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The Economist

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FEBRUARY 23RD–MARCH 1ST 2019

Can pandas fly?

The struggle to reform China's economy

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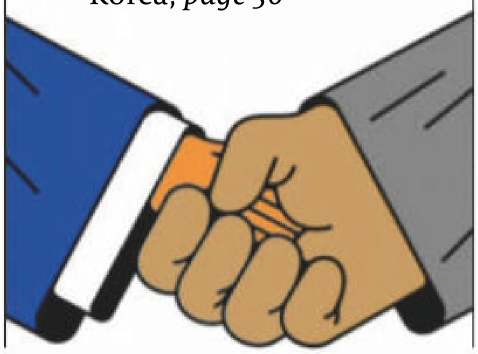

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Pakistan's prime minister, Imran Khan, warned **India** not to attack his country in retaliation for a suicide-bombing in **Kashmir** that killed 40 Indian security personnel, the worst attack on security forces in the region in 30 years of conflict. A militant group based in Pakistan said it was responsible. As tensions mounted between the two arch-rivals, a gun battle between police and suspected militants killed nine people in a village in Kashmir.

Amid the hostilities **Saudi Arabia's** crown prince and de facto leader, Muhammad bin Salman, visited Pakistan and India, where he promised large investment deals. The Saudi foreign minister offered to help ease tensions between the two neighbours, underscoring the Saudis' new-found confidence on the world stage.

A fire broke out in the Chawkbazar district of Dhaka, **Bangladesh's** capital, killing scores of people. Poor safety regulations have led to hundreds of people being killed in building fires in recent years.

Fang Fenghui, a former chief of the joint staff in **China's** army, was found guilty of corruption and sentenced to life in prison. Mr Fang had been allied with Zhang Yang, who served on China's military commission before his arrest for corruption and subsequent suicide in 2017. President Xi Jinping has undertaken an unprecedented crackdown on graft, which some believe to be a cover for a purge of his opponents.

Polling errors

Nigeria delayed its presidential election by a week after officials said they had not managed to distribute ballot papers and other voting materials in time for the scheduled date of February 16th. The delay is expected to reduce voter turnout, as many people had to travel to their home districts in order to cast their ballots.

South Africa's government pledged 69bn rand ($4.9bn) to prop up Eskom, a state-owned power utility that is close to bankruptcy. Power cuts caused by poor maintenance have slowed economic growth.

Hundreds of civilians were evacuated from the last enclave held by Islamic State in eastern **Syria**. Kurdish-led forces backed by America have pushed the jihadists to the brink of defeat. A Kurdish commander urged Donald Trump to halt his plans to pull American soldiers out of Syria and called for up to 1,500 international troops to remain.

Poland withdrew from a central European summit in Jerusalem after a dispute with **Israel** over how to characterise Poland's treatment of its Jewish community during the second world war. Israel's acting foreign minister said Poles "suckle anti-Semitism with their mother's milk".

Independents' day

In **Britain**, eight Labour MPs quit the party over Jeremy Corbyn's poor leadership, which has led to dithering over Brexit and failed to clamp down on a surge in anti-Semitism among party activists. The eight back a second referendum on Britain leaving the EU. Rather than form a new party they will for now sit in the House of Commons as the Independent Group. They called on centrist MPs from any ▶▶

party to join them. Three Conservative MPs duly did so.

Demonstrations were held across **France** to protest against the rise in attacks against Jewish people and symbols, which were up by 74% last year. This week 80 Jewish graves were daubed with swastikas, and Alain Finkielkraut, a prominent philosopher, was heckled with anti-Semitic abuse by *gilets jaunes* (yellow vest) protesters.

Pedro Sánchez, the prime minister of **Spain**, called a snap general election for April 28th. Mr Sánchez's socialist-led coalition had suffered a heavy defeat in parliament when parties from Catalonia that normally support the government joined conservatives in voting down the budget. The Catalans had tried to force Mr Sánchez into discussing independence for their region.

The ball's in your court

Donald Trump urged **Venezuela's** armed forces to back a political transition and said they should accept the offer of amnesty by Juan Guaidó, who has been recognised as the country's interim president by Venezuela's legislature and by some 50 countries. Mr Trump held open the possibility of military intervention to topple the repressive regime of Nicolás Maduro.

Jair Bolsonaro, **Brazil's** president, presented an ambitious plan to reform the country's publicly funded pension schemes. His proposal, which requires amendments to the constitution, would establish a minimum retirement age of 65 for men and 62 for women and would limit the scope for pensioners to collect more than one benefit.

Gerald Butts, the principal private secretary of **Canada's** prime minister, Justin Trudeau, resigned. He denied allegations that he or anyone else in the prime minister's office had put pressure on Jody Wilson-Raybould, then justice minister, to settle a criminal case against an engineering company based in Montreal. Mr Trudeau has also denied that he put pressure on Ms Wilson-Raybould to intervene.

Ecuador reached an agreement with the IMF to borrow $4.2bn to help it cope with a large external debt and budget deficit. It will also borrow $6bn from other multilateral lenders, including the World Bank. The government will reduce fuel subsidies and employment at state-owned enterprises.

Constitutional showdown

The first lawsuits were launched against Donald Trump's declaration of a **national emergency** on the Mexican border, which allows him to sequester funding for his border wall. Sixteen states, including California, filed a court motion arguing that Mr Trump's edict would divert money from law enforcement.

Bernie Sanders announced that he is to run again for president as a Democrat in 2020. The 77-year-old senator from Vermont was describing himself as a socialist years before today's crop of young pretenders in the party was even born. He raised nearly $6m in the 24 hours following his campaign launch, outstripping his rivals.

It is shaping up to be a bad year for Britain's car industry. In the latest blow, **Honda** decided to close its plant in Swindon in 2021, putting 3,500 jobs at risk. It is the first time the Japanese carmaker has closed one of its factories (it is also stopping production of one of its models at a facility in Turkey). Honda said it was accelerating its commitment to electric cars, and stressed that Brexit was not a factor in its calculation to shut up shop. Many observers think otherwise.

Flybmi was less shy about blaming Brexit for its troubles. The British regional airline called in the administrators amid rising fuel and carbon prices, but was explicit about the uncertainty surrounding Brexit, which caused it difficulties securing valuable flying contracts in Europe.

The European Union threatened to react in a "swift and adequate manner" if America imposes additional tariffs on **European car imports**. America's Commerce Department recently submitted a document to Donald Trump that reportedly recommends levying duties on European cars on the ground that damage to America's car industry is a threat to national security. The president has 90 days to decide whether to act.

The decision by **India's** central bank to increase the interim dividend it pays to the government raised more questions about its political independence. The payment will help the government meet its fiscal targets ahead of the forthcoming election.

Anil Ambani, one of India's most prominent businessmen, was found guilty of contempt of court by the country's supreme court for not paying Ericsson, a Swedish network-equipment company, for work it carried out at Reliance Communications. Mr Ambani founded Reliance, which recently filed for bankruptcy. The court said Mr Ambani would be sent to prison if he didn't pay, prompting Reliance to promise to comply.

The nosedive in financial markets towards the end of last year led **HSBC** to report a lower annual profit than had been expected. The bank announced net income of $12.6bn. That was below analysts' forecasts of $13.7bn, which John Flint, the chief executive, ascribed to being "very much a fourth-quarter problem".

Has he annoyed the Kremlin?

International investors reacted with shock to the arrest of **Michael Calvey** in Moscow. Mr Calvey, an American, runs Baring Vostok, a big private-equity firm in Russia. He has been accused, along with other executives, of defrauding a bank that is owned by Baring Vostok and will remain in custody ahead of a trial in April. Mr Calvey denies the accusations, which he says are rooted in a dispute involving two shareholders.

A French court found **UBS** guilty of helping people evade tax and fined it €3.7bn ($4.2bn). It also ordered the Swiss bank to pay €800m to the French state in damages. UBS is to appeal against the verdict, arguing that it was based on "unfounded allegations". It said the court had failed to establish that any offence had been committed in France, and therefore it had applied French law to Switzerland, posing "significant questions of territoriality".

Estonia's financial-services regulator ordered **Danske** to close its sole Estonian branch, which is at the centre of a €200bn ($227bn) money-laundering scandal. Meanwhile **Swedbank**, which is based in Stockholm, saw its share price plunge after a TV programme aired accusations that it was involved in the scandal.

New York's mayor, Bill de Blasio, criticised **Amazon's** decision to cancel its plan to build one of its two new headquarters in Queens. The online retailer pulled out in the face of growing opposition from newly emboldened left-wing Democrats, who questioned the subsidies it would receive. Mr de Blasio said Amazon had been offered a "fair deal".

Walmart reported solid growth in sales for the quarter covering the Christmas period. Online sales in America surged by 43% as the retailer ramped up its grocery delivery and pick-up services. Meanwhile, Britain's competition regulator said it might block the planned merger of **J. Sainsbury** with **Asda**, a subsidiary of Walmart. The merger would create Britain's biggest supermarket company. A furious J. Sainsbury criticised the Competition and Markets Authority, saying it had "moved the goal-posts" in its analysis.

Not so half-baked after all

Greggs, a cheap but cheerful purveyor of sandwiches and bakery food in Britain, reported an "exceptionally strong start" to 2019, which it attributed to the roll out of its **vegan sausage roll**. Derided by some (Piers Morgan pilloried Greggs for being "PC-ravaged clowns") the company said the publicity had boosted sales of its other "iconic sausage rolls" and food. Some predict this will be the year of the vegan.


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Can pandas fly?

If Xi Jinping reforms the economy, he could both calm the trade war and make China richer

For the past two weeks Chinese and American negotiators have been locked in talks in Beijing and Washington to end their trade conflict before the deadline of March 1st, when America will ratchet up tariffs on Chinese goods or, perhaps, let the talks stretch into extra time. Don't be distracted by mind-numbing details on soyabean imports and car joint-ventures. At stake is one of the 21st century's most consequential issues: the trajectory of China's $14trn economy.

Although President Donald Trump started the trade war, pretty much all sides in America agree that China's steroidal state capitalism makes it a bad actor in the global trading system and poses a threat to security. Many countries in Europe and Asia agree. At the heart of these complaints is the role of China's government, which funnels cheap capital towards state firms, bullies private companies and breaches the rights of foreign ones. As a result, China grossly distorts markets at home and abroad.

The backlash is happening just as China's model of debt, heavy investment and state direction is yielding diminishing returns. Growth this quarter may fall to 6%, the worst in nearly three decades. Many suspect that the true figure is lower still. By opening the economy and curbing the state, Xi Jinping, China's autocratic leader, could boost performance within China's borders and win a less hostile reception beyond them. He is loth to limit the power of the government and the party, or to accept American demands. But China's path leads to long-term instability.

Its leaders are entitled to feel smug. The party has presided over one of history's great successes. Since 1980 the economy has grown at a 10% compound annual rate as nearly 800m people have lifted themselves out of poverty. A country that struggled to feed itself is now the world's biggest manufacturer. Its trains and digital-payments systems are superior to those of Uncle Sam, and its elite universities are catching up in the sciences. Although inequality and pollution have soared, so have living standards.

Yet as our essay this week explains, since Mr Xi took power in 2013, China has in some ways gone backwards. Two decades ago it was possible, even sensible, to imagine that China would gradually free markets and entrepreneurs to play a bigger role. Instead, since 2013 the state has tightened its grip. Government-owned firms' share of new bank loans has risen from 30% to 70%. The exuberant private sector has been stifled; its share of output has stagnated, and firms must establish party cells which then may have a say over vital hiring and investment decisions.

Regulators meddle in the stockmarket, critical analysis is suppressed and, since a botched currency devaluation in 2015, capital flows are tightly policed. Mr Xi has ignored Deng Xiaoping's advice to "hide your capabilities and bide your time", launching the "Made in China 2025" plan, an attempt to use state direction to dominate high-tech industries. This has alarmed the rest of the world, though it has yet to produce results.

Make no mistake, Mr Xi's approach can continue for some time. Whenever the economy slows, stimulus is injected. In January banks extended $477bn of loans, a new record. But structural shifts are working against China. The working-age population is shrinking. Investment is a swollen 44% of GDP. As resources are sucked up by wasteful projects and inefficient state firms, productivity growth has slowed. Now that debt has surged, interest payments will amount to nearly three-quarters of new loans.

The backlash abroad risks becoming yet another drag. As barriers to trade rise, China cannot rely on the rest of the world for growth. Its share of world exports will struggle to rise above today's 13%. Its biggest and most sophisticated firms, such as Huawei, are viewed with suspicion in Western markets (see Business section). Mr Xi promised a "great rejuvenation" but what beckons is lower growth, more debt and technological isolation.

China's leaders have underestimated the frustrations behind the trade war. They have assumed that America could be placated with gimmicks to cut the trade deficit, and that the row will end when Mr Trump leaves the Oval Office. In fact American negotiators, with the support of Congress and the business establishment, have demanded deep changes to China's economy. Western opposition to China's model will outlast Mr Trump.

To deal with hostility abroad and weakness at home, Mr Xi should start by limiting the state's role in allocating capital. Banks and financial markets must operate freely. Failing state firms should go bust. Savers must be permitted to invest abroad, so that asset prices reflect reality, not financial repression. If money flows to where it is productive, the charge that the economy is unfairly rigged will be harder to sustain and the build-up of bad debts will slow.

Mr Xi also needs to temper China's industrial policy. It is too much to imagine that it will privatise its 150,000 state firms. But it should copy Singapore, where a body called Temasek holds shares in state firms, giving them autonomy while requiring that they operate as efficiently as the private sector. Spending on industrial policy should shift away from grandiose schemes such as Made in China 2025 towards funding basic research.

Lastly, China must protect the rights of foreign firms. Within China that means giving foreigners full control of subsidiaries, including over their technological secrets. Beyond its borders it means respecting intellectual property, which will be in China's interest as its firms grow more sophisticated.

Given China's poor record, America will need room to respond through tariffs or arbitration if China does not meet its commitments. But America should also reward good behaviour. If Chinese firms can use greater transparency to persuade it that they are operating on commercial principles, they should be treated like businesses from any other country.

Today, these reforms seem a distant prospect. But they were accepted wisdom among China's technocrats a decade ago. They are also popular at home. Corporate bosses and senior officials say that they want American pressure to get through to Mr Xi in a way they cannot. Under him, China is becoming trapped in a bad cycle of sluggish growth, debt, state control and hostility abroad. A more economically liberal China would end up richer and make fewer enemies. It is time for Mr Xi to change course. ■

British politics

Splitting image

The resignation of a few MPs from their parties may not sound like much, but it could disrupt Britain's politics

IN THE PAST few years many of the MPs in Britain's main parties have grown increasingly unhappy. One reason Brexit has proved tricky is that the party divide does not map onto views about Europe. This week 11 moderate MPs, eight Labour and three Conservative, decided that they had had enough—and more may join them. Given that Parliament seats 650 MPs, their resignation to create a new Independent Group might seem a minor tremor. But it matters: as a verdict on Labour's leader, Jeremy Corbyn; as another complication in resolving Brexit; and as a warning of an earthquake that could yet reshape Britain's two-party system.

One of the eight Labour MPs, Luciana Berger, is Jewish. She has been subjected to unrelenting racist attacks from within the party. Mr Corbyn's feeble response—he has not met Ms Berger since 2017—has led many of his MPs to conclude that Labour has surrendered to anti-Semitism. This week even the deputy leader, Tom Watson, lamented that he sometimes no longer recognised his own party. The resigning MPs are right. Mr Corbyn has failed a test of leadership and shown that he cannot tell right from wrong.

The mass resignations also underline how far Brexit now trumps party loyalties. The Leave-Remain divide identifies voters and MPs more than the old left-right one does. The threat of more resignations will strengthen the hand of Brexit moderates who have not left. Mr Corbyn will be under pressure to show that the option of a second referendum, which is popular in his party, is genuine and not a meaningless ploy, as some suspect. To pacify rebellious Conservatives, including some in her cabinet, Theresa May, the prime minister, will be under renewed pressure to promise she will not leave the European Union on March 29th without a deal.

The hardest question is whether this week's resignations will lead to a realignment. The MPs have only just started on that journey (see Britain section). Most already faced a high risk of deselection by their party. They have not yet formed a new party of their own or developed a programme. They are backbenchers with mostly limited ministerial experience. Moreover, a huge obstacle stands in the way. Britain's brutal first-past-the-post electoral system protects incumbent parties and creates difficulties for new ones. That is why the system has endured for so long.

Yet the new group has a chance of pulling off something spectacular. Some in Labour face the contradiction of striving to win power when they have concluded that their leader is unfit to be prime minister. Mrs May has said that she will not lead the Conservatives into the next election. Were she to be succeeded by a hardline Brexiteer, tensions within the Tories could become unbearable. Despite the weakness of today's Liberal Democrats, still suffering after coalition with David Cameron's Tories, some polls suggest that a new centrist party could attract many votes from those disenchanted with both main parties' drift to the extremes.

If it is not to lose momentum, the Independent Group has to move fast. It not only needs more defections, but must also work with other parties, including the Scottish and Welsh nationalists as well as the Lib Dems and Greens. It must cohere around a strong message, most obviously its opposition to a no-deal Brexit and its call for a second referendum. And it will need to unite behind one leader. The likeliest candidate just now is Chuka Umunna, the MP for Streatham, who once made a bid to become Labour leader.

Realignments are rare in British politics, but they do happen. Labour displaced the Liberals in the 1920s, the Scottish nationalists overwhelmed Labour in Scotland in 2015 and the UK Independence Party secured and won a Brexit referendum. This week's rebellion could yet subside—like the Social Democratic Party (SDP), formed by four former Labour MPs in 1981. The SDP merged with the Liberals, but not before galvanising Labour moderates to reform their party. If the Independent Group managed nothing more, it would still count as a success. ■

Trump's emergency

Imperial purple

It is no good complaining about how Donald Trump abuses his powers. You have to curtail them

SINCE THE day he became president, Donald Trump has trampled political norms. He has cosied up to foreign dictators while traducing his own officials. He has demanded that the Justice Department investigate his adversaries and mused about pardoning himself. He lies so frequently that it seems like a tic. In declaring a spurious state of emergency on America's southern border, has he at last gone too far and provoked a crisis?

The president's action on February 15th was born of frustration and fear for his political future. Having repeatedly promised to build a wall on the Mexican border, he had to do it. Unsurprisingly, his original plan of getting Mexico to pay failed. Mr Trump's attempts to cajole Congress to provide the money, including by shutting down the government, fared no better. Boxed in by his own foolish promises and ineptitude, he has fallen back on the ruse of declaring an emergency and grabbing what money he can from the military budget.

As a lawsuit already filed by 16 states points out, there is no emergency on the southern border in any normal sense. Last year 400,000 people were apprehended there, down from 1.6m in 2000. Meanwhile the border force has doubled in size. Drug seizures are down, mostly because less marijuana is coming in.

America does face genuine emergencies. Perhaps the greatest ▸▸

of these is the terrible opioid epidemic that kills some 50,000 people every year and will continue to do so for years to come (see Briefing). Mr Trump plans to spend just $1bn over two years saving some of these lives. Devoting $8bn to putting more barriers in the Sonoran Desert is the wrong priority.

Whether Mr Trump is overreaching his authority, and in what ways, is a legal question. The courts may rule that the business of defining what is an emergency belongs to the executive. Better, then, to assume the real problem is not so much that the president is exceeding his powers as that those powers are excessive. This is largely Congress's fault, and it is for Congress to fix.

For decades, presidents both Republican and Democratic have asserted greater powers for themselves, and have often been allowed to get away with it. Having declared an open-ended war on terror, George W. Bush set up military commissions and authorised warrantless wiretaps. Barack Obama invented new categories of illegal immigrant, which he then protected. Every president since Gerald Ford has declared at least one national emergency. Many are no longer emergencies, yet they linger, along with some of the powers they brought with them. Nearly 40 years after Iranian revolutionaries took Americans hostage, Jimmy Carter's emergency declaration is still in force.

Congress has also passed laws increasing the power of the executive, which Mr Trump is now exploiting. One of the three pots of money he intends to raid to pay for his wall is the Defence Department's anti-drug fund. In 2016 Congress passed a bill that appears to give him the power to do just that. More cash will come from a Treasury asset-forfeiture fund, which can also be tapped easily. Only Mr Trump's third target, the military construction budget, requires a declaration of emergency. He has a good chance of getting his way there, too. His emergency powers are broad, and he could veto a motion of disapproval which Congress is due to vote on (see United States section).

Mr Trump has made an appallingly sloppy case for his emergency declaration. He mused publicly for weeks about whether to issue it, as though he were still a reality-TV star building tension. He cannot even stick to the line that there is an emergency. "I didn't need to do this," he explained on February 15th. But, he said, he wants to get the wall built quickly. It is provocative enough when a president asserts new powers. It is more so when he admits that he is doing so because it is convenient.

Such shamelessness is clarifying, however. Just as Mr Trump's refusal to release his tax returns showed that the tradition of presidential candidates doing so was only a tradition, just as his failure to divest himself of his business interests demonstrated that a president cannot be forced into it, his cynical declaration of an emergency reveals how vague and expansive that power is. It would be best if Mr Trump acted nobly. But a nation founded on law should know not to expect that of its leaders.

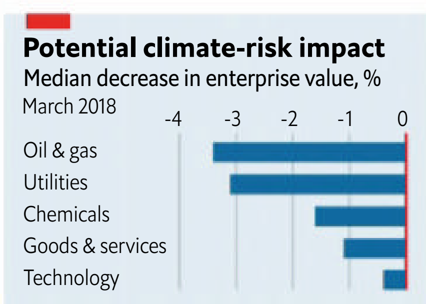
Congress should take stock of its defences against bad leadership and strengthen them, as in the 1970s after Richard Nixon's resignation. It could curtail emergency powers, say by changing the law so that emergencies expire automatically after a month or two unless Congress re-authorises them. Republicans may be tempted to keep things as they are. They should remember how it feels when the boot is on the other foot. ■

Business and global warming

Hot, unbothered

Corporations need to rethink how they approach climate risk

CHIEF EXECUTIVES who care about climate change—and these days most profess to—often highlight headquarters bedecked with solar panels and other efforts to lower their carbon footprint. Last week Volkswagen, a carmaker, told its 40,000 suppliers to cut emissions or risk losing its custom. Plenty of investors, meanwhile, say they are worried about being saddled with worthless stakes in coal-fired power plants if carbon taxes eventually bite. Yet the reality is that meaningful global environmental regulations are nowhere on the horizon. The risk of severe climate change is thus rising, posing physical threats to many firms. Most remain blind to these, often wilfully so. They should start worrying about them.



Potential climate-risk impact
Median decrease in enterprise value, %
March 2018

Nature disrupting supply chains is nothing new. Businesses have coped with floods, droughts and storms since long before the joint-stock company became popular in the 19th century. Two things have changed. First, supply chains have grown complex and global (just look at VW). As links have multiplied so, too, have points of possible failure. Many sit in the tropics, more given to weather extremes than the temperate West.

Second, global warming is fuelling more such extremes everywhere (see Books and Arts section). In 2017 Houston experienced its third "500-year flood" in less than four decades, California suffered five of its 20 worst wildfires ever and parts of the Indian subcontinent were underwater for days following epic monsoon downpours. That year insurers paid out a monumental $135bn in compensation. Another $195bn in estimated losses was uninsured. Power plants often run slow because the river water they use for cooling is too hot. Last year commercial traffic along the Rhine, the world's busiest waterway, ran aground when rains failed to replenish its sources.

Corporate-risk managers have just about come to grips with tangled supply chains. But they are rotten at assessing their exposure to a changing climate (see Business section). Unfamiliar with bleeding-edge climate models, which tell you what disruption to expect next, risk managers fall back on retrospective tools like flood maps, which are tried, tested—and wrong.

One study last year found that accounting for physical risks to corporate assets would shave 2-3% off the total market value of over 11,000 globally listed firms. That is less than many stocks move in a given day, and a fraction of the estimated 15% downward effect of a transition to cleaner energy. Unlike the energy transition, though, some physical harm to corporate assets is all but guaranteed. Not only that, but the risks rise as the world warms. And the average conceals a huge range. Some companies would lose nearly one-fifth of their enterprise value. Most have no clue where they stand. ▸▸

They have few pressing incentives to find out. Markets tend to punish honesty about previously unacknowledged risks, not reward it. Rather than learn that nature poses a "material" threat—which firms are obliged to disclose to shareholders—it is safer not to look in the first place. Although credit-raters and insurers are busily reassessing climate risk, companies' premiums and credit have scarcely got more expensive. On the rare occasion markets do reprice a company's risk, they do so in a hurry. PG&E, a Californian utility, was forced into bankruptcy protection in January after insurers and creditors fled when they concluded that it could be on the hook for billion-dollar liabilities over its possible role in sparking wildfires.

Such cases would be rarer if companies were legally obliged to assess and disclose their climate vulnerabilities. An international group set up by the Financial Stability Board, a global set of regulators, issued voluntary guidelines for public companies in 2017. These should be made mandatory.

It is in businesses' long-term interest to own up to the threats they face. A post-disaster payout from a cheap insurance policy is better than nothing—but a lot worse than avoiding disruption. Adaptation could mean erecting flood barriers around factories or battening down warehouse roofs to withstand stronger gales. Insurers reckon a dollar spent on such measures saves five in reconstruction. It may involve lobbying politicians to fill the estimated $110bn-280bn shortfall in annual public spending on resilience. In extreme cases, it may require retreat from a business. If this lays bare the seriousness of global warming's effects, the world may even get serious about tackling its causes. ■

English-medium education

Babel is better

Young children should be taught in their mother tongue, not in English

When Winston Churchill was at Harrow School, he was in the lowest stream. This did not, he wrote in "My Early Life", blight his academic career, for "I gained an immense advantage over the cleverer boys. They all went on to learn Latin and Greek and splendid things like that...We were considered such dunces that we could learn only English...Thus I got into my bones the essential structure of the ordinary British sentence—which is a noble thing."

Partly thanks to Churchill and the post-war Anglo-American ascendancy, English is these days prized, not despised. Over a billion people speak it as either their first or second language; more still as a third or fourth language.

English perfectly exemplifies the "network effects" of a global tongue: the more people use it, the more useful it is. English is the language of international business, law, science, medicine, entertainment and—since the second world war, to the fury of the French—diplomacy. Anybody who wants to make their way in the world must speak it. All of which has, of course, been of great benefit to this newspaper, which has floated on a rising linguistic tide.

It is not surprising that there is a surge in "English-medium" education all over the world. In some regions—such as East Asia and Latin America—the growth is principally among the rich. In others—Africa and South Asia, where former colonies never quite escaped the language's grip—it is happening at all income levels. Parents' desire for their children to master English is spurring the growth of private schooling; parents in the slums of Delhi and Lagos buy English-medium education in the hope that their children will gain a university degree, obtain good jobs and even join a glittering world of global professionals.

Where the private sector leads, governments are following. Some countries have long chosen to teach in English as a political expedient, because a local language would prove contentious. But even where public schools teach children in their mother tongue, or a local language, education authorities are switching to English medium, in part to stem the outflow of children into the private sector. That has happened in Punjab and Khyber Pakhtunkhwa in Pakistan; many Indian states have started large or small English-medium experiments. In Africa most children are supposed to be taught in a local language in the first few years, but often, through parental pressure or a lack of textbooks, it does not happen.

Teaching children in English is fine if that is what they speak at home and their parents are fluent in it. But that is not the case in most public and low-cost private schools. Children are taught in a language they don't understand by teachers whose English is poor. The children learn neither English nor anything else.

Research demonstrates that children learn more when they are taught in their mother tongue than they do when they are taught in any other language (see International section). In a study of children in the first three years in 12 schools in Cameroon, those taught in Kom did better than those taught in English in all subjects. Parents might say that the point is to prepare children for the workplace, and that a grasp of English is more use than sums or history. Yet by year five the children taught in Kom outperformed English-medium children even in English. Perhaps this is because they gain a better grasp of the mechanics of reading and writing when they are learning the skills in a language they understand.

English should be an important subject at school, but not necessarily the language of instruction. Unless they are confident of the standard of English on offer, parents should choose mother-tongue education. Rather than switching to English-medium teaching, governments fearful of losing custom to the private sector should look at the many possible ways of improving public schools—limiting the power of obstructive teachers' unions, say, or handing them over to private-sector managers and developing good curriculums and so on.

Pakistani Punjab has decided to end the English experiment; Uganda has introduced mother-tongue instruction in 12 different languages in the first four years of schooling. More should follow. After all, it was a good education in his mother tongue, rather than in the classics then favoured by the British aristocracy, that won Churchill the Nobel prize for literature. ■

Huawei and China

"How to handle Huawei" (February 2nd) was right in saying that "aggressive action" against the telecoms-equipment maker "would come with huge costs for all, including America". Take Britain, for example. Over the past five years, Huawei has brought £2bn ($2.6bn) to the country and created 7,500 jobs. The company has pledged a further £3bn in investment and procurement in the coming five years. You were also right that "the exclusion of a firm on the say-so of American officials, without evidence of spying, would set a dangerous precedent". Discrediting a company without any concrete evidence misleads the public, violates rules of commerce and damages business confidence. The right approach is to be rational towards foreign companies and support fair competition. The Chinese government encourages Chinese firms doing business abroad to contribute to the local economy and society and operate within international regulations and local laws.

Moreover, the National Intelligence Law is aimed at improving the legal system relating to national security. Chinese laws and regulations do not authorise any firm, including Huawei, to build back doors to network systems. The British government keeps an eye on Huawei's operations through the Cyber Security Evaluation Centre, whose reports show no evidence of any problem involving back doors.

ZENG RONG
Spokesperson of the Chinese embassy
London

An Irish dance

I enjoyed your article on the demography of the Irish in Britain ("Last waltz in Kilburn", February 9th). However, there were a few tell-tale signs that you are more used to Scottish traditions, such as their "whisky" and "ceilidh". Next time your correspondent is in Ireland we'll treat him to some whiskey at a proper Irish céilí!

AIDAN CLERKIN
Dublin

Let there be light

It is wrong to assume that the only benefit that matters in the cost-benefit calculus of providing Africans with solar electricity is improving incomes ("Light to all nations?", February 9th). Even your article acknowledges that Rwandans with solar lamps lit their households more brightly, burned less kerosene and their children studied a bit more. Isn't that enough to warrant support? Isn't it enough for children to be able to study at night without potentially damaging their lungs from kerosene smoke? I suspect these are the reasons why people in rich countries value light. Low-income families who use these solar lanterns buy them not because it makes their lives richer, but because it makes their lives better. We should all be so enlightened.

ALEXANDER SOTIRIOU
MATTHEW SOURSOURIAN
Consultative Group to Assist the Poor
Washington, DC

Keep the pressure on Iran

You criticised American sanctions against Iran because they hit most Iranians ("How to deal with the mullahs", February 9th). Yet sanctions have an insignificant effect on poverty. A bigger factor is the regime's redistribution of wealth to the elite. Poverty has plagued Iranians since the revolution in 1979. This did not change when the nuclear deal struck between world powers and the regime in 2015 opened the country up to trade. In fact the deal gave the regime access to billions of dollars, consolidating its power. With this newfound money, it has reinforced and modernised its repressive security apparatus to carry out terror operations inside and outside Iran.

You also claimed that few ordinary Iranians are ready to die trying to overthrow the mullahs. Various uprisings, such as the student revolt in 1999, the uprising after the 2009 elections and the unrest in 2017 and 2018 show that many Iranians are so fed up with the Islamic regime that they are ready to sacrifice their lives. The selfless efforts of those Iranians to overthrow the regime will only be made harder if the regime grows stronger because of the normalisation of trade relations with the free world.

ARVIN KHOSHNOOD
Lund, Sweden

Your leader provided some practical suggestions on how to deal with Iran. It closely followed Henry Kissinger's advice in "World Order", published in 2014:

> "Pursuing its own strategic objectives, the United States can be a crucial factor—perhaps the crucial factor—in determining whether Iran pursues the path of revolutionary Islam or that of a great nation legitimately and importantly lodged in the Westphalian system of states. But America can fulfil that role only on the basis of involvement, not of withdrawal."

Alas, President Trump's unilateral withdrawal of America from the nuclear deal not only rejected the above, but also worsened everything, domestically and internationally. It will force Iran to continue to behave as "a cause" and not as "a country."

NAJMEDIN MESHKATI
Fellow
Project on Managing the Atom
Belfer Centre
Harvard University
Cambridge, Massachusetts

Doctor in charge

You reported on the hope that online tools will divert patients from overstretched general-practitioner (GP) doctors ("A doctor in your pocket", February 2nd). But there is little evidence that any existing algorithm can achieve this safely. Our experience with askmyGP is that the key to any online system is enabling family doctors to triage patient requests before offering time-consuming face-to-face appointments. Automatically diverting demand away from GPs is unimportant.

Furthermore, we know from more than 150,000 patient contacts over the past six months in about 30 practices that the overall level of demand does not increase by making it easier for patients to contact their GP, as your article speculates might happen. We also know that just 1% of patients choose video when offered it, suggesting that it is misguided to think that video contact is important.

DR STEPHEN BLACK
Chief analyst
AskmyGP
Biggleswade, Bedfordshire

FOMOs v JOMOs

I appreciated Bartleby's piece (February 2nd) on the two tribes of working life: the FOMOs (those who have a fear of missing out) and the JOMOs (who relish the joy of missing out). As a card-carrying JOMO, if ever I feel guilty for not attending a networking event, it cheers me to remember that "networking" is only one letter away from "not working".

RUFINO HURTADO
Washington, DC

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The death curve

MANCHESTER AND PHILADELPHIA

About 50,000 Americans are dying each year from opioid overdoses. The federal response remains sluggish and inadequate

THE GIRL looks like a typical teenager sitting on the bench of a fire station in Manchester, New Hampshire. But she is not. Just 19 years old, with acne still marking her face, she is here seeking help for opioid addiction. Already she has been hooked for four years. At 15 she started with Percocet, a prescription drug. Now homeless, these days she uses fentanyl, a cheap, synthetic opioid. After checking herself out of treatment two weeks ago, she went on a meth- and fentanyl-fuelled bender.

Soon a taxi arrives. It will deposit her at Granite Pathways, the treatment centre she left two weeks ago. She gathers up her few possessions, which are neatly lined up on the concrete floor. The firefighters wish her well as she climbs into the taxi, encouraging her to stick with her recovery this time. She promises to try but, once she has gone, they do not sound hopeful. They have seen this story too many times before.

Such episodes occur regularly now across Manchester. The city has set up a programme, known as Safe Stations, whereby anyone struggling with drug addiction can walk into a fire station seeking help. About 200 people come every month. "People trust firemen," says Daniel Goonan, the station's chief. "We don't ask for insurance or anything—there's no stigma." It is an innovative strategy for dealing with the American opioid epidemic in one of its centres. In 2017 New Hampshire had the third-highest opioid death rate in America, after Ohio and West Virginia. Shelters are full so those who are homeless and addicted wander the streets in the freezing cold. At a local hospital, 5.5% of newborn babies delivered have been exposed to opioids *in utero*. Mr Goonan vividly recalls the case of a ten-year-old boy who performed CPR on his overdosing parents and then went back to eating his breakfast cereal. It was not the first time the boy had done it.

Drugs now kill about 70,000 Americans every year—more than car crashes or guns (both 39,000), more than AIDS did at the height of its epidemic (42,000), and more than all the American soldiers killed in the entire Vietnam war (58,000). In 2017 about 47,600 of those deaths were caused by opioid overdose—a fivefold increase since 2000. Only 32% of those opioid deaths involved prescription pills; the rest were from illegal heroin and fentanyl (see chart 1 overleaf). But three out of four heroin users first became addicted to pills.

Chart the overdose death rate in America since 1980 and a terrifying graph emerges (see chart 2 overleaf)—an exponential curve increasing at a constant clip of 7.6% per year. Estimates suggest that the epidemic will rage for at least a further five to ten years, killing more than 50,000 people each year. An urgent and sensible response would be able to bend this death curve somewhat, to reduce the harm yet to come. But the response has been slow and fitful at best, even though measures that would help are well-known. What started as a problem of abused prescription drugs has been transformed by corporate greed, a failure of the health system and a lack of political will into a social disaster.

Origins of a crisis

The risks of opioid addiction have long been downplayed. Alexander Wood, who invented the hypodermic needle in 1853, touted his invention by claiming that morphine would not cause addiction if injected rather than smoked or swallowed. After needles and morphine were deployed in the American civil war, as many as 100,000 veterans were left addicted. In 1895 scientists at Bayer, a German pharmaceutical firm, began selling a strong morphine ▸▸

compound called diamorphine. To market it, they called it "heroin" from the German word meaning heroic.

In the 20th century, heroin became a controlled substance in America, associated with poor blacks in inner-city ghettos. Medicinal opioids were legal, but used for limited purposes, such as surgery and palliative care. Then in 1996 Purdue, a private pharmaceutical firm, launched OxyContin, a pill that releases oxycodone, an opioid that, like heroin, is twice as strong as morphine. Other firms developed similar drugs, available on prescription.

OxyContin was aggressively marketed to doctors as a wonder drug that could safely dissipate chronic pain for 12 hours at a time with what it claimed was "less than 1%" risk of addiction. Yet the sales pitch was deeply misleading. In many patients the effect of the pills wore off after eight hours, leading to cravings for more. Moreover, evidence of long-term efficacy of opioids for chronic pain is limited, according to scientists for the Centres for Disease Control and Prevention (CDC).

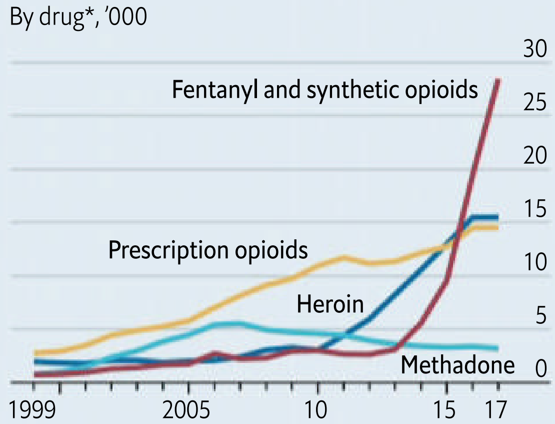
Despite the quantity of opioid pills prescribed since the 1990s, the amount of pain Americans report has not decreased. To explain drug-seeking behaviour that doctors began observing in their patients, Purdue promoted the theory of "pseudoaddiction"—that what looked like addiction was really patients trying to avoid untreated pain. The basis of the "less than 1%" claim was a single-paragraph letter to a medical journal in 1980 about opioids administered in hospitals, not homes.

As opioid sales quadrupled from 1999 to 2011, deaths from overdoses rocketed. Prescribing patterns were slow to change even as addiction became difficult to overlook. The number of opioid prescriptions peaked in 2012, at 255m—more than one for every American adult. States began implementing prescription-drug monitoring programmes, which detect if patients are seeking opioids from more than one doctor. Pills like OxyContin were made harder to crush, snort and inject. In 2015, even as

Breaking bad 1

United States, number of opioid deaths

By drug*, '000



Source: Centres for Disease Control and Prevention

*Deaths involving multiple opioids counted in each category

doctors had begun reducing prescriptions, Americans were still getting four times as many opioids per head as Europeans. The CDC only released its revised guidelines to limit access to them in 2016. By then the crisis had already mutated from one of prescription pills, over which the government had some control, to one of illicit opioids—first heroin and then fentanyl.

Just like any epidemic, opioid addiction can be modelled. Allison Pitt, Keith Humphreys and Margaret Brandeau, a trio of public-health experts at Stanford University, estimate that on the current course, just over 500,000 people will die of overdoses from 2016 to 2025. They also modelled the effects of 11 different policy responses possible in today's political climate. Most would reduce the projected number of deaths marginally.

Increasing distribution of naloxone, a life-saving drug that reverses overdoses, would decrease deaths by 4.1%; moderately expanding medication-assisted treatment (MAT), which reduces craving for drugs and helps users lead a more normal life, would cause another 2.4% drop. Other responses, like tightening drug-prescribing guidelines and instituting programmes to prevent "doctor shopping", would, perversely, trigger a short-term increase in deaths by incentivising those addicted to prescription painkillers to switch to heroin or fentanyl. Even if America introduced all the policies likely to save lives, deaths over the next decade would drop by just 12.2%, the academics calculate. That would spare tens of thousands of lives. Yet, given the sluggish federal response, it is likely that today's high drug-death rates have become the new normal.

Smack, stock and flow

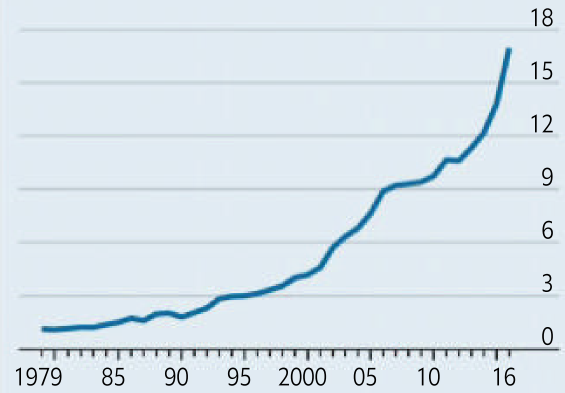
The problem of drug addiction, whether to crack or to heroin, can be reduced to stocks and flows. As a drug gains notoriety, new users flow in. As an epidemic rages and matures, the wave of new addictions dwindles. "A lot of people have real experiences—a brother who got shot over drugs, or a mother who overdosed," says Mr Humphreys. "That cuts off the new flow of initiates." There is some evidence that the opioid crisis is entering this phase. The number of teenagers reporting misuse of prescription opioids has fallen by more than half in the past five years. But the stock of those already addicted remains.

According to the Substance Abuse and Mental Health Services Administration (SAMHSA), a government agency, 2.1m Americans meet the medical criteria for opioid addiction. Only 20% of them are receiving treatment. Although the official total is large, it is thought to be a severe underestimate. SAMHSA's own statistics show that 11.5m Americans misused prescription opioids in some way in 2016. Even with

Epidemic 2

United States, overdose death rate, all drugs

Per 100,000 population



Source: "Changing dynamics of the drug overdose epidemic in the United States from 1979 to 2016" by Jalal et al., *Science*, 2018

treatment, the condition is chronic and relapse is frequent. John Kelly of Harvard Medical School has estimated that it takes eight years, and four or five treatment attempts, for someone addicted to opioids to achieve a single year of abstention. Bit by bit, the stock atrophies. Some go into remission, others to prison. Each year, anywhere between 1% and 4% of them will die of an overdose.

Another team of modellers argues that the death curve might even continue its acceleration, whether from fentanyl or another drug as yet undiscovered. "Anyone who tells me otherwise has to show me why that curve should bend now when it hasn't in the face of the war on drugs and the rise and fall of other drugs," says Donald Burke, the dean of public health at the University of Pittsburgh. As long as there is a reservoir of at least 2m people addicted to opioids, there is significant room for the crisis to spread. With prescription pills selling for about $50 each on the streets, and a hit of heroin or fentanyl selling for $5 or less, that seems highly likely.

The one silver lining is that America is treating this epidemic more as a public-health crisis than one of criminal justice. This change is unquestionably related to race. During the crack epidemic of the 1980s and 1990s, when users were disproportionately black, authorities responded with punitive crackdowns. As the New Hampshire fire-station initiative shows, it is quite different for opioids, which kill whites at nearly twice the rate as blacks.

Though the newfound compassion is welcome, the public-health response remains woeful. The policies that help reduce death and harm from opioids are no mystery. Organised under the umbrella term "harm reduction", these approaches limit the negative consequences of drug-taking without expecting that people will stop. They include expanding naloxone distribution, needle exchanges and access to MAT. No policy can reverse the opioid crisis by itself—each of these chips away at the likely future death toll. Harm reduction has been shown to save lives and, by avoiding future policing, emergency and health costs, also save public money.

The approach has been successful in Europe. After France suffered a heroin epidemic in the 1980s and 1990s, the country established needle exchanges and drastically expanded access to MAT by allowing all doctors to prescribe buprenorphine, which reduces cravings. Four years later, heroin deaths had dropped by 79%. In the 1980s Switzerland had the highest AIDS incidence rates in Europe because of shared needles among heroin users. In the mid-1990s the government began a programme of heroin-assisted treatment, providing medical-grade heroin with clean needles in sterile facilities. Deaths from overdoses and AIDS declined by more than 50% in a decade.

Substituting one for the other

America is not Switzerland. Taxpayer-sponsored heroin therapy is unlikely any time soon. But even less controversial harm-reduction policies are being stymied by governmental inertia and a misunderstanding of the evidence.

In Kensington, a poor district of Philadelphia, drugs are sold in broad daylight. Men without coats sway in the frigid air, before crumpling against a wall. There is rubbish everywhere, blown by the wind alongside discarded orange caps from syringes. Pawn shops that will buy anything line the main street. Philadelphia has the highest opioid-overdose death rate of America's big cities.

Jose Benitez, the director of a needle exchange in the city, is working to set up a safe-injection site in Kensington, which he thinks would save more than 100 lives a year. It would be the first of its kind in America, but the legal issues are immense. It is a federal felony to maintain a place for illicit drug use, and the justice department has made clear it will not tolerate what the deputy attorney-general calls "a taxpayer-sponsored haven to shoot up". Retorts Mr Benitez, "It's too important not to try it, because it's clear what the benefits are."

Even MAT, known as the gold-standard treatment for opioid addiction, faces hurdles. Tom Price, Donald Trump's former health secretary, unhelpfully dismissed the treatment as "substituting one opioid for another". Half of drug courts, which divert users from jails and into treatments, require abstention and do not allow MAT.

Access to treatment remains shackled by excessive medical regulations as well as the high costs and chaotic structure of American health care. To prescribe buprenorphine, doctors need a special waiver which requires eight hours of training. There is no such hurdle to prescribing of opioids that cause addiction. In fact, a doctor can prescribe buprenorphine without a special waiver if the purpose is to treat pain, but not if the purpose is to treat addiction. Methadone can only be distributed through speciality clinics, and cannot be given by primary-care doctors, as it is in Britain or Canada.

Sometimes the only place to help is in hospital after an overdose. Giving buprenorphine in the emergency room staves off withdrawal symptoms that might lead a patient to go straight out to find a new fix. Initial studies show that it is effective in preventing relapse. But it is still not commonly used in America. "Addiction should have parity," says William Goodman, chief medical officer of Catholic Medical Centre in Manchester. "You come into the emergency room with a heart attack, we'll treat you. You come in with addiction, we give you a card and tell you to call a number."

Because many opioid users are indigent, much substance-abuse treatment and behavioural therapy is paid for by Medicaid, the government health-insurance programme for the very poor. As the programme is administered by each state, the quality of care varies. Some Republican-led states have refused the Medicaid expansion out of their dislike for Obamacare, limiting access to treatment for residents. In 17 states Medicaid does not cover methadone treatment. In West Virginia, the state with the highest opioid-death rate in the country, Medicaid only began paying for it in January 2018.

This tendency—of sensible drugs policy emerging in fits and starts several years after the crisis has taken off—seems set to continue. But some regional leaders are fighting it. Two years ago, Chris Sununu, the governor of New Hampshire, met a woman in the rural north of the state who was struggling with addiction. She complained that all the treatment centres were more than 100 miles away from her home. "That's the problem right there," says Mr Sununu. "The geographic barrier between where people live and where they can get treatment." The incident inspired him to draw up a "hub-and-spoke" network of treatment centres to minimise travel time for the state's rural residents. He wants to link the treatment network with sophisticated data analysis. It is a good idea, but it began only last month.

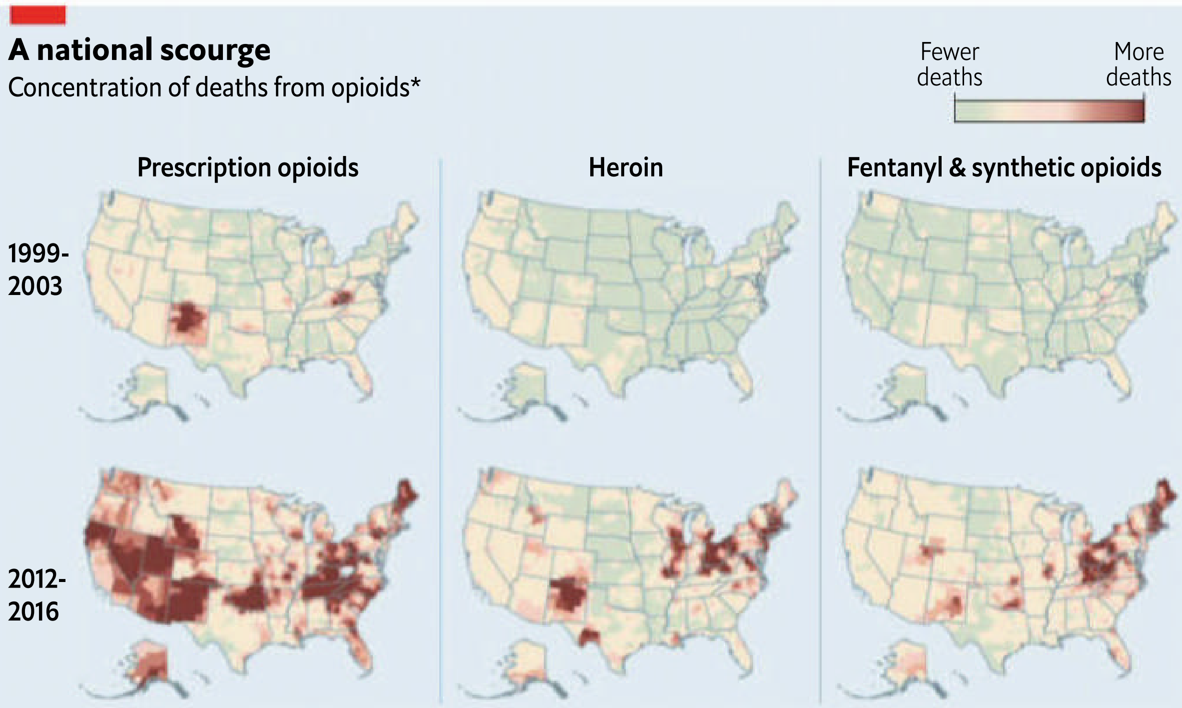
The White House Council of Economic Advisers estimates the total social cost of the opioid crisis to the country in 2015 was as high as $504bn, or 2.8% of GDP. Prosecutors of all sorts, from states to tiny towns, are trying to establish culpability, suing large opioid manufacturers and drug distributors in an effort to recoup some of those social costs. In 2007 Purdue's parent company paid $600m in fines over charges of "misbranding".

Whether a big financial settlement, like the $206bn deal reached with tobacco companies, will materialise is uncertain. The manufacturers might be able to argue that regulators were asleep at the wheel, and that doctors and the addicted patients themselves were responsible, thus avoiding a calamitous civil judgment. Even if a settlement does happen, it will be years in the future.

Right now the federal response remains weak. A bipartisan bill signed by President Donald Trump last year allocated just $1bn over two years. Thomas Farley, the health commissioner of Philadelphia, worked in public health at the height of the AIDS epidemic. He credits the huge injection of funds after the Ryan White CARE Act, passed in 1990, for helping defuse that crisis. "Ultimately a major federal response programme on AIDS allowed us to create a high-quality treatment system," he says. "With opioids, we haven't seen the federal government go anywhere near there." ■

A national scourge

Concentration of deaths from opioids*



Source: "Changing dynamics of the drug overdose epidemic in the United States from 1979 to 2016" by Jalal et al., *Science*, 2018

*Standard deviations above/below the pooled mean

Also in this section

Emergency power

The master builder

SAN DIEGO AND SILVER SPRING

Even if courts let the president have his wall, it will not fix what ails the border

A FEW HOURS after Donald Trump tweeted about "the attempted Invasion of Illegals, through large Caravans, into our Country", Carmen sat in a church office in suburban Maryland, quietly sobbing. Five years ago she and her son, who was then three, fled from El Salvador and her violent husband. "It's difficult to leave your country," she says. "You have your family and your friends. Your whole life is rooted there. But when it comes to your child's safety, I don't think there is anything a mother wouldn't do." They crossed Guatemala, Mexico and the Rio Grande before presenting themselves to immigration cops in New Mexico. After being detained, she applied for asylum, and was released to await a hearing. She is still waiting.

If America has a border crisis, it comes not from any sort of invasion—in the year to September 2018, the authorities caught 396,579 people trying to cross the southern border, fewer than half as many as in 2007—but from people like Carmen and her son: families fleeing troubled states in Central America to seek asylum. Mr Trump's steel-bollard fencing, even if it survives a legal and political assault, will do nothing to fix that problem.

Mr Trump wants to add 234 miles of fencing to the roughly 700 that already exist along America's border with Mexico. He has identified four sources to pay for it. Congress gave $1.4bn. He also plans to take $601m from the Treasury Department's asset-forfeiture funds and $2.5bn from the Defence Department's anti-drug fund. His administration argues that declaring a national emergency, which he did on February 15th, gives him access to $3.6bn appropriated for military-construction projects. Not everyone agrees.

Wall law

Public Citizen, an advocacy group, filed suit in a federal court hours after Mr Trump's declaration, on behalf of an environmental group as well as three landowners in Texas who believe they will face "an imminent invasion of their privacy and the quiet enjoyment of their land" during and after construction of the wall. They argue that historically low immigration numbers mean that no national emergency exists at the southern border. Mr Trump seemed to acknowledge that during a press conference, saying: "I didn't need to do this, but I'd rather do it much faster." They also argue that the statute Mr Trump has cited to let him use the $3.6bn does not apply, because the border wall is neither a military-construction project nor essential to support the mission of the armed forces.

Another suit, filed the next day in the same court by three environmental groups, centres on the harm to wildlife and other "far-reaching environmental impacts" that building a wall could cause. The plaintiffs acknowledge that the National Emergencies Act of 1976 fails to define "emergency". But, they contend, "common usage" of the term involves "elements of suddenness and surprise" that "require an urgent response". Not only did Mr Trump say he did not need to declare an emergency, he bandied the idea around for weeks before the declaration as a strategy to circumvent Congress if his budget negotiations failed.

On February 18th a group of 16 states sued Mr Trump in a federal court in San Francisco. They argue that his declaration evinces a "flagrant disregard of fundamental separation of powers principles ingrained in the United States constitution"—specifically the Appropriations Clause in Article I, which states that the government can spend only money provided by Congress. The states also argue that their National Guard units stand to lose millions in federal funding when the administration reallocates it to the wall.

At least one of these cases will probably end up before the Supreme Court, where precedent cuts both ways. On the one hand, courts typically defer to the president on questions of national security. On the other, the Supreme Court ruled against then-president Harry Truman in 1952, striking down his attempt to seize steel mills in *Youngstown Sheet & Tube Company v Sawyer*. In a concurring opinion that has come to define the limits of executive authority, Justice Robert Jackson wrote that when a president "takes measures incompatible with the expressed or implied will of Congress", his power "is at its lowest ebb". Mr Trump seems to be in that territory. Congressional Democrats will try to pass a resolution condemning his money grab.

A poisoned chalice

Yet even if courts invalidate Mr Trump's emergency declaration, he is likely to have almost $4.5bn to spend on a project of dubious practical utility. Christopher Wilson, of the Wilson Centre's Mexico Institute, believes the discussion over where to erect new fencing "would be a rational conversation…20 years ago, before we had 700 miles of fencing along the border. Now we're talking about where to put a 30-foot fence on top of a 1,000-foot mountain."

Walls work best, argues Doris Meissner of the Migration Policy Institute, a think-tank, "where urban areas touch other urban areas". El Paso and Juárez, for example, form a single binational conurbation bisected by the Rio Grande. In sparsely populated areas, cameras and remote sensors are sufficient for picking up suspicious movements; in cities people can slip across borders more easily.

Dee Margo, El Paso's mayor, says that he would favour spending not on a wall, but on more staff to process the tens of thousands of people, cars and lorries that cross the border daily. He is not alone. All but one member of Congress from a border district is a Democrat (see map), and all, including the lone Republican, oppose Mr Trump's wall. Fear-mongering about violent immigrants notwithstanding, 22 of the 23 border counties are safer than similarly sized counties elsewhere.

If the goal is to stanch the flow of drugs coming from Mexico, money would be better spent improving scanners and other infrastructure at ports of entry, where most of them arrive hidden in vehicles. Better data analytics would improve risk-screening for people and vehicles crossing. But not all new infrastructure has to be high-tech: Mr Wilson praises dogs for their ability to sniff out drugs. The spending bill includes $776m for such measures, which is welcome, but only a seventh of what Mr Trump wants to spend on his wall.

The bill also includes funds for another 75 immigration judges. That is also welcome but probably insufficient. Hiring tends to lag behind funding. In the last fiscal year Congress funded 484 immigration judges, but at year's end just 395 were working. And as of September there was a backlog of 319,000 pending asylum cases. Between 2010 and 2017 the number of asylum claims filed annually rose from 28,000 to 143,000, with many coming from Venezuela, Guatemala and El Salvador. Political instability and violence in Central America pushes people north. But some are also drawn by America's inefficient asylum system, which lets people stay and work while their claims are assessed.

The real problem is structural. America's immigration-enforcement system was designed to cope with the sort of migration that historically came from Mexico—single men looking for work, eager to dodge immigration police. It is not suited to today's flow, which consists largely of families and children eager to present themselves to police so they can claim asylum. Sadly, ambitious immigration reform has eluded Washington for years, and this administration is unlikely to take up that poisoned chalice (see Lexington).

Instead, it is poised to spend billions on a project that will let Mr Trump fulfil a campaign promise while changing little along the border. That money would be better spent on technology at ports of entry—and on improving America's asylum system so that it draws fewer people northward, and leaves fewer people, like Carmen and her son, in limbo for so long. ■

The 2020 election

Bernie runs again

WASHINGTON, DC

He is no longer the ideological outsider in the Democratic primary

BERNIE SANDERS, the self-declared socialist senator from Vermont, had a good long run against Hillary Clinton in the 2016 Democratic presidential primary. His left-wing pitch has fared even better. Slogans that were lampooned then—Medicare for all, a $15 nationwide minimum wage, free tuition at public colleges—are now mainstream. Among Democratic presidential hopefuls, fealty to these mantras can even seem mandatory.

In his announcement video, an 11-minute monologue, Mr Sanders sounded triumphant. "Three years ago during our 2016 campaign, when we brought forth our progressive agenda, we were told that our ideas were 'radical' and they were 'extreme'," Mr Sanders says. "Well, three years have come and gone." He sees a successful run in 2020 as a coda to his revolution. The antagonists remain the same this time round—billionaires, especially President Donald Trump; multinational companies; bad trade deals. But Mr Sanders also seems keen to talk about sexism towards women and racism against blacks, two groups that did not warm to him in 2016.

This time he enters a busy field with an agenda that is no longer outlandish. Elizabeth Warren, a Massachusetts senator, is another longtime idol of the left who brings other flashy ideas—such as a wealth tax and universal child-care—along with a stronger command of detail. Even Kamala

Harris, the Californian senator who took pains to say that she is "not a democratic socialist", has nonetheless endorsed Medicare for all, the Green New Deal and a $15 minimum wage. Mr Sanders may stand out, with his broadsides against banks and trade deals, but his ideological lane has become uncomfortably crowded.

What that means for his chances of winning is unclear. If Democratic primary voters are looking for a contest over ideological purity, then Mr Sanders, as the Medicare-for-all hipster who supported the idea before it was cool, is favourably positioned. He is performing well in early polls. On the morning of his announcement, punters on PredictIt, a political-betting market, thought him a leading candidate, trailing only Ms Harris and Joe Biden (who has not yet announced his plans). They rated him twice as likely to be the candidate as Ms Warren.

But if voters prize electability, Mr Sanders has less of a chance. Even if there is now little daylight between him and his primary rivals, the label of out-and-out socialist could hinder him. Mr Trump's strategists see fear-mongering over socialism as a winning strategy. His re-election campaign quickly released a statement denouncing "an agenda of sky-high tax rates, government-run health care and coddling dictators like those in Venezuela".

If elected, Mr Sanders would be inaugurated at the spry age of 79. His Democratic rivals might be too courteous to bring that up. But Mr Trump, though just five years younger, surely would. In an interview with a local radio station, Mr Sanders was eager to tackle that criticism: "We have got to look at candidates not by the colour of their skin, not by their sexual orientation or by gender, and not by their age". He also noted that he has "a great deal of energy". ■

Chicago and Rahm Emanuel

The heat-seeking missile

CHICAGO

How America's third-biggest city fared under its abrasive, energetic mayor

RAHM EMANUEL is restless. He swallows an indigestion tablet, buttons a blue cardigan, then paces his office on the fifth floor of City Hall. On February 26th voters will choose between 14 candidates vying to replace him as mayor of Chicago. How does he think his two terms will be remembered? Predecessors let problems fester, he says, but "there wasn't a single challenge we didn't attack". City debt, a lack of corporate investment, rotten schools, violence, racial segregation, corruption—all have long blighted America's third-biggest city. "But we never walked away," he says.

Take his boasts with a pinch of salt. When pressed on Chicago's large, lingering fiscal problems he is scornful, slaps your correspondent's knee, then adds a sharp kick to his foot. "Nobody in public life solves anything. They improve it. If you're here to solve it, call me," he says.

Mr Emanuel shrank the city's structural deficit by hundreds of millions of dollars by cutting spending and increasing taxes. He has also been prone to raising new debt to pay off old, a bad habit known locally as "scoop and toss". But Chicago's finances never deteriorated as much as, say, Detroit's, because the city's economic engine kept whirring.

David Axelrod, an ally from when both men worked for Barack Obama, praises the mayor as energetic, like a heat-seeking missile. "He is a brilliant guy, for all his quirks," he says. In particular, Mr Axelrod admires him for tackling the city's enormous fiscal problems. Credit-rating agencies have grown more optimistic about Chicago, after listing its bonds as junk. But the city's long-term fiscal health is still doubtful. Ed Bachrach, co-author of a new book on Chicago, says overall city debt rose from $7.5bn to $9.7bn in seven years to 2017. Worse is a colossal, unfunded liability of some $40bn for pensions of city workers. Even Mr Emanuel admits he only "stopped the bleeding".

The wider economy is doing well, though the city can seem cut off from the rest of Chicagoland, as the cluster of suburban cities around Chicago is known. Disputes occasionally flare, as when Chicago politicians talk of expanding city limits around O'Hare airport. Some mayors strive to co-operate with their suburban neighbours to get things done—John Hickenlooper, who ran Denver between 2003 and 2011, was a good example. Mr Emanuel has preferred distant horizons, branding his as a "global city". A two-decade-old Chicagoland "Mayors' Caucus" does little.

At least Chicago's 2.7m population is stable after decades of decline. Its jobless rate is just 4% and poverty is falling. Last year nearly 58m tourists came for theatre, comedy, sports and museums. New walking and cycle tracks have been built by the river and lake. By one measure O'Hare again claims to be America's busiest airport. It is set for a $12bn expansion.

Mr Emanuel prodded firms such as McDonald's to bring their headquarters to Chicago. The metropolis draws more foreign direct investment projects than any in America and is behind only London, Paris, Singapore and Amsterdam worldwide. Manufacturing, which still employs 9% of workers, is surprisingly strong. Ford announced on February 7th that it would add 500 jobs to a factory in the city.

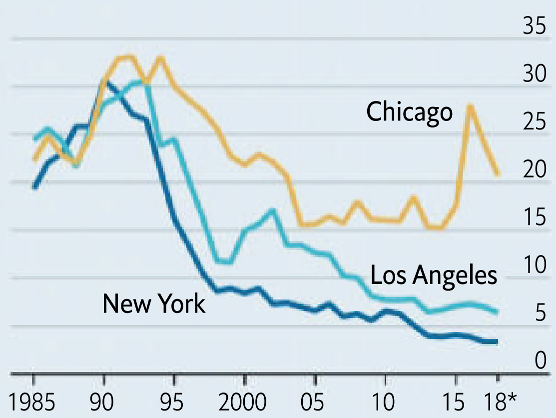
Chicago's school system used to be a national joke. It was long dominated by intransigent teachers' unions and almost went bust. At last that is changing. Longer school days, shorter holidays and the belated introduction of universal pre-school mean that children spend more time studying. Mr Emanuel claims the average child will gain the equivalent of an extra four years in school as a result.

The mayor also closed 48 underused schools in poor, depopulating neighbourhoods. He is defensive about that, admitting it was "tough on them, on families, on ▸▸

His language is salty enough

Unfortunate exception

United States, murders per 100,000 people



Sources: FBI Uniform Crime Reporting; city police departments

*Preliminary

me politically". Black residents, almost the only ones affected, turned on him; Mr Axelrod says he should have found a way to soften the blow in already suffering districts. But the decision made sense, given a financially strained school system with capacity for 550,000 but only 360,000 children enrolled.

As important, head teachers got more autonomy and added courses for high achievers—38,000 children are enrolled in International Baccalaureate programmes. Results are improving. More pupils finish: a pitiful 56% graduated seven years ago, whereas 78% do so now. The head of city schools, Janice Jackson, says that "for the first time there is a comprehensive push" to get everyone to complete high school.

If Mr Emanuel thinks everything has gone so well, why did he back out of his well-funded bid for a third term last September? He says he was dissuaded by seeing polls that indicated he could win. Had they indicated the opposite, the ultra-competitive politician claims he would have relished the challenge, "because that's the weird psychology of a middle Jewish kid". Instead the 59-year-old will write a book, earn money somewhere and plot an eventual return to public life.

Next up: somebody blander

More probably, he knew he faced a brutal campaign. In 2015 he was only narrowly re-elected. Black voters, one-third of the electorate, used to support him, but many resent the school closures and the persistence of violence and poverty in their districts. Chicago has failed to match the success of New York and Los Angeles in cutting murder rates sharply (see chart).

The police chief, Eddie Johnson, praises a surge of 1,000 new officers and other efforts, like the "Becoming a Man" programme to deter 7,500 school pupils from being drawn into gangs. But many think the mayor has failed badly on crime. Mr Emanuel is scorned especially for a delay in the release of police footage of a policeman shooting Laquan McDonald, a black teenager, 16 times in 2014.

After the video at last emerged in November 2015, violence soared and Mr Emanuel's chances of re-election slumped. The policeman involved was recently found guilty, the first murder conviction of a serving officer in decades. That trial, under way as the campaign began, would have overwhelmed Mr Emanuel's message. The mayor said he would not run the day before it started.

What are Chicago's prospects after him? Mayors usually are "larger than life and embody the energy" of a mighty urban centre, says Mr Axelrod. That hardly seems true of the people competing to succeed Mr Emanuel. Only Bill Daley, a stolid man who is the son and brother of two other long-serving mayors, might be recognised outside the Windy City. He is backed by rich donors who hope he will extend Chicago's economic recovery. He might manage that, but he's no missile. ■

Social media and law enforcement

Watching: The detectives

WASHINGTON, DC

How the police track what people say and do online

SHOULD THE police monitor social media? The question seems to have an obvious answer. Social media, says Joe Giacalone, a retired New York Police Department detective who now teaches at John Jay College, is "a treasure trove for investigators. People post stuff they shouldn't...vehicles, weapons, you name it. If you're dumb enough to post something on social media and you're wanted for a crime, you deserve to get caught." In this sense, social media is no different from any other public space. If criminals brag about or plot their exploits publicly online, police should be able to use that information without obtaining a warrant, just as if they overheard chatter in a bar or on a street corner.

But there is a difference between an individual officer looking at posts from someone suspected or accused of a specific crime, and the sort of mass monitoring made possible by data-scraping and automated surveillance. There is also a difference between looking for evidence of criminal activity and monitoring politically unpopular, but still legally protected, speech. Records obtained by the American Civil Liberties Union of Northern California (ACLU-NC) revealed that in 2015 a police department in Fresno used a social-media monitoring firm that boasted it could "avoid the warrant process when identifying social-media accounts for particular individuals," and could "identify threats to public safety" by monitoring terms including "policebrutality", "wewantjustice", "Dissent" and "Blacklivesmatter". Other law-enforcement agencies in California used a similar service whose marketing materials referred to "unions [and] activist groups" as "overt threats".

Nor is such monitoring limited to state and local police forces. Immigration and Customs Enforcement hoovers up vast amounts of information, including from social-media posts. On January 17th the ACLU-NC sued seven federal agencies that failed to respond properly to Freedom of Information Act requests about their social-media surveillance. The only agency that responded at all was the FBI, which could "neither confirm nor deny the existence of records".

While some might applaud the FBI for tracking threats online, others recall its Cointelpro initiative, which lasted from 1956 to 1971 and involved surveillance and infiltration of groups the agency deemed subversive, including civil-rights organisations. In 2017 an FBI report warned of terror threats from a "Black Identity Extremist" movement; some fear that police agencies will once again subject activists to disproportionate and extra-legal scrutiny, and in so doing chill protected speech and rights of association.

As in other debates over the surveillance of public spaces, targeting, scale and cost all matter. Few people would object to police tracking known or even suspected criminals online; more would agree with Matt Cagle, the ACLU-NC's technology and civil-liberties lawyer, that "government should not be conducting suspicionless surveillance of First Amendment-protected activity." Similarly, most people probably understand that their social-media ▸▸

Correction: In "Old prejudice in new tweets" (Feb 16th) we described Tom Steyer as Jewish. He is an Episcopalian of Jewish descent.

posts are public (to varying extents, depending on how they use their privacy settings). They might be uncomfortable if they knew that the government could, without a warrant, collect and search everything they have ever posted.

Although police can follow someone in public without a warrant, doing so means that an officer thinks it worth his time. Data-mining programs make it possible to track millions of people online with minimal effort. Technology, says Rachel Levinson-Waldman, senior counsel to the Brennan Centre's Liberty and National Security Programme, "enables a much more significant level of surveillance at a much lower cost". As people live more of their lives online, surveillance will inevitably follow. Americans must decide how much of it they are willing to tolerate. ■

The revival of Hawaiian

Speak, memory

How the Hawaiian language came back from near-extinction

Ma uka, ma uka ka ua,
Ma kai, ma kai ka ua

SO SING THE children at Hawaii's Punana Leo O Hilo kindergarten on the Big Island of Hawaii. "It is raining on the uplands, it is raining by the sea." The chant is much like any other "Rain, rain, go away" nursery rhyme, but it has an unusual power: it is one of the tools that has brought about the revival of a near-dead language.

The decline of Hawaiian was not, as is the case with most disappearing languages, a natural demise caused by migration and mass media. In 1896, after the overthrow of the Hawaiian monarchy by American business interests, schools were banned from using the language, and children were beaten for speaking it. By the late 20th century, aside from a couple of hundred people on one tiny island, English had replaced Hawaiian and only the old spoke the language to each other.

The civil-rights movement brought a revival of interest among the young, centred on the University of Hawaii at Hilo. Larry Kimura, a professor there, was not satisfied that the language should be merely a subject taught at college: he and his students wanted to bring it back to life. The idea for how to do that came from a visiting Maori, who suggested "language nests", which had been successfully used to revive New Zealand's native language.

In 1985, when educating children in Hawaiian was still banned, Kauanoe Kamana and her husband Pila Wilson, both students of Kimura's, created the first Punana Leo (which means "language nest") at Hilo. Neither was a native speaker, but both were determined to bring up their children as such. They gathered together a small group of children, including their own son and daughter, and elderly native speakers. The movement grew: there are now 12 kindergartens and 23 schools, some of them stand-alone Hawaiian-medium schools, some Hawaiian-medium strands within English-medium schools. The number of children being educated in Hawaiian has risen from 1,877 in 2008 to 3,028 in 2018. Along with Japanese, Hawaiian is the non-English language most commonly spoken among children.

The success has been hard-won. Campaigners had to get the law changed, and they also had to fight scepticism. "People in the community, even in our families, were saying: 'You'll ruin your children's future, they won't be able to go to college, they'll be total failures'." Such fears turned out to be unfounded. All the pupils at Nawahi, the main Hawaiian-medium school, complete high school, compared with the state average of 83%; 87% go to college, compared with a state average of 55%.

But academic outcomes are not the primary focus, says Mr Wilson. "We value our connection with our ancestors more than we value being millionaires," he says. Mr Kimura explains that the schools have allowed Hawaiians to pass on their culture, including the creation myths written by Kalakaua, Hawaii's last king. "You folks have heirlooms," he says of the British relationship to its monarchy. "We don't. These are our crown jewels."

Combating the dominance of English is tough. Seventeen-year-old Kalamanamana Harman, who has been educated entirely in Hawaiian—and, with a place at Dartmouth, is one of the movement's academic success stories—says that the wobbly moment for young Hawaiian-speakers comes at the beginning of high school. "At the age of 13, we tend to speak English a lot. It's kind of like a virus." But Hawaiian has a different sort of power. "We like to use it outside school, just to communicate in a secret language, so other kids want to learn it." She is teaching it to the non-Hawaiian-speakers in her football team.

Efforts have been made to revive other American languages. The most notable has been the rebirth of a truly dead language, Wopanaak, which used to be spoken by the Mashpee Wampanoag tribe of Massachusetts but died out in the 19th century. Fortunately, a 17th-century translation of the Bible into Wopanaak made reclamation possible, and it is now the medium of instruction in a kindergarten modelled on Punana Leo. But none has got as far as Hawaiian. "If you look around the world, it's a very rare success," says Andrew Cowell of the University of Colorado. He attributes that to the advantage of exclusivity—it is the only Native American language in Hawaii, whereas many states have a number of different tribes, each with its own language—and to support from the university.

Kalamanamana Harman recalls a sense of isolation when she was brought up as a Hawaiian-speaker. "It's hard being different from other kids," she says, "but you see the value of it over time." She intends to bring up her children as Hawaiian-speakers. Recalling her kindergarten days, she sings a snatch of the "Rain, rain, go away" chant, and points out that her name in Hawaiian means "rays of the sun". ■

Lexington | Diversity and its discontents

Donald Trump's real target is not illegal immigration but a vast, unstoppable increase in diversity

When Juan Garcia started work as an urban planner for the government of Gaston County in 1997, he reckons he was the only Latino among its 1,400 employees. Hub of a dying textiles industry, on the western edge of Charlotte, the county was missing out on the boom already rippling through the periphery of North Carolina's most dynamic city. For that reason Gastonia, its altogether less zippy capital, was not seeing many of the Mexican immigrants then pouring into the state, to labour on the building sites erupting in Charlotte and revive the poultry industry in Union County, east of the city. But this was about to change.

Finding opportunities overlooked by others in Gastonia's rundown factories and mills, migrants started settling in the town's trailer parks and poor black neighbourhoods. Its Hispanic population soared, to around 6,000, or 9% of the total, within a few years. This caused friction with Gastonia's white majority, recalls Mr Garcia, who was born in Colombia. "Mexicans like to get physically closer when they're talking to you than Anglos do. They might slaughter a chicken in their yard. They play loud music there." But the ill-will rarely went beyond grumbling about the migrants' poor English. Some in Gastonia said this reflected the much deeper tensions in the South between whites and blacks. Resentment of immigrants was only a brief distraction from that main drama. In any event, the migrants, many of whom had either moved from Texas or come directly from the Rio Grande, expected no favours. "So long as you treat people the right way, you're all right," shrugged Elvira, who came to North Carolina to pick tobacco 25 years ago and now works at the "Las Americas" supermarket in Gastonia.

The influx of Hispanics to the town, and hundreds of unfashionable cities like it, illustrates how much they have changed America over the past three decades. The Hispanic population has risen ninefold since the 1960s, to around 60m. Its members, many of them second- and third-generation immigrants, are dispersing across the country, driving growth and changing the social fabric wherever they go. While the white population is on the cusp of declining, most states have flourishing Hispanic communities. North Carolina, which had around 40,000 Hispanics in 1990, now has almost a million. The high growth rates it has meanwhile sustained owe a lot to this migrant infusion.

To men like Julian, in other words, who had popped into Las Americas on a half-hour break between his jobs. From 5.45am to 3.30pm he works as a machinist in one of Gastonia's surviving looms; between 4pm and 11pm he drives a fork-lift in a packaging factory. Thus have Gastonia's Hispanics filled gaps in its old industries, taking low-skilled jobs that blacks and whites no longer want. Meanwhile the many small landscaping and construction businesses they launched have forged an overdue connection between Gastonia and the new services-based economy of the South, a 20-minute drive across the Catawba river in Charlotte. Recognising the community's importance, as well as its needs, Gaston County now employs over 100 Hispanic public servants, with a premium on bilingual doctors, nurses and social workers.

This transformation is the essential context in which to view Donald Trump's talk of a crisis at the southern border. The president appears to be motivated less by genuine concern for the state of the border than by his white supporters' feelings of anxiety over demographic change. His promise of a border-wall, which few immigration experts think America needs, following a steep decline in the number of illegal crossings, is a sign of that. In fact, were Mr Trump not so obviously using his promised border-wall as a political device, he might have built one by now. Last year he turned down an offer from the Democrats that would have given him wall money in return for comprehensive immigration reform—far more money than his emergency is likely to get him. In short, the physical promise of the wall is largely a figment. It is a symbol of Mr Trump's tacit pledge to his white supporters to defend them against the diversifying of American society that many fear. It is too late for that, however. Most of the growth in America's Hispanic population is the result of natural increase, not immigration. Mr Trump's nativist stand is positively Canute-like.

It also carries great costs. The most important is the forgone opportunity to cauterise America's immigration sore that his presidency represents. The anxiety of Mr Trump's followers is exacerbated—explained, even—by the chaotic legacy of decades of illegal immigration. It stands to reason that America's roughly 11m illegal migrants, most of whom are Hispanic, are willing to work harder, in tougher conditions, than indigenous people. Economists may argue over the effect of that on wages; but it is a theoretical disadvantage to natives that they are bound to resent.

Meanwhile the insecurity illegal migrants live with is a barrier to assimilation, which also causes tension. It was fairly amazing that most of the shoppers in Las Americas, despite having spent years in America, spoke little or no English. The answer to these tangled problems has long been clear. America needs to regularise the status of millions of illegal immigrants, while further improving border security to win consent for that change. Given Mr Trump's hold on the nativist right, he could have done this. Yet that would have required him to want to fix the mess, and not seek to profit from it.

A wave is coming

The pay-off for his party will be short-lived, however, because of another development among Hispanics. For several reasons, including the fact that many are illegal and unable to vote, their political clout has lagged behind their numerical rise. In North Carolina, they are 10% of the population and 3% of registered voters. Yet Hispanic citizens are now entering the property-owning middle-class in vast numbers. The looming calamity for Republicans, who have done so much to alienate them, is that such people vote. ■

Brazilian politics

Facing the pensions conundrum

Congress may yet water down Jair Bolsonaro's biggest economic reform

JAIR BOLSONARO won last October's presidential election in Brazil by railing against crime and corruption. But the success of his presidency depends on whether he can revive the torpid economy. He can only do that if he reassures investors by reforming the country's absurdly generous pension systems, which imperil public finances. On February 20th Mr Bolsonaro presented congress with a draft constitutional amendment to bring pension spending under control. He then went on television to promote a reform that he promised would "change our history".

Mr Bolsonaro has sent mixed signals on pensions, which funnel benefits mainly to better-off Brazilians and will become increasingly unaffordable as the population ages. The government spends 12% of GDP on pensions, compared with 8% among the rich countries of the OECD. Mr Bolsonaro raised hopes of reform by naming Paulo Guedes, a former investment banker and determined moderniser, as his economy minister. Mr Bolsonaro, who confesses to knowing little about economics, calls Mr Guedes his "Posto Ipiranga", a full-service petrol station. On the other hand, when he was a congressman Mr Bolsonaro opposed a pension-reform plan backed by the previous president, Michel Temer. After the election he criticised Mr Temer's scheme again, saying "we can't save Brazil by killing old people."

The package that the president proposed this week shows that Mr Guedes has won the argument, at least for the moment. It would set minimum retirement ages of 65 for most employed men and 62 for most women, which is what Mr Temer suggested. What's more, the proposed 12-year transition period is shorter than Mr Temer's 21 years. Currently, people start drawing pensions on average in their mid-50s, after paying into the system for at least 30 years.

The plan would raise contributions paid by people with higher incomes and limit the extent to which pensioners can collect more than one benefit. Rules for public servants would be brought closer to those for private-sector workers.

If congress enacts the proposal in full, the government would save 1.1trn reais ($295bn) over ten years, more than 1% of expected GDP over the period. That is higher than the 800bn reais of savings in Mr Temer's original plan. The package "seems to go in the direction of reducing imbalances significantly," says Mario Mesquita, an economist at Itaú, a Brazilian bank.

It must now get through congress, where three-fifths majorities are needed in both houses to amend the constitution. Few observers expect it to pass without changes. The question is how damaging those changes will be. Congress cut the expected savings from Mr Temer's proposal in half. (It eventually failed after allegations of corruption forced him to spend all his political capital on persuading congress to shield him from prosecution.)

Mr Bolsonaro has advantages that his predecessor lacked. Allies lead both houses. Even politicians who do not support him now think that pensions must be fixed, as does the broader public. "There's consensus about the need and urgency for reform," says Tasso Jereissati, a senator from the centrist Brazilian Social Democracy Party, which supports the government's economic agenda. BTG Pactual, an investment bank co-founded by Mr Guedes, found that 83% of congress members support some sort of pensions reform.

But, as Mr Jereissati admits, "there's a wide spectrum" of views about what sort. Just 38% of legislators agree with the proposed minimum ages. Most voters also think they are too high, according to a poll by XP Investimentos, a broker. Mr Bolsonaro has made his job harder by refusing to reward supporters with patronage, the normal way of forming majorities in congress.

His two-month-old presidency is already engulfed in scandal, which makes things still harder. The latest follows revelations by *Folha de São Paulo*, a newspaper, that Mr Bolsonaro's Social Liberal Party had put up fake candidates in order to fill gender quotas and receive public campaign money. On February 18th Mr Bolsonaro sacked Gustavio Bebianno, the party's former chairman, from his cabinet job.

Such dramas will probably not destroy pension reform. Eurasia Group, a political consultancy, puts the odds of no reform at ▸▸

all this year at 30%. But they may weaken the government, forcing it to make concessions to interest groups that would be hurt by change. Already, proposals for new rules for military pensions have been postponed by 30 days. Moody's, a credit-rating agency, predicts that congress will reduce savings from the reform to 600bn-800bn reais. Even so, investors would be reassured, Moody's says.

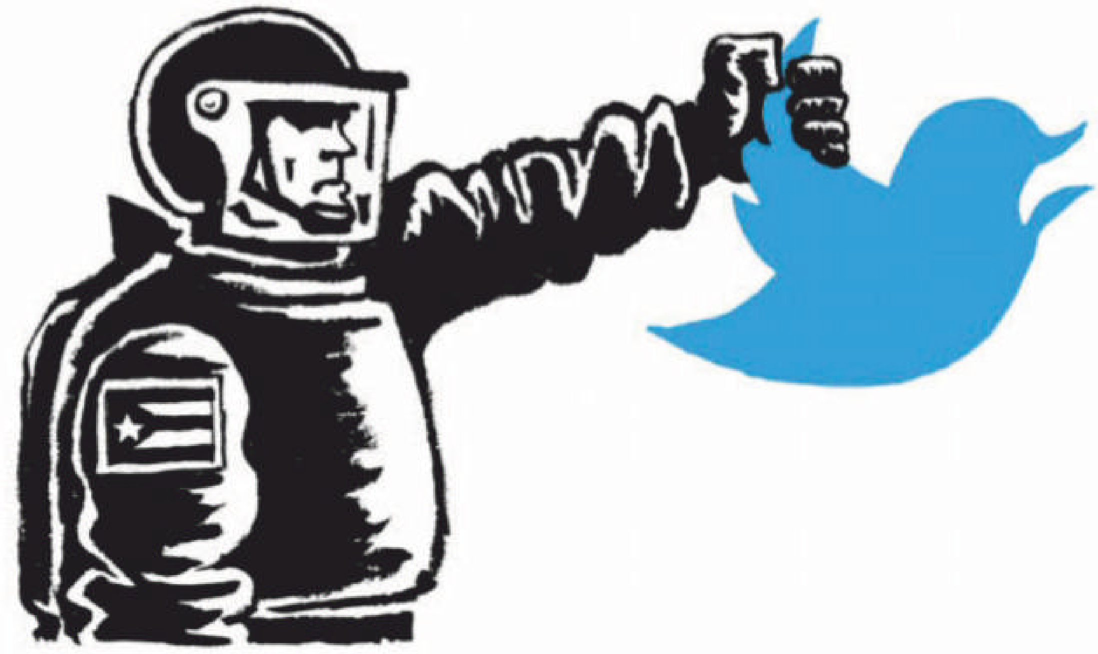
Mr Guedes's ambitions do not end with pension reform. They include simplifying the tax code and reducing barriers to imports. "We're going to privatise everything," says a member of his team. To achieve such goals, Mr Guedes will have to overcome opposition from the retired generals in Mr Bolsonaro's cabinet, who are loth to sell such "strategic" assets as Petrobras, the state-controlled oil company. Industry will resist lower import barriers.

Right now, the government is throwing its weight behind "*nova previdência*" ("new pensions"). The economy ministry reportedly plans a social-media blitz to argue that reform will reduce inequality, create jobs and release money for such public services as health and education. All that is true, and has been for a long time. Perhaps this time Brazilians will believe it. ■

Cuba

Twitter, but not better

The regime is tweeting. That does not make it more tolerant of dissent



THE DAY BEFORE Miguel Díaz-Canel became president of Cuba last April, a newscaster on state-controlled television urged Cubans to join in a *tuitazo* (outpouring of tweets). The hashtags he proposed were PorCuba ("ForCuba") and SomosContinuidad ("WeAreContinuity"). Mr Díaz-Canel himself joined Twitter in August. For the first few weeks he followed only Nicolás Maduro, Venezuela's embattled despot, and Evo Morales, Bolivia's leftist president. In December, in an attempt to make Cuba's dictatorship appear more accountable to its people, he instructed government departments to make themselves more visible on social media. Now 24 of the 26 ministries tweet, as do most of the ministers who lead them.

Increasingly, Cuba's 11m citizens can tweet back. In December 3G mobile networks became available to anyone on the communist island for the first time. Previously, Cubans' main access to the internet was through public Wi-Fi hotspots, for which they pay by the hour. Just 37,000 homes have internet connections. Access to 3G, which is paid for by the megabyte, encourages Cubans to migrate from data-hungry services like Facebook and Instagram to less-voracious Twitter. By the end of January the country's 5.3m mobile-phone owners had bought nearly 1.4m 3G packages.

Two-way tweeting seems to narrow the distance between rulers and ruled. After a tornado struck Havana in January, Betsey Díaz Velázquez, the minister of internal trade, tweeted a list of discounted food available to people in the affected area. When people scolded the government by tweet for failing to provide for those who had lost their homes, she offered them free food. "A year ago I couldn't name a single Cuban minister," said Camilo Condis, an entrepreneur, last December. "Now I know all their handles, recognise their faces, and I've even had a chance to interact with some of them."

Lately, though, the conversation has turned angry. The ill-will arises from the government's attempt to enact a new constitution through a referendum to be held on February 24th. It would make modest changes to the existing constitution, such as legalising private property (subject to regulation by the state) and limiting the president to two five-year terms. Tempers flared after the national assembly announced in December (by tweet) that a provision allowing for same-sex marriage would be dropped. In its place is a fudge that would recognise marriage as a "social and legal institution", to be defined later.

Cubans who favour gay rights vented using the hashtag YoVotoNo (IVoteNo). Its use has widened to include other gripes about the new charter, such as its failure to allow Cubans to elect their leaders directly. Few expect the referendum to be a fair vote. The hashtag has become so popular that the government felt obliged to counter with YoVotoSi ("IVoteYes").

This has been plastered on buses, state-run grocery stores and ice-cream parlours. At the annual parade on January 28th in honour of José Martí, a hero of independence, the government distributed T-shirts—a luxury in Cuba—emblazoned with the pro-constitution hashtag. People who disagree too actively with the sentiment have been detained and roughed up by police. Cuba's rulers have learned how to tweet, but they have not forgotten how to shut people up. ■

Canada

Butts out

OTTAWA

The resignation of Justin Trudeau's closest aide has not calmed a scandal

WHEN JUSTIN TRUDEAU, Canada's prime minister, demoted Jody Wilson-Raybould, the justice minister and attorney-general, in a cabinet shuffle on January 14th he gave no explanation. On February 7th the *Globe and Mail*, a newspaper, provided one. It quoted anonymous sources as saying that Ms Wilson-Raybould was being punished for resisting pressure from someone in the prime minister's office to drop the prosecution for fraud of SNC-Lavalin, a construction and engineering firm. The company, which is accused of paying bribes in Libya during the rule of Muammar Qaddafi, would have been let off with a fine, the report alleged.

Mr Trudeau denied that he gave such instructions to Ms Wilson-Raybould. Her presence in cabinet, as minister of veterans' affairs, was proof there was nothing to the story, he said on February 11th. She resigned the next day. Now Gerald Butts, the prime minister's principal secretary, has followed her. He quit on February 18th, saying that neither he nor Mr Trudeau's staff had put pressure on the justice minister. ▸▸

This is a grievous loss to Mr Trudeau. Mr Butts was a close friend, who helped him lift the Liberals from third-party status to win the election in 2015. Both men no doubt hope that Mr Butts's departure will calm the controversy before the next election due in October. The Liberals trail behind the Conservatives in the polls.

That seems a vain hope. Mr Butts's resignation "does not in any way settle this matter", said Andrew Scheer, the Conservatives' leader. The scandal has brought Mr Trudeau's foes together. Conservatives and the New Democrats, a left-leaning opposition party, had already secured investigations by the parliamentary ethics commissioner and the House of Commons justice committee. Now they are demanding a separate independent inquiry into the government's handling of the SNC-Lavalin case.

This was never going to be an easy year for Mr Trudeau. Canada's relations with the United States are tense. Ontario, the most populous province, has taken the federal government to court over its plan to impose a national price for carbon emissions. Energy-rich Alberta accuses Mr Trudeau of moving too slowly to build an oil pipeline. On February 19th a convoy of lorries from Alberta came to Ottawa to make that point.

More damage may be on the way. Ms Wilson-Raybould has so far refused to comment on the SNC-Lavalin affair, but is expected to testify before the justice committee on February 25th. As attorney-general, she gave advice to the government that is subject to solicitor-client privilege. She has hired a former justice of the Supreme Court to advise her on what she can say. If she speaks about the substance of the accusations, and does not back up Mr Trudeau's story, he will be in grave trouble. ■

Bello The return of the Monroe doctrine?

Donald Trump, the implausible would-be liberator of Venezuela

FOR THE PAST month most of the democratic world has united in an effort to remove Nicolás Maduro, Venezuela's dictator, through popular, diplomatic and economic pressure. Some 50 countries have recognised Juan Guaidó, the speaker of the national assembly, as the country's interim president with the aim of forcing a democratic election. On this issue, Donald Trump, who has led the offensive, has enjoyed both international support and bipartisan backing at home.

The American president seemed to care little for nurturing that consensus on February 18th, when he gave a speech in Miami about Venezuela that grazed the line separating foreign policy from domestic politics. He let off a fusillade against "socialism and communism". The speech seemed directed at shoring up his support in Florida, a swing state with lots of voters who have Cuban and Venezuelan roots. By conflating "socialism" with totalitarian communism, Mr Trump was taking a swipe at Democrats who have recently adopted that word. But he was also ignoring the fact that the opposition to Mr Maduro in Venezuela and in Latin America includes moderate socialists.

For some, Mr Trump's muscular embrace of the cause of democracy in Venezuela seems odd. In other places he has been happy to embrace dictators and ignore the erosion of human rights. Nevertheless, Latin American leaders who have met the president since 2017 say that he has always raised the issue of Venezuela. That may be because of the Florida connection.

Administration officials say that Venezuela is different because it is "in our hemisphere". It has a direct impact on the United States: mass emigration and Venezuela's tolerance of drug trafficking and Colombian guerrillas in its territory destabilise the region. But there is an echo, too, of the Monroe Doctrine. Formulated by President James Monroe in 1823, this was an expression of solidarity with the fledgling Latin American republics against European absolute monarchies. But it became the cloak for interventions, especially against elected left-wing governments during the cold war. It is because of that history that when Mr Trump repeats that "all options are open" in Venezuela, many Latin Americans part company with him. But not all: some Venezuelans in exile have long wanted the United States to use force to remove Mr Maduro and his Cuban backers, pointing to the suffering they are inflicting.

Mr Trump does not like foreign wars; his threats are intended to persuade the army commanders in Caracas to switch sides. Perhaps they will, but there is little sign of it. The immediate focus of the administration and Mr Guaidó is February 23rd, when they plan to deliver food and medicines, which Mr Maduro has promised to block. The longer he survives, the more pressure Mr Trump will face to turn threats into action. What might be the implications of a military intervention?

A quick victory would, perhaps, have few detractors. Some point to the relatively low cost of the invasion of Panama in 1989. This toppled General Manuel Noriega in six weeks: 23 Americans were killed, along with some 300 Panamanian soldiers and the same number of civilians. But Panama is a pocket state. It had American bases and no proper army. Venezuela is a very different proposition.

Optimists claim that its army would not put up a fight. It is corrupt, top heavy, has no modern combat experience and its kit is poorly maintained. "They underestimate us," said General Vladimir Padrino, Mr Maduro's defence minister, in response to Mr Trump's speech. "We are called upon to carry out our historic task: defending the fatherland." Outsiders tend to play down the ideological commitment of some in the armed forces. Military units have political commissars, many of them Cubans. Even if most of the air force's 23 Sukhoi jets are grounded, it only needs one to be operational to, say, bomb Bogotá, if Colombia becomes the launchpad for a military intervention. There are many guns in the hands of pro-regime militias. Venezuela has a tradition of guerrilla warfare.

An American invasion would thus be highly risky. It would also be counterproductive, because it would deprive a new government of legitimacy and revive anti-imperialism across Latin America when the main issue is the defence of democracy. Yes, Cuba is intervening in Venezuela, and there is scant evidence that Mr Maduro will go peacefully. Even so, maintaining the broadest possible political front against him remains the best option.

India and Pakistan

Modi's jaw-breaking threats

DELHI

An election raises the stakes as India weighs its response to the latest of many Pakistan-backed terrorist outrages

"IT'S TIME to repay Pakistan in its own coin," snarls India's rumpled but brilliant national-security adviser, plotting vengeance for a terrorist attack. Soon after, in this season's runaway hit film, "Uri: The Surgical Strike", muscled Indian commandos resoundingly smite the enemy. As in Bollywood, so, perhaps, in real life. After a Pakistan-based jihadist group claimed responsibility for a suicide-bombing on February 14th that killed some 40 Indian paramilitary police, Narendra Modi, India's prime minister, promised a "jaw-breaking" response. Suspense is mounting as to how and when, rather than if, India plans to punish Pakistan.

Some repayment has already been inflicted. India has suspended Pakistan's favoured trading status, slapping a 200% duty on its products. This will not hurt much. India imports less than $500m of Pakistani goods a year. Security forces in Kashmir did also swiftly find and kill three men they said planned the bombing. But public anger remains at fever pitch and, perhaps more important, a general election looms in April. Mr Modi came to office promising to get tough with Pakistan, but has lately sagged in the polls. In the felicitously timed "Uri", a lurid recreation of an actual Indian retaliatory raid in 2016 that is believed to have left some three dozen Pakistan-based guerrillas dead, he is portrayed as a wise, stern commander-in-chief. Now, despite the risk of escalation between the nuclear-armed states, the temptation is for him to burnish his image by giving Pakistan another bloody nose.

India's fury is understandable. The attack struck a bus filled with young recruits heading for deployment in the wintry Kashmir valley. News channels endlessly replayed grim footage of the carnage and moving scenes from funerals across the country. The toll was the highest for a single attack on the security forces in three decades of unrest in the picturesque valley, a densely settled part of Jammu & Kashmir, a former princely state that was split unhappily between India and Pakistan after their independence in 1947.

The bomber himself was Indian. But the target of Indian anger is still understandable. Pakistan has for years covertly helped militants infiltrate the Indian-administered, Muslim-majority valley. Jaish-e-Muhammad, the group that claimed responsibility for the bus attack, is guilty of some of the worst atrocities in a 30-year conflict in Kashmir that has taken some 45,000-70,000 lives. After dropping, the death rate has been rising since Mr Modi came to office in 2014. The group's leader, Masood Azhar, lives openly in Bahawalpur in Pakistan, where it runs a seminary, a training camp and a media arm.

It is understandable, too, that India scoffed at a call for dialogue made by Imran Khan, Pakistan's prime minister. In a televised speech four days after the attack, Mr Khan scolded India for being hasty to blame its neighbour, promising that if Mr Modi had any evidence, Pakistan would be ▸▸

Also in this section

happy to aid the investigation.

As a curt reply from India's foreign ministry noted, "Promises of 'guaranteed action' ring hollow given the track record of Pakistan." India has in the past often supplied Pakistan with actionable intelligence, such as against the perpetrators of a terrorist attack on Mumbai in 2008 that left 166 people dead. Pakistan has either done nothing, or limply chastised the culprits and let them go. Mr Azhar himself has at various times been detained, before being quietly released to mould more jihadists.

Indian officials note, in addition, that they are scarcely the only ones to complain of Pakistani perfidy (see next story). Indeed, some Pakistanis join them in questioning Mr Khan's sincerity. "Would you care to order an inquiry independent of how we respond to Delhi about how Jaish continues to recruit & train ppl [people] for jihad, and runs camps?" tweeted Ayesha Siddiqa, a London-based scholar.

Far bigger, better-armed and with an economy 8.5 times the size of Pakistan's, India nevertheless has limited options for striking back. The nuclear balance is an obvious dampener. Nor does either country wish to drift into even a limited conventional war; the cost would be ruinous. And because Pakistan hides behind plausibly deniable proxies, India would not wish to lose its moral advantage with a direct attack. The diplomatic calendar has granted some reprieve: Mr Khan and Mr Modi both had to roll out red carpets this week to receive the Saudi crown prince, Muhammad bin Salman. And on February 21st Mr Modi was in South Korea, to collect, of all things, the Seoul Peace Prize.

A further constraint lies in Afghanistan, where America is negotiating a wind-down of its role that will require continued help in chaperoning the Taliban—which also has mysterious ties with Pakistan's security services—towards a smooth resolution. John Bolton, Mr Trump's national security adviser, initially tweeted support for India's "right to self-defence against cross-border terrorism". But since Pakistan has signalled that any Indian retaliation would affect peace talks in Afghanistan, America has piped down.

The mood in India, however, makes it likely that all this will merely delay some kind of punishment, not preclude it. If Mr Modi is driven by purely electoral considerations, he has perhaps two months to act. In the meantime, anger has welled up across India in the form of harassment by Hindu-nationalist groups of Kashmiris and other Indian Muslims. Ugly incidents, sometimes encouraged by officials from Mr Modi's party, have seen Kashmiri families chased from their homes, students from schools and traders from markets. Of course, driving such a wedge into Indian society was precisely the terrorists' aim. ■

Terrorism and Pakistan

Caught in the middle

Pakistan faces a diplomatic squeeze from three sides

VISITORS TO THE bird markets of Pakistan would have found stocks depleted this week. To welcome Muhammad bin Salman, the crown prince of Saudi Arabia, who swept in for a two-day visit on February 17th, they freed 3,500 pigeons, cleaning out avian bazaars across the country. To make the crown prince feel at home, a parliamentary delegation presented him with a gold-plated submachine-gun. Yet as Pakistan firms up one relationship, others are crumbling. In recent weeks, three of its neighbours—India, Iran and Afghanistan—have accused it of fostering cross-border terrorism.

On February 13th a bomb-laden lorry killed 27 members of Iran's elite Islamic Revolutionary Guard Corps (IRGC) in the south-eastern province of Sistan-Baluchistan. Iranian officials said that the bomber and other plotters were Pakistanis, and that the attack was planned and launched from Pakistani soil. An IRGC commander warned that if Pakistan does not "do its duties", Iran will fight "the terrorist groups organised by regional and extra-regional intelligence services"—an allusion to the ISI, Pakistan's spy agency, and to those of America, Saudi Arabia and Israel.

The next day Jaish-e-Muhammed (JEM), another jihadist group, based in Pakistan's Punjab province, claimed responsibility for a suicide-bombing that killed 44 soldiers in Indian-administered Kashmir. And on February 15th Afghanistan wrote to the UN to complain that Pakistan's overt meetings with Taliban leaders, part of wider American-led talks, were "a violation of the national sovereignty of Afghanistan".

Pakistan now finds itself in a diplomatic pincer. On February 17th Sushma Swaraj, India's foreign minister, unexpectedly turned up in Tehran. "We agreed on close co-operation to combat terrorism in the region," tweeted Iran's deputy foreign minister. "Enough is enough!" And on February 19th Prince Muhammad travelled on to New Delhi, where India's officials tried to persuade him that its economy was a bigger prize than Pakistan's friendship.

Last year Saudi Arabia was persuaded to drop its support for Pakistan in the Financial Action Task Force (FATF), an intergovernmental body that combats money-laundering and terrorist financing. That resulted in Pakistan being placed on a "grey list". Its status is under review at a meeting that concludes on February 22nd. Its neighbours' opprobrium means that it is unlikely to get a clean bill of health; it may even be blacklisted in October.

None of this makes Pakistan entirely isolated. China offers diplomatic succour. It has repeatedly blocked efforts at the UN to designate Masood Azhar, JEM's Pakistan-based leader, as a terrorist. Pakistan's pivotal role in the Afghan peace talks, coaxing insurgents to the negotiating table, also helps. On February 19th Pakistan's envoy in Kabul hinted that the talks might be at risk if Pakistan were put under pressure. Not for the first time, Pakistan seems to have a losing diplomatic hand, but still has some valuable cards to play. ■

Elderly literature in Japan

Fifty shades of grey

TOKYO

Books by and for the old are proliferating

LITERATURE REFLECTS life. So in ageing Japan there is a raft of smash-hit books by aged authors. "Age 90: what's so great about it?" is a humorous essay on the difficulties of the elderly, by Aiko Sato, who is 95 and wrote it with a pen. It sold 1m copies in 2017, making it Japan's bestselling book that year. In 2018 the Akutagawa literary prize went to Chisako Wakatake, 63 at the time, for her debut novel "Live by Myself" with its 74-year-old protagonist, Momoko.

The books talk about how to live in old age, and it is not all doom and gloom. The widowed Momoko, for example, learns to live on her own. "The Finished Person" by Makiko Uchidate, who is 70, opens with the line "retirement is a living funeral" before going on to depict the adventures of a retired salaryman, including falling for a younger woman and returning to his home town. "Going to Die Soon", also by Ms Uchidate, features 78-year-old Hana, a vibrant former alcohol-shop owner trying to make the most of her remaining years. The novel has been called a book for *shukatsu*, or preparing for death, making readers think more deeply about what it means to age.

Japan's population has the world's highest proportion of over-65s, at 28%. People are living longer and staying healthier, so many have at least 20-30 years of retirement, for much of which they are sprightly. And although the Japanese have been spending less on books, that is least true for the over-60s. Lawson, a convenience-store chain, recently decided to stock books with the older generation in mind.

But the wrinkly writers' books are attracting younger readers, too, according to the Research Institute for Publications (RIP), a body in Tokyo. Some are preparing for their own old age or want to understand the increasing number of old people they see around them. Others find relevance in the themes explored, such as loneliness, a problem that stretches well beyond the silver-haired. In Hiroyuki Itsuki's blockbuster self-help book, "Recommendation for Solitude", the 86-year-old author promotes reminiscing about "the good old days".

The most notable feature of the new genre is that the vast majority of authors, and main characters, are women. Especially popular, says the RIP, are the *ara-hun* ("around-hundred" years-old) writers like Ms Sato, whose book, readers say, helps them be more positive. It is not just that women have a longer life expectancy. Their popularity, reckons the institute, also reflects support for strong women who are passionate about their work, a phenomenon that is all too rare in Japan today. ■

Banyan Fool me twice

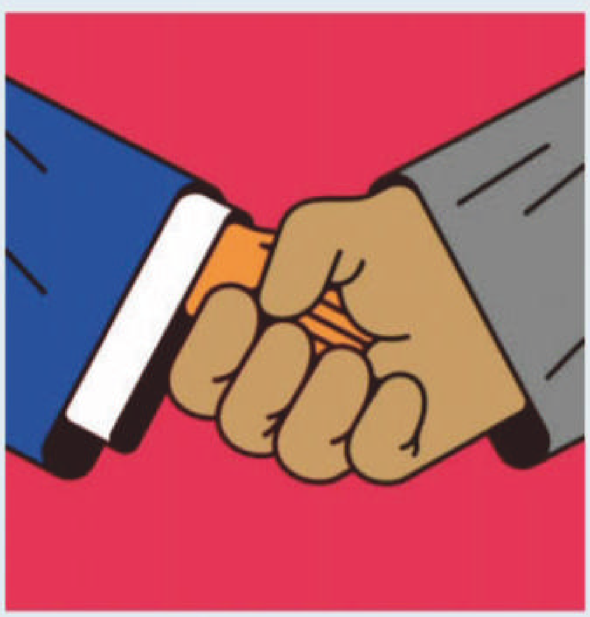
In round two of the Trump-Kim love affair, the low expectations suit North Korea

After their made-for-television spectacular last June in Singapore, Donald Trump and Kim Jong Un needed another gig. A second summit between the American president and North Korea's dictator will take place on February 27th and 28th in Hanoi, the Vietnamese capital. The choice of venue is intriguing. For America, Vietnam's Communist Party is foe turned buddy, and it has blazed a trail of market reforms in the country. Mr Kim, presumably, is expected to look and learn. But he has steadfastly refused to emulate Vietnam's economic transformation. And, though Mr Trump has confessed to falling in love with the young despot, North Korea and America have only just started dating. For Mr Kim, Vietnam may just be a country that defeated the United States.

Hanoi, of course, is merely a backdrop. In Singapore residents got official notices to keep their lights on at night to maximise the dazzle of the skyline. In Hanoi locals have a slightly more subversive edge. One barber is offering customers the Trump or Kim looks free of charge. Both leaders are sensitive about fun being made of their hair, though only one may send the mockers to the gulag (the fate of some of the 50-70 critics of Mr Kim's foreign policy, who were reported this week to have been purged in an "anti-corruption" drive).

The coiffures may be sharp but the outlines of any summit agreement remain fuzzy. In Singapore the two sides agreed to build "a lasting and stable peace regime". Mr Trump said he would provide North Korea with "security guarantees", and Mr Kim committed himself to "complete denuclearisation" of the Korean peninsula. Much was left vague: timetables, verification and indeed what denuclearisation means; North Korea has long taken it to include the removal of America's security commitment to South Korea. Yet Mr Trump's people were adamant: this was all about the "complete and verifiable" dismantling of North Korea's nukes.

What a difference a few months make. This week Mr Trump put his desired outer limit on the time frame for North Korea's denuclearisation: "ultimately". "I'm in no rush," he added, so long as "there is no testing." The "testing" involved North Korean missile launches and six nuclear detonations that, by late 2017, had evolved into a dangerous game of brinkmanship. Mr Trump's decision to sit down with Mr Kim deserves some credit (though it is hardly worthy of the Nobel peace prize for which, he has indiscreetly boasted, Japan's prime minister, Shinzo Abe, has obsequiously nominated him). The region certainly feels less tense because of the whirlwind diplomacy, involving South Korea too, that began early last year. But Mr Trump's claim that North Korea is no longer a nuclear threat is gainsaid by his own intelligence chiefs. It may even dismay Mr Kim, who is almost certainly expanding his arsenal.



Mr Trump has set a low bar for success in Hanoi, but Mr Kim will surely have to offer something. Choi Kang of the Asan Institute, a think-tank in Seoul, predicts a "bad small deal". It might include destroying the nuclear reactors at Yongbyon and letting inspectors confirm that the Punggye-ri site, where nuclear devices were detonated underground, really is closed. But the fifth and sixth nuclear tests are thought by experts to have taught the North Koreans all they need to know from blasting. Yongbyon, which has been mothballed before, is decrepit anyway. Thae Yong Ho, the most senior North Korean diplomat to have defected, says such steps are like painting an old car for resale. Meanwhile, expect little in Hanoi on the inspection of the North's nuclear programme, let alone declaring its full extent.

Mr Thae argues that Mr Kim has cleverly shifted the emphasis from nuclear disarmament to "peace". Both sides may agree in Hanoi to establish liaison offices in each other's capitals, a first step towards normalising diplomatic relations, and an eventual "peace declaration"—some vague, non-binding assertion that neither side will threaten the other.

What Mr Kim wants above all is some relief from UN sanctions. Mr Trump might calculate that granting this would not cost America much. South Korea's president, Moon Jae-in, is offering to invest in the North's railways and to promote economic co-operation. If larger shipments of oil were allowed, China would presumably foot the bill. Mr Trump might also be fine with that outcome—even if it gets little closer to dismantling the North's nukes. In Singapore Mr Trump was played without knowing it. In Hanoi he may not even care.

The church in the Philippines

Rendering unto Duterte

MANILA

The Catholic clergy struggle to respond to the president's vitriolic attacks

"We need a national exorcism," says one celebrant at a mid-week mass in Manila's San Carlos Seminary. The faithful see the devil's work in the assaults on the Catholic church made by none other than the Philippine president. For almost three years Rodrigo Duterte has lambasted the institution and its symbols, calling God "stupid", the Holy Trinity "silly" and saints "drunkards". Bishops are "useless fools", he said in December. "Kill them," he went on—several priests have indeed been murdered on Mr Duterte's watch. He says he was molested by a priest as a boy. "I told you so," he said on February 20th, on the eve of a summit on clerical sexual abuse in the Vatican.

Around four in five of the country's 100m people consider themselves Catholic. And 6m of them flocked to hear Pope Francis when he visited four years ago (pictured). The president continues his vituperations regardless. He started them on the campaign trail in 2016 but still won millions of Catholic votes. That is not to say that Filipinos approve of his tirades: a survey released in September by Social Weather Stations, a pollster, found that 83% of respondents considered his insults against God to be vulgar. Yet they seem not to damage his standing and he refuses to refrain.

Catholicism came to the Philippines in the 16th century with the Spanish conquerors. The colonial regime entwined Catholicism inextricably with the state; the church has enjoyed wealth, land and prestige ever since. Under the leadership of Cardinal Jaime Sin, formerly Manila's archbishop, it showed its moral power to move the masses when the pious marched to oust Ferdinand Marcos from his dictatorship in 1986. Cardinal Sin also helped topple President Joseph Estrada in 2001.

The glory days appear gone. The Catholic church serves as a convenient foil for Mr Duterte's populist routine. Priests freely admit that, in a country where about one in five people is poor, the church needs to do more to help. Indeed, it can be argued that Catholics have actually done plenty to hinder anti-poverty efforts: decades of preaching against contraception mean large families remain common. The biggest tend to be in the most deprived areas. "We are pro-life in every respect," explains one priest at a dinner where *balut*—fertilised duck eggs cooked and served with the fetus inside—are being enjoyed.

The president's accusations of hypocrisy sting for other reasons, too. One priest believes that, partly because many of the Philippines' most elite colleges are Catholic, the church has become too associated with the well-heeled. "We are misunderstood by the poor because we speak the language of the middle class," he explains. On the other hand, the better-off can contribute more generously to Church coffers.

The church's response to Mr Duterte is also hampered by a new scepticism in the clergy about political involvement. More than a decade of opposition to government provision of contraception came to a head in 2012. That year a bill was passed guaranteeing free contraception and sex education in school—policies a large majority of Filipinos approve of. Legal battles followed, but the church lost. "That was a humbling experience," believes Eleanor Dionisio of the Archdiocesan Institute for Research and Development at San Carlos Seminary. Many high-ranking Catholics are now loth to meddle in politics.

This marks a huge shift. In past elections candidates craved backing from powerful clerics. Now voters seem to care much less. "The church is not into politics," insists Father Jerome Secillano of the Catholic Bishops' Conference of the Philippines (CBCP). Rather, any Catholic opposition to Mr Duterte requires lay leadership. That is how a thousands-strong "interfaith" protest march against Mr Duterte in Manila in late January was organised.

So diminished is the church that when it has criticised government policies, its remonstrations have fallen a little flat. It has opposed Mr Duterte's murderous "war on drugs" since its beginning in 2016. Last year the CBCP asserted in a pastoral letter that "to consent and keep silent in front of evil is to be an accomplice to it". Still, the war goes on; an estimated 20,000 people have died in extra-judicial killings. The church also failed in efforts to reverse a tax reform passed last year that increased the prices of staples such as petrol.

Seen as out of touch with the poor, and with its clergy cowed, the church faces a third challenge in coping with Mr Duterte: cautious leadership. Toppling governments and herding crowds is not the style of the current archbishop of Manila, Cardinal Luis Antonio Tagle. Nor is chastising presidents. "The bishops don't want to add to the chaos," explains Father Secillano. Clearly there is no consensus in the Catholic elite about whether to wait it out quietly or to rebuke the president publicly.

No saving grace

Yet, for all its loss of clout, the church's hierarchy "remains one of the most influential institutions in Philippine society," says Risa Hontiveros, a senator. She spent years fighting for the law on contraception and is poised to battle religious conservatives again over a bill she recently introduced to permit divorce in the Philippines (the only other place where it is still illegal is Vatican City). It has no chance of passing before mid-term elections in May. Yet even she believes the church could play a leading role in fighting Mr Duterte's excesses; she and others opposing him could make common cause with it on several issues, such as the war on drugs. But it seems improbable a senior Catholic leader will emerge to head such an alliance. "We already have a saviour!" exclaims one priest. He does not mean Mr Duterte. ■

They cheered Francis but elected Duterte

Outbound tourism

Holidaying for the motherland

BEIJING

Chinese tourists are a boon to many economies. They also give China clout

EARLIER THIS month the great pyramids of Giza and the nearby Sphinx were lit up in "Chinese red". Spectators, many of them from China, were then given another unprecedented treat. The sound-and-light show, a staple of pyramid entertainment since 1961, was narrated in Chinese.

The event was sponsored by the Chinese government, which takes pride in its travellers' growing influence. Since 2012 China has been the world's biggest source of tourists. Chinese travellers racked up nearly 150m trips abroad last year. Their spending—over $250bn in 2017—far outstrips that of their American counterparts (see chart on next page). Chinese officials know these tourists buy influence. Take Egypt, which China sees as a regional hub of its Belt and Road Initiative—an effort to boost its influence through massive spending on infrastructure. China's leg-up for the country's tourist industry is a way of showing thanks for Egypt's enthusiasm.

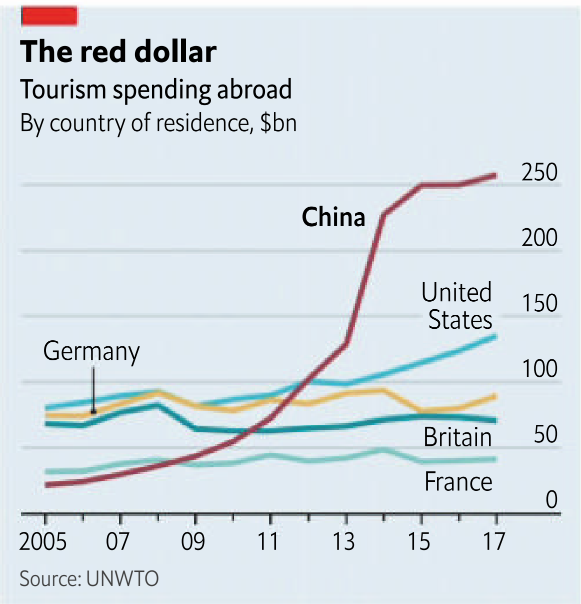
China even uses the term "tourism diplomacy". The Communist Party's mouthpiece, the *People's Daily*, says this has become an "important and indispensable" tool of China's foreign policy. And, just as Chinese tourism can win friends, so its curtailment can be used to show displeasure. Some analysts call this tactic "weaponising" outbound tourism. In countries where Chinese visitors play an important economic role, any twitch by China that may curb the flow soon spreads anxiety.

New Zealand (pictured) is one such country. Tourism is the country's biggest earner of foreign exchange. China is its second-biggest source of tourists after Australia. So the cancellation of a ceremony due to be held this week in Wellington to mark the launch of the China-New Zealand Year of Tourism understandably caused jitters. New Zealand cited "changes of schedule on the Chinese side", but speculation blamed China's pique with New Zealand for airing anxieties about the security of 5G technology made by Huawei, a Chinese firm.

An article published by *Global Times*, a tabloid controlled by the *People's Daily*, fuelled concerns in New Zealand that China's enthusiasm for the year of tourism was waning. The newspaper said "tense political relations" had "sparked boycotts" by potential Chinese visitors, quoting a Beijing resident as complaining: "New Zealand stabbed us in the back but asks for our money? This is two-faced."

China's resentment may subside. On February 19th New Zealand's prime minister, Jacinda Ardern, denied reports that her government had banned a company, Spark, from using Huawei equipment. She said no final decision on Huawei had been made. *Global Times*, for which poking foreigners in the eye is a business model, may have strayed from the government line. The overseas edition of the *People's Daily* had a very different message, reporting on February 15th that "fervour" among Chinese tourists for trips to New Zealand was "continuously rising". It referred to the launch of the year of tourism as "upcoming". ▸▸

→ Also in this section



The Chinese government has never admitted it cuts tourist numbers to punish other countries. But it certainly does. Take Taiwan, where the numbers of visitors from China grew rapidly after the election in 2008 of a China-friendly president, Ma Ying-jeou. He was replaced in 2016 by a China-sceptic one, Tsai Ing-wen. The number of Chinese trips fell from nearly 4.2m in 2015 to about 2.7m last year. Direct or indirect government pressure on China's tour operators to reduce the number of package tours is the most likely cause.

After South Korea installed an American-owned missile-defence system, THAAD, in 2017, that country also suffered a dramatic decline in visitors from China. By late last year restrictions appeared to be loosened. In 2018 there were nearly 5m visits by Chinese tourists, up from just over 4m in the previous year. The numbers are still far from pre-THAAD levels, however.

Japan and the Philippines have also suffered. In 2012, during anti-Japanese protests in China, the number of Chinese visitors to Japan fell sharply. By 2014, however, they were back again in record numbers. In 2012 some travel agencies suspended group tours to the Philippines during a standoff between that country and China in the South China Sea. No such trouble mars ties under the country's current China-friendly leader, Rodrigo Duterte. A year ago the Philippines said China had overtaken America to become its second-biggest source of tourists, after South Korea.

How much Chinese government meddling is responsible for falling numbers is often hard to gauge. Public patriotic sentiment, albeit whipped up by official rhetoric, may also be an important factor. Cautious travel agents in China proactively curtail trips to certain countries when they sense that the diplomatic mood is souring, says someone in the business.

Turkey is a case in point. It had been enjoying a Chinese-tourism boom owing, not least, to a reality-television show (featuring in this instance hot-air ballooning)—a fairly typical reason for a surge, say travel agents. On February 9th Turkey called China's gulag for "re-educating" Muslims in Xinjiang province a "great shame for humanity". China responded with a safety alert to Chinese travellers to Turkey, as it did recently for Canada, another country embroiled in a Huawei-related spat.

The tiny Pacific-island country of Palau provides refreshing evidence, however, of Chinese tourists' resilience to governmental tampering with their holidays. Their numbers in Palau rose from fewer than 650 in 2008 to more than 91,000 in 2015. Then they began to drop, partly, perhaps, because of official reminders to travel agencies that Palau, which recognises Taiwan, does not enjoy "approved destination status"—a cachet that only China's diplomatic partners may enjoy. Yet many Chinese tourists seem happy to ignore that. The government can stop tour groups, but independent travel is far harder to curb. Last year about 50,200 Chinese still made it to Palau, despite the closure, for conservation reasons, of its wondrous Jellyfish Lake. ■

Hong Kong and its region

At bay

HONG KONG

A master-plan worries Hong Kong

IT DOES NOT lack ambition. On February 18th China unveiled a long-awaited master blueprint for the Greater Bay Area (GBA), a mammoth urban cluster comprising the special administrative regions of Hong Kong and Macau, and nine cities in the southern province of Guangdong. The GBA will boast a population of 71m and a total area of 56,000 square kilometres. It will become by far the world's biggest integrated "bay area", surpassing rivals such as Tokyo and San Francisco. The master plan calls on the GBA to play "the leading role in the country's economic development".

Like most big Chinese ideas, this one is attributed to President Xi Jinping himself. It has two overarching goals. The first is to align Hong Kong and Macau more closely with the mainland. Macau has rarely caused trouble for China; but Hong Kong, a former British colony, has seen a rise in pro-independence sentiment in recent years. So the preamble to the blueprint notes that the GBA will allow "compatriots" in Hong Kong and Macau to "take pride in a strong and prosperous motherland".

However, the plan is being marketed on the second goal. The GBA aims to become a "first-class" innovation hub. The idea is to make the most of the strengths of the region's cities so that they co-operate rather than compete with one another. Hong Kong will be the leader in financial and other professional services. Shenzhen, home to tech giants like Tencent, an internet firm, will become "the capital of creativity with global influence". The comparatively poorer cities in Guangdong province will continue to focus on manufacturing, producing everything from intelligent robots to new-energy vehicles.

The blueprint also assigns cities new industries. Macau, for instance, is supposed to develop a traditional Chinese medicine industry in a bid to diversify away from gambling. The business community is warming to the GBA. A recent survey by KPMG, an advisory firm, of more than 600 executives across the region found that 80% supported "integrated development".

China's national government has already been trying to bind the region together more closely. Last September Hong Kong was connected up with the mainland's bullet-train network. In October a mega-bridge linking Hong Kong, Macau and Zhuhai, in Guangdong, opened to traffic. The blueprint proposes further measures of integration, such as mutual recognition of professional qualifications.

But unlike other city clusters, the GBA involves three customs zones, three legal systems and two hard borders (Guangdong's with Hong Kong and Macau). Its success will depend on how free the movement of people, goods and capital will be. Hong Kongers, however, will not be keen on open borders with Guangdong.

Some have a bigger worry. The city's long-standing strength, points out Alvin Yeung, the leader of the pro-democracy Civic Party, is in being "not just an ordinary Chinese city". Hong Kong is permitted a high degree of autonomy until 2047. So, for example, American restrictions on exports of sensitive technology to China have so far not applied to Hong Kong. Yet by tying the city ever closer to the mainland, Mr Yeung fears that the GBA may end up costing Hong Kong its special status. At worst, it would be treated by America and the rest of the world as just another Chinese city. ■

Chaguan | The propaganda machine wins

Economic woes are hurting Chinese journalists as much as censorship does

SOME DAUNTING obstacles must be overcome to study journalism at the University of Hong Kong (HKU), home to the region's best college for reporters. Applicants must speak good English, find annual tuition fees of over $25,000 and—to secure places on courses that are oversubscribed each year—persuade HKU professors that their interest in journalism is heartfelt. A surprising number of mainland Chinese youngsters, who represent about 60% of students on the master's programme for journalism, then face a further obstacle: telephone calls from parents, begging them to shun careers in news lest they doom their whole family.

A group of mainland students, hosting Chaguan in an HKU common room, share stories of tough parental calls. Lansie (her chosen name in English) fields frequent pleas from her mother to avoid writing about Chinese politics, which end: "Do you want us all to be in prison?" Fernando's father works for the state media, but still he urges his son to start a business and forget about the "noble things" journalism can do. As for Ann, her family's concerns seem more trivial. Her parents have begged her "thousands of times" to consider a career in finance. They complain that, for now, they are respectably middle-class. But if Ann becomes a journalist they fear she will pull them into poverty.

Parents are right that Chinese journalists can lose their jobs, and in rare cases their freedom, if they touch on sensitive subjects or challenge the state or a powerful vested interest. When outsiders say that that China lacks a free press, they are usually talking about such controls, which have grown stricter since Xi Jinping became China's leader in 2012.

Yet within the news industry the blows that hurt most, day-today, are economic, not political. Ann's parents are not snobbish outliers to worry about money. They give voice to a fear that every week drives good journalists to quit, many to jobs in public relations. It is hard to lead a middle-class life on a journalist's pay, or to start a family. A junior reporter in Beijing may earn $1,000 a month, barely enough to cover the rent. China's newspapers enjoyed a golden age of profitability from the mid-1990s until 2010 or so. The boldest tested the limits of censorship and held (some) powerful wrongdoers to account. Those business models have collapsed, as consumers desert traditional outlets for bite-sized, often sensational social-media posts, watched on smartphones.

A remarkable new study in the *Journal of Communication* details how readers and advertisers have fled metropolitan newspapers. More than 100 editors, managers and reporters, from obscure inland provinces to giant coastal cities, were interviewed for the study "Chinese Newspaper Groups in the Digital Era: The Resurgence of the Party Press". The authors, Wang Haiyan of Sun Yat Sen University in the southern city of Guangzhou, and Colin Sparks of Hong Kong Baptist University, recall the rise of powerful provincial newspaper groups, typically anchored by a staid-but-authoritative party paper, for instance *Southern Daily* in Guangzhou, and commercially driven sister titles, such as *Southern Metropolis Daily*. All such newspapers report to provincial propaganda departments. But when "metro" papers were at their most profitable they could defy lowly officials, answering only to the most senior.

The best used that breathing-space to report on wrongdoing by officials below them in the pecking order or in other provinces. Scoops were painstakingly gathered by their own reporters, or were slipped to them by colleagues from other provinces whose work was being suppressed by local censors—a trick known as "supervision in another place". The study quotes anonymous editors recalling glory days when propaganda directors would plead with them to stop exposing blunders, with one reduced to asking: "Can you stop for a while and perhaps you can continue next year?"

It did not last. Total Chinese newspaper circulation peaked in 2012, and newspaper-advertising revenues plunged by 75% between 2012 and 2016. Since then, staid party newspapers have proved more resilient than their commercial cousins. For one thing, the *Southern Daily* and its kind can rely on government subscriptions. Recently, party papers have been seeing more advertisements placed by local governments hoping to buy positive coverage of their policies, and to impress higher-ups. At the same time party newspapers, including the most important, the *People's Daily*, have been ordered to create digital sites and apps. Often backed by hefty subsidies, some are unexpectedly lively. Meanwhile, ailing titles are expanding side-businesses. The study reports on a group with morning newspapers that uses its distribution network to deliver eggs and fruit in the afternoons.

The revenge of the People's Daily

Investigative journalism is not extinct in China. The boldest business publications, such as *Caixin*, still expose crooked firms. Optimists note the cacophonous rise of bloggers and social-media sites on commercial platforms such as Weibo or WeChat. Some blogs are written by veteran journalists and publicise stories that evoke such a public response, so rapidly, that censors cannot contain them, leaving state media scrambling to catch up. A good example involves a scandal involving childhood vaccines last year. Such successes help to explain why young Chinese want to study journalism. Cao Peixin, who teaches broadcast journalism at the Communication University of China in Beijing, notes that 8,000 students applied this year for 30 undergraduate places. Students see journalism as a cause, not an industry, he says.

But, with career ladders collapsing, it is not clear how idealistic youngsters can become authoritative journalist-bloggers. Revealingly, even HKU students determined to defy parental qualms to work as reporters are doubtful about returning to the mainland. Censorship is one reason, but also low pay. Chinese journalists have long sacrificed safety and a quiet life to do good work. They now wonder if they must forgo their dignity, too. ■

The global centre

CHENGDU

A giant microcosm reveals the Chinese economy's struggle with itself

THE WORLD'S biggest building got off to a bad start. On the eve of its opening, Deng Hong, the man who built the mall-and-office complex, disappeared.

For years Mr Deng had received tributes in local media for turning farmland into glistening conference centres and hotels. The billionaire "conference king" walked with a swagger, chomped on cigars and knew how to please officials. Hefty contracts rolled his way, including one to develop a landmark in the suburbs of Chengdu, a city of 14m in south-western China. This, the New Century Global Centre, was to be his crowning accomplishment, the world's largest structure by floor space, the size of 246 football fields, or nearly three Pentagons or eight Louvres.

But then he was gone, swept up in a corruption investigation just before the building's doors opened in 2013. The media focus shifted to his hubris and his wasteful, pharaonic venture. Inside, it had a massive waterpark with an artificial beach, an ice rink, a 15-screen cinema, a 1,000-room hotel, offices galore, two supersized malls and its own fire brigade, but just a smattering of businesses and shoppers. It became a parable for the economy's excesses and over-reliance on debt.

Today, more than five years on, the story has taken a series of surprising turns. For one, the building is not a disaster. During the summer, the waterpark is crowded. The mall has come to life, a testament to the rise of the middle class. The offices are a cauldron of activity: 30,000 people work there in every industry imaginable, from app design to veterinary care. Mr Deng has been released and is back in business, declaring last summer that he had a clean slate.

A triumphant return? Not quite. Mr Deng's freedom is marred by the fact that he no longer owns the centre but is now an employee. It was bought by an arm of the state—a transaction that regulators are probing for financial irregularities. From one angle the world's biggest building seems to be thriving; from another it is once again under a cloud.

Discussions on China's economic future also tend to swing between two extremes. At one end of the spectrum, it is seen as an unstoppable juggernaut, destined to dominate the 21st century. At the other end is the conviction that a crash is inevitable. The trade war with America has achieved the improbable feat of bringing these views together, reflecting both a fear that China must be confronted before it is too strong and a desire to hasten its collapse.

The Global Centre—the tale of its construction, its occupants and its evolution—hints at a different future. It is neither a spectacular success nor a catastrophic failure but a long economic struggle, a contest between China's tremendous potential and the cracks in its foundations. America is only a secondary player in the drama. China, for better and for worse, is writing its own story.

In the middle of the kingdom

The centre is now surrounded by broad roads and tall buildings. But for years the land it sits on was home to the fields of Huang Fenyu, a stout woman in her 50s, and the few thousand residents of Yumin village. Many lived by timeless rural rhythms, sowing rice in the spring and harvesting green stalks in the autumn.

In 2005 those rhythms came to a halt. Chengdu officials ordered the people of Yumin to relocate to high-rise housing a short drive away. It offered each one 35 square metres (377 square feet) of floor space and as much as 8,000 yuan (then $1,000), or two years' income. Razed of the last vestiges of its former life—narrow lanes, rice paddies, cheap bungalows—Yumin village was renamed GX92 (211/252), an 80-hectare (200-acre) land parcel to the city's south. In September 2008, it was sold for 480m yuan to Mr Deng's company, the Exhibition and Travel Group.

Ms Huang now works as a janitor in a nearby bank. She knows the compensation she received was paltry. The one time she went to the Global Centre for dinner, it cost her two days' salary. "My heart ached," she says. Even so, she is not bitter. Her new home has better plumbing and sturdier walls. The younger generation will, she says, benefit from a stronger economy. It is a quiet optimism that remains typical of modern China. Though nearly 5km from where she lives, the Centre is so big that it looks as if it is just down the street, its wavy roof outlined with neon lights at night.

Yumin village's transformation—the conversion of farms into a construction site—has been replicated all over China. It provides the most basic answer to the question of how the economy has grown so fast. Officially, the government dates its "reform and opening" period to 1978. Yet for the first 15 years progress was uneven. Gradually unshackled from central planning, the Chinese people showed their entrepreneurial flair. But the Communist Party was divided on the critical issue of how to build the roads, homes and factories that it sorely needed—how, in the jargon of economists, to accumulate the physical capital that fuels growth.

It was only in the 1990s that China settled on a model that has, in many respects, persisted to this day. It started evaluating local officials by how quickly the economy grew under their watch. They, in turn, competed with each other to woo firms, offering them cheap land, tax breaks and low-cost labour. Transforming the bureaucracy into something more like a large startup business, hungry to expand, yielded dramatic results. China accounted for 4% of the global economy in 1990; now that is close to 18%.

Built on sand?

Three factors have underpinned this model. Each can be found in the origins of the Global Centre. The first is land, all of which is publicly owned. This puts a valuable asset at the disposal of local officials. They can offer cheap long-term rents to attract businesses or sell big leaseholds to developers. As long as growth continues, this is sound economic logic. Developers buy up land, assuming, mostly correctly, that they can sell what they build. For local governments it is a source of wealth. In Sichuan province, of which Chengdu is the capital, land sales bring in nearly as much as taxes.

A second feature of China's economy is cronyism. Mr Deng bought the land in 2008 at a steep discount, according to state media. The city government had supposedly attached strict conditions to the sale. He was to build an arts centre as well as a landscaped park. A mall-and-office complex was not part of the plan. Yet today the only building on the site is the Global Centre.

Officials must have known. The city government is across the street. At the time Chengdu's Communist Party chief was Li Chuncheng. His given name means "spring city", but locals dubbed him Chaicheng, or "demolish the city". Mr Deng got close to him: when Mr Li wanted a relative's remains moved somewhere with better *feng shui*, Mr Deng made the arrangements.

Mr Li's fortunes turned soon after Xi Jinping came to power in 2013. Jailed for graft related to construction, he is one of the dozens of high-flying local leaders cut down by Mr Xi's anti-corruption campaign. Mr Deng himself was detained but never publicly charged. The official line is that he was asked to "assist an investigation", a euphemism for helping the party net a bigger fish.

Still, Mr Li's downfall offers a window into the nexus between government and business. Local officials can dole out contracts in exchange for benefits, like covering their children's tuition overseas or buying homes for their relatives. The path is then clear for projects that in other countries would be almost inconceivable.

The third feature in China's model is debt (see chart). Mr Deng bought the land in 2008 just as the country embarked on a manic phase of growth. Worried about drag from the global financial crisis, Beijing unleashed a huge stimulus. Local officials ran up debts, and seized lots of land for development. A building boom ensued.

The Global Centre is one of the many projects from that period that dot the country. Some are useful, such as China's high-speed rail network. Others, less so: scores of cities built big futuristic districts but are still struggling to attract residents. China's total debt soared from about 150% of GDP in 2008 to more than 250% today. Rapid increases of this magnitude have presaged financial trouble elsewhere, from the banking crises that ripped through the West a decade ago to Japan's stagnation in the 1990s.

Yet the striking thing about these three factors in China's economic system is that they were all useful until recently. The government's control of land gave it a lever to kick-start investment. Land also played an overlooked role in governance, says Michael Song, an economist at the Chinese University of Hong Kong. In a large country with a lack of accountability, it functioned as a disciplining tool. To raise the value of land, officials had to invest in infrastructure, from highways to power grids. If they did not, they would have a harder time selling land in the future.

Many economists believe that corruption was, counter-intuitively, a lubricant for growth

Many economists also believe that corruption was, counter-intuitively, a lubricant. Emerging from the Maoist era, a little graft gave officials an incentive to do what was needed to support growth, whether in selling state assets or enticing firms to invest.

Debt also greased the wheels. Up to a point, the increase in borrowing is a sign that the financial system is operating as it should, channelling savings into investment. Virtually all developed economies have debt levels that are at least as high as China's, albeit mostly built up over longer periods.

The challenge now is to shift to a different economic model, because all three factors are hitting their limits. Land is a finite resource, and the government's appropriations have got ahead of market need. Gan Li of Chengdu's Southwestern University of Finance and Economics estimates that 65m homes—21% of urban housing stock—are vacant. Corruption has reached corrosive levels. Frailties from all the debt are showing. Corporate-bond defaults in 2018 reached $18bn, more than triple the previous annual record.

But turning onto a new path is hard. Local governments cannot easily find revenue sources as bountiful as land. The anti-graft campaign has sapped the motivation of officials while leaving the rotten system around them intact. Efforts to tame debt have also hurt growth, forcing regulators to ease up in recent months. China's problems are simple enough to diagnose. Treatment, though, is painful, and the disease more chronic than acute. So instead of taking bitter medicine, officials hope time will be a balm. But China's ills are likely to get harder to cure.

2 The billionaire factory

Consumption is booming, but so is inequality

IF THE LESSONS from the Global Centre's construction seem gloomy, counter that with some time inside it. Here, China's commercial promise is almost palpable. From the main entrance, visitors walk into a cavernous atrium which mixes high-end touches with a fairground atmosphere. The glossy marble floor is flanked by long gold-trimmed escalators. To the left is one large mall; to the right another. Straight ahead is the waterpark, under the glare of an ultra-long LED screen, projecting seaside scenes.

The park's main attraction is a wave pool (pictured), which generates huge artificial swells. On a summer's day, it is raucous. Hundreds of bathers are in the surf, many with mobile phones in plastic pouches hung around their necks. Pulsating music is blasted at top volume as dancers in bikinis take to elevated platforms.

One father, Zhang Meng, sits in the waterside food court, his belly spilling over his trunks as his four-year-old son licks chocolate sauce off a dessert plate. An ad salesman for a media company, Mr Zhang has money to spend but is far from rich. When the waterpark started selling annual passes at just 700 yuan ($104) for an adult, he jumped at the offer. Twice a month in the summer he brings his wife and son. They stroll around the mall, go for a swim and dine on spicy dumplings. "We love the environment," he says. Squint a little, and it could be Coney Island or Blackpool in the 1950s, albeit with digital touches under a vaulted glass roof.

This scene underscores the long-awaited emergence of Chinese consumerism. China's economy is often described as unbalanced. Investment accounts for nearly half of GDP, more than double the level of developed economies. Consumption, meanwhile, accounts for about a third of GDP, half the level of developed economies. Yet a simple emphasis on these two ratios misses something important, argues Arthur Kroeber, founder of Dragonomics, a China-focused research firm. Consumption has such a low share of GDP in China not because people are staying away from shops but because its investment has been unusually large.

The pressing concern is not whether China can rebalance towards consumption but whether its spending boom can be sustained

Looked at from a different vantage, consumption is already booming in China. Between 1990 and 2017, consumer spending per person rose nearly eightfold in inflation-adjusted terms, more than double the increase in India. China is the world's biggest market for passenger cars, smartphones, luxury goods and beer. This is not a country of repressed shoppers.

The pressing concern is, therefore, not whether China can rebalance towards consumption but whether its spending boom can be sustained. In recent months much ink has been spilled over the idea that China might be cutting back on consumption. Evidence is patchy at best. Car sales fell sharply in 2018, but that was partly because a tax benefit was eliminated. Retail sales, more broadly defined, remain strong.

Obviously Chinese consumers cannot defy the laws of gravity. If the economy were to slump into a recession, household spending power would, inevitably, suffer. Yet there is also reason to think that, short of that, consumption in China will be resilient.

Great mall of China

Big trends work in its favour. Over the past few years the labour force has started shrinking, which has pushed up wages. Low-end factories are moving abroad. For consumption this is an unalloyed positive. When workers earn more, they can also spend more. Household consumption bottomed out with a 36% share of GDP in 2010, when construction of the Global Centre was in full swing. This year it is on track to reach 40%.

Income levels have reached about $5,000 per person in cities, a level at which discretionary spending has taken off in other countries. The fact that the Global Centre was built in Chengdu, far inland, illustrates the strength of this trend. It is poorer than the coast, but big hubs of prosperity have nevertheless emerged. Chengdu's economy has quadrupled over the past decade.

Everyone wants to be bourgeois now

Estimates of the size of China's middle class vary from 100m to 600m, depending on how it is measured. Precise estimates are beside the point. What matters is the direction of travel. Consumer numbers are destined only to grow. Even in an age of e-commerce, people flock to malls like the Global Centre. Along with the usual array of clothing stores and jewellery shops, there are toddlers' play centres, virtual-reality arcades and cosplay cafés. On weekday evenings people queue outside restaurants on the top floor.

But there is a darker side to China's rise as a consumer society: its yawning inequality. Most countries that undergo rapid growth experience rising wealth gaps. In China this natural tendency has been exacerbated by the state's control over where people can live. The government gifted urban residents their homes in the late 1990s when property was privatised. Those in rural areas had no such luck. Moreover, the *hukou* residency system makes it difficult for rural citizens to settle in cities. They are barred from certain jobs and their children are sidelined in the schooling system.

When the post-Mao era began, Chinese were poor but equal. The income gap rose sharply from the 1990s. It is among the world's most unequal countries today, with the richest 1% holding one third of all household assets. China has more billionaires than America, even though its income per head is just one-fifth. For those on the bottom rungs of the Chinese income ladder, climbing up it has long been a motivation, but it is getting harder.

Yang Fanji and her family run a restaurant on a dusty street near the Global Centre. They deliver about 80 takeaway meals every day to its office workers. Ms Yang (not her real name) used to work at an electronics factory on the coast for better pay, but returned to Chengdu, just four hours from her home village, so that her eight-year-old son could live with her. She was able to get him into a local school by pulling some strings. But with a low wage and high living costs, she is unable to save much, making her part of a large and seemingly permanent urban underclass.

In fact there is much China could do for those like Ms Yang if it truly wanted to reduce inequality. For a start, it could make it easier for those born in rural areas to move to cities. It has, over the past decade, built up a social-security system that gives almost all citizens health insurance and old-age pensions. But payments are meagre. As ageing accelerates, the burden will only increase.

Tax reforms would also help. The government does not tax the investment earnings and property of the rich, which are basic revenue sources in developed economies. Officials seem more fearful of angering rich urbanites than of neglecting poor farmers.

In a provocative article in 2017, Barry Naughton, an economist at the University of California, San Diego, asked whether China was a socialist country. In some respects, he ventured, it was: the government can exercise much more control than is normal in a capitalist system. But on the key question of what it does with that power, he concluded that China was decidedly non-socialist. Redistribution policies have been conspicuous failures.

The number of shoppers splashing in the Global Centre's waterpark or splurging in its restaurants will continue to rise. But the other part of the population, those on the outside looking in, scrubbing dishes late into the night after a long day serving its workers, also looks firmly entrenched. It is not a happy picture.

3 Means of production

The market is under increasing pressure from the state

CROWDS START arriving at the Global Centre before nine in the morning every weekday, well before the shops open. They are the 30,000 people who work in the offices on its upper floors. These contain a motley mix of companies, 1,800 in all—a rough cross-section of China's business world.

Some, like Huodongjia, would be at home in Silicon Valley. Its main product is an app for conference listings. Wang Qing, its founder, clad in skateboarder shoes and shorts, is refreshingly frank about the headaches of tech entrepreneurs in China. There's too much short-termism, he says. "The mentality for investors is, if I give you 10 yuan today, you've got to give me 11 back tomorrow."

Other offices are starkly different. At the Quanxing law firm, Fu Shaojie talks of China's progress in developing the rule of law. But he believes the law answers to the Communist Party, not the other way around. "We are making our system more democratic," he says, explaining that this means his firm works with the government to stop disputes reaching courts. His waiting room displays a book with the collected wisdom of Xi Jinping, China's president.

China is certainly not a fully free market. Yet it has come a long way since Chairman Mao. The structure of the economy looks very different depending on where you focus. There is an exuberant private sector, vital to China's success. Employment in state firms plummeted in the 1990s when the government closed thousands of loss-making companies. The private sector more than made up for them. These days, officials use a rough "56789" formula to describe its significance: it accounts for 50% of tax revenues, 60% of GDP, 70% of innovation, 80% of jobs and 90% of companies. The point is clear. China would be nowhere without its private firms.

In many industries, China's entrepreneurs face more cut-throat competition than their Western peers. Take property: the ten biggest developers account for 30% of sales in America but around 15% in China. The rush into new industries can be frenzied. China already has more than 1,000 robotics firms.

But at the same time, the government seems to be everywhere. China has 150,000 state companies. With preferential access to banks, they account for 70% of corporate debt. And in many industries, from finance to shipping, the government aims for what it calls "absolute controlling power", limiting competition and blocking entrants. This is a danger for China when its economic priority is to increase productivity. State firms are much less efficient. Their return on assets is less than half that of their private peers (see chart).

These two parts of the Chinese business world are often described as separate, as if plucky private firms are battling clumsy state-owned rivals. In reality they are deeply intertwined. The challenge for private firms is not so much how to compete against state firms as how to coexist with them. Wanjiang Gangli, a water-monitoring company with headquarters in the Global Centre, has seen its business boom as the government has targeted pollution. "In this system when leaders focus on an issue, it's highly effective," says He Xin, its general manager. But that same power makes for frustrations. To get contracts, his firm must partner with state firms, which have little technology but lots of political clout.

The worry is that this coexistence, already fragile, is breaking down. Complaints about *guojin mintui* (the state advances, the private sector retreats) emerged a decade ago, when the government gave state firms lots of cash to help the economy through the global crisis. "Retreat" may at first have been an overstatement, but there is no doubt that the private sector stopped advancing: its shares of both investment and industrial output levelled off.

Now, under Mr Xi, it looks more like a full retreat. In the three years before he became president in 2013, private firms received roughly half of all bank loans. State firms got just a third. In the three following years, more than 70% flowed to state firms, according to Nicholas Lardy of the Peterson Institute for International Economics. The tone has also changed. The Communist Party has insisted that private companies, including foreign multinationals, establish party cells. A foreign manager at a car-parts company which cut staff last year says he had to discuss "social stability" concerns with his firm's party secretary. It was a warning shot.

Some observers had thought Mr Xi would take China in the opposite direction. He initially pledged that market forces would play a "decisive role" in the economy. But he also vowed to strengthen state-owned firms. The latter pledge has been more potent. Over the past five years the government has merged steel mills, chemical companies and rolling-stock manufacturers, hoping to make them mightier. It has prodded private companies to invest in state firms, to make them more efficient. China Unicom, a state-owned telecoms giant, now counts three big private internet companies—Alibaba, Baidu and Tencent—as shareholders.

This risks dulling the edge of the private sector. Normally, companies get higher returns as they grow and reap economies of scale. In China the reverse happens, says

Feeling the squeeze

China, return on assets of industrial firms, %

Source: National Bureau of Statistics of China


Impressive from a distance

Mark Williams of Capital Economics, a research firm. His hypothesis is that big companies draw more attention from officials. Political meddling hurts them.

Last year a little-known blogger published an article arguing that the private sector had fulfilled its "historic task" of enriching the country, and that it was time for it to fade away. The article went viral not because people agreed but because it encapsulated their fears. Since then officials have tried to reassure businesses that they are still wanted. Mr Xi has vowed "unwavering" support. Yet these protestations count for only so much. As long as the government remains determined to strengthen state-owned companies, there will be no level playing-field for private firms.

Standing in the shadows

Even when officials craft sensible policies, this imbalance can knock them off course. A dispiriting case has been their attempt to defuse financial dangers. To do so they have clamped down on shadow banking, a lightly regulated universe that includes everything from banks' off-balance-sheet books to investment vehicles for the wealthy. Peer-to-peer lending is at the extreme risky end. One P2P firm, Zhongke Loans, resides inside the Global Centre. Wu Jinjun, its founder, describes his work with missionary verve. P2P lenders, he says, serve small borrowers, whom banks ignore.

But many P2P firms have either been fraudulent or mismanaged. Of the 4,000 that existed, two-thirds have failed. For Zhongke, staying afloat will be hard. It offers investors sky-high annual returns of 14%, which few companies can sustain. A ticker on its website measures, with disconcerting precision, how long it has been in operation: four years, three months, three days. Mr Wu's immediate concern is the central bank's belated decision to vet all P2P platforms and bar those that do not meet its standards.

Restoring order to the financial system is the right idea. But in doing so, the government has inadvertently stifled the private sector. Private firms are by far the biggest recipients of shadow loans. Banks prefer to lend to state companies that carry implicit government guarantees, especially when the economy slows. They do not favour the state for ideological reasons but because it is the best bet for them to get their money back, plus interest.

Even Western investors fall prey to these incentives. The manager of a major European fund recently met a Chinese bank to ask about a regulatory order to lend more to small firms. The fund manager feared that this would force the bank to take on undue risks. Fear not, the bank's executive promised, it would reclassify subsidiaries of big state firms as smaller entities. This way it could satisfy regulators without imperilling its loan portfolio—a natural outcome in a system so heavily anchored by the state.

4 A new long march

Global economic dominance is not assured

LOTTE MALL, a high-end South Korean department store in the Global Centre, normally wants to attract people. But on March 7th 2017, it was trying to keep them away. Despite a chill in the air, dozens had gathered on the plaza in front. They waved the Chinese flag, played the national anthem and unfurled banners, one of which read: "We will not tolerate violations of our motherland's safety!" It was, in short, not a typical day for staff more accustomed to selling face cream.

The trigger had been a decision by South Korea to install an American anti-missile system on its soil to defend itself against the threat of attack by North Korea. China perceived itself as the real target. State media lashed out at South Korea, and specifically at Lotte, because it had leased land in its home country for the anti-missile batteries. Protests hit some of Lotte's 100-plus stores around China.

Sitting more than 1,000km inland, the Global Centre can seem remote from the rest of the world. But the global tensions surrounding China's economic rise resonate in its corridors. The Lotte protests are a crude example of how China uses its biggest advantage—its huge market—to cow others into submission. Indeed, they were just the latest in a series of protests or boycotts freighted with political significance. Norway, the Philippines, Japan and Taiwan have all been on the receiving end.

China uses these outbursts of nationalism, whipped up by state media, to punish offending countries. The commercial pressure is hard to endure. Eventually South Korea promised China that it would refrain from additional deployments of the American defence system. But for Lotte it was too late. Its China business has not recovered. Having already sold dozens of stores, it is reportedly considering selling the rest, including its Global Centre branch.

There is an even bigger concern about the way that China wields its market power: as a lever to get companies to give up their technology. This is one of the core grievances behind America's trade war with China. The American and European chambers of commerce estimate that a fifth of their members have faced such demands, and in high-tech sectors as many as two-fifths.

An irony of the trade war is that many of America's demands would propel China's ascent

When China joined the World Trade Organisation in 2001, it pledged to stop requiring transfers of technology as a condition of market entry. The difficulty in building a case against China is that it has generally abided by the letter of its WTO commitments. Its methods are more subtle. From car manufacturing to cloud computing, foreign companies need local partners to operate in China. Regulators can also use product testing and approval procedures to compel them to disclose intellectual property. An unstated goal of these policies is to give Chinese firms access to foreign technology. But when challenged, China often replies that they are voluntary, commercial agreements.

Even more blatant is the outright theft of intellectual property. An IMAX theatre on the top floor of the Global Centre mall is an emblem of how brazen Chinese firms can be. The screen is one of 600 around China, IMAX's biggest market in the world—but also one of its thorniest. In 2014 it won a $7m court judgment in Canada against a former employee, Gary Tsui, for copying its 3D technology and starting a rival in China.

It was a limited victory. Mr Tsui is still active in China, filing patents under his local name, Cui Xiaoyu. And he now works as chief engineer for China Film Digital Giant Screen (CGS), part of a state-owned company. No wonder foreign firms sometimes feel they are competing not against commercial rivals but against the state. In Chengdu, not far from the Global Centre, CGS opened its 100th screen in 2015. It now has more than 300.

There is no way to know exactly how much China has stolen. The American government estimates that its firms lose intellectual property worth up to $600bn annually to foreign thieves, with China the leading culprit. Like any claimant in a dispute, though, it has reason to overstate the damage.

China is not the first country to steal intellectual property or demand tech transfers. Brazil, India and Mexico insist on joint ventures in various industries. China, though, is unusual in its heft. If the behaviour of, say, Malaysia or Argentina seems unreasonable, foreign firms can leave. Forgoing China is tougher.

So the real question is whether China can get away with it. It is in this regard that Donald Trump's hard line has been most notable. From an economic perspective American tariffs make little sense; they are a blunderbuss that will hurt America's growth as well as China's. Yet, unlike more delicate negotiating tactics in the past, they have made China pay attention.

The fallout has reached the Global Centre. At the office of Anbang Logistics, an international shipping company, employees are attempting to get goods to and from Chengdu. Li Jing, its vice-president, is blunt about the impact of the trade war, a view that seldom comes through in China's state media. "Our business is exports, so we feel the pain directly," she says.

The tariffs are having big knock-on consequences. Her firm can charge more for delivering electronics, allowing it to defray the cost of moving heavier products. But with Chinese electronics now facing tariffs in America, the cost of shipping other products has gone up. And Ms Li expects 2019 to be even worse. Unless, that is, America and China reach some kind of deal. Already, China has watered down some of its joint-venture requirements for foreign carmakers and banks.

Nevertheless, it is also easy to exaggerate the threat. The portrayal of China as an efficient, commercially minded, strategically brilliant government that, at its leisure nabs technology from foreign companies, rarely accords with reality. Policies are often much more muddled than they appear to the outside world.

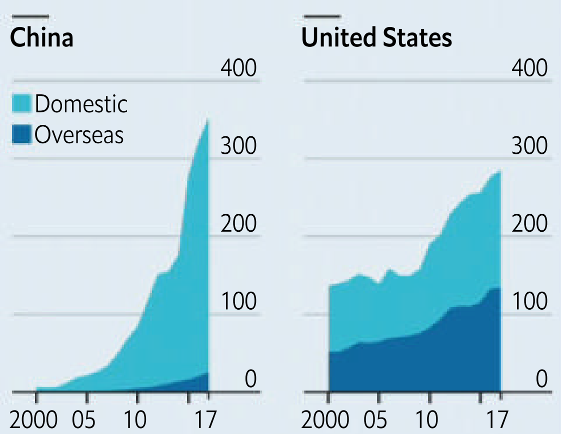
Not taking off

Take the joint ventures. Perhaps the most notable fact is how rarely they have been effective. Despite an array of aviation partnerships, China has failed to create a decent passenger jet even after years of trying. A former industry minister famously described carmakers' joint ventures as opium: Chinese firms are hooked on them for profits and make little of value themselves. Even theft only gets China so far. IMAX, for instance, believes the 3D technology stolen by its former employee is now outdated and that its Chinese rival has failed to keep up with its latest advances.

China has done well at building first-rate ports, highways and railways. But promoting innovation is harder. Patents filed by Chinese companies, for instance, are not all they seem. In the Global Centre, Finchos Electronics, a company that produces fingerprint readers, proudly displays dozens of patent certificates on its wall. Yet more than half are for incremental changes. Overall, China generates more patents in a year than America, Europe and Japan combined, but less than a quarter are for genuine inventions, and few of its domestic patents are recognised abroad (see chart).

Influential at home

Patents granted, '000



Source: WIPO

Government subsidies also have shortcomings. DoubleFlyer, an education-technology company in the Global Centre, was granted a rent-free office in an industrial park in the suburbs. Such support works well for manufacturers but less well in knowledge-based industries. After six months Luo Sai, the young founder, moved DoubleFlyer back to the centre, to be closer to its business partners. Ms Li of Anbang Logistics raises her eyebrows at the Belt and Road Initiative, China's mega-plan for investing abroad. Rail links between western China and Europe are the big accomplishment so far, an increasingly popular route for moving goods. But, without subsidies, she reckons that train costs would soar and exporters would go back to boats.

This is not to say that China is failing. Judging by growth or innovation, it has excelled compared with most other countries at its income level. But it still has far to go. Despite the name of its plan to develop advanced industries—"Made in China 2025"—which has caused so much concern in America, the bureaucrats who drew up the plan did not think that China could rival foreign prowess until 2049. That is cold comfort for firms whose technology has been stolen. But it is an indication of where China stands: its rise will be measured in decades, not years.

An irony of the trade war is that many of America's demands are ideas that would propel China's ascent. Opening more industries to competition would boost the private sector and productivity. Curbing subsidies would ease pressure on the public purse and curtail excess production. Better protection of intellectual property would stimulate innovation.

But it is China's call. That a tycoon built the world's biggest building deep in the interior, and that his building has been filled up with a dizzying array of businesses, gets at an essential truth: this is an economy whose fate is being written domestically. It is not pressure from outside that will make or break China, but its own decisions.

The direction is far from certain. Soon after Mr Deng ran into legal troubles, he put his assets, including the Global Centre, on sale. A local fund manager who looked over the books proclaimed that maintenance was too expensive and returns too low. But a buyer did come forward: the Yunnan Metropolitan Construction Investment Group, a state-owned firm.

The deal throws up red flags. The Yunnan group's finances are wobbly. It has razor-thin returns and debt more than ten times higher than its earnings. The group is supposed to focus on building infrastructure in Yunnan, one of China's poorest provinces, not on snapping up property elsewhere. It is a case of how state firms often hurt rather than help China by squandering capital.

Meanwhile, as one part of the deal, Mr Deng is back. He is working for the Yunnan group, tasked with helping it make a success of his buildings, including the Global Centre. A little more than five years after it opened, he can take some pride in it. Millions of people have come through its doors.

But he still has a challenge on his hands. To retain a shareholding in his projects, he has promised to deliver nearly $1bn in profits from 2018 to 2020, ten times more than over the previous three years—a nearly impossible task. Problems are also showing up. The waterpark now closes for half the year, because it is too costly to run in the winter when crowds are sparse. Doors have started to fail on some of the 200 lifts. Rainwater drips through the roof. This is one more way in which the Global Centre reflects the Chinese economy. Glittering from afar, the structure looks shabbier and less solid up close, and is sorely in need of renovation. ■

Returning jihadists

When the bad guys come home

BEIRUT

As Islamic State is defeated, governments around the world are struggling to deal with returning jihadists

IN THE FIRST heady days of their self-proclaimed caliphate, foreigners who joined Islamic State (IS) gleefully renounced their ties to the West. Jihadists from France, Canada and other countries filmed themselves burning their passports. But as IS nears its defeat, once-belligerent radicals act now like aggrieved tourists stranded on a package holiday. A Canadian man complains that his embassy has not been in touch. A British woman who had "a good time" in Raqqa wants help to return to London.

These IS members are a serious problem for their home countries. More than 41,000 foreigners travelled to Syria and Iraq to join the group. By the middle of last year 7,366 had returned home, according to the International Centre for the Study of Radicalisation, a think-tank in London. Thousands more died on the battlefield. What remains are around 850 men and a few thousand women held in makeshift camps scattered across eastern Syria.

Until recently their home countries were happy to leave them there. Then came President Donald Trump's decision in December to withdraw American troops from Syria. The Kurdish-led forces who control the area are already ill-equipped to hold thousands of prisoners. It will become nigh-on impossible after America pulls out. Mr Trump wants foreign governments to repatriate their citizens. "The alternative is not a good one in that we will be forced to release them," he tweeted. A bad alternative indeed—but so are the others.

The simplest is to make the detainees someone else's problem. A law passed in 2015 lets Australia strip citizenship from people who join terrorist groups. It was first used in 2017 against Khaled Sharrouf, a Lebanese-Australian man who photographed his young son holding a Syrian soldier's severed head. International law frowns on making people stateless; Australia's law applies only to dual-nationals.

Britain has no such hang-ups. It has cancelled the nationality of Shamima Begum, who joined IS as a teenager, on the ground that her Bangladeshi mother makes her eligible for citizenship there. Mr Trump says an American-born woman who was a propagandist for IS will not be allowed home. Courts may overturn these decisions. Even if they do not, it is unseemly for Western governments to dump their citizens on other states. Western countries are surely better equipped to handle them than, say, Lebanon or Bangladesh.

Saudi Arabia takes a different tack. In 2004, after a wave of domestic terrorist attacks, it created a rehabilitation centre for extremists. Detainees are held in a pleasant compound with a swimming pool and art therapy. Conjugal visits are allowed. Such efforts are expensive, though. They require prolonged, one-on-one attention from teachers and clerics, and are likely to be unpopular in the West. France set up its own deradicalisation centre three years ago in a chateau in the Loire Valley. Residents studied history and philosophy and met an imam to discuss religion. They were meant to stay for ten months, but the centre was closed after locals protested against the radicals in their midst.

It is also impossible to know whether these schemes work. Scholars disagree on how people become radicalised or even how to define the term. Saudi Arabia claims that less than 20% of its 3,000-plus graduates returned to jihad—which means its curriculum failed hundreds of times. A Somali-American man arrested at the airport in Minnesota, on his way to Syria, was released from custody in 2017 after a seemingly successful year in rehab. What worked for him may not work for hardened fighters who massacred and enslaved innocent people. Sentencing them to a glorified summer camp feels unjust.

Yet putting them on trial is complicated. America has a decent record. One man was sentenced to 20 years in prison and a ▸▸

second was indicted in June. But it was unable to try a third suspect for lack of evidence. He was released after more than a year in custody. Heiko Maas, the German foreign minister, says his country faces a similar problem. Testimony from battlefield interrogations is inadmissible in court. Documents recovered by Kurdish fighters have no chain of custody.

Australia has a useful tool: the "declared-area offence", which makes it a crime to enter proscribed areas. Only Mosul and Raqqa were labelled as such, however. To use the law, prosecutors must prove that suspects entered those cities. Even that can be difficult. Once they are convicted, states must decide where to hold them. America provided no more than 300 fighters and even fewer came back. Jailing them is easy. Not so in Europe, where the numbers are often greater. Some European countries already have problems with radicalisation in their prisons. Adding returned fighters to the mix could incubate the next round of extremists.

Faced with such problems, politicians understandably throw up their hands. If their citizens committed crimes abroad, should they not be tried there? But eastern Syria's Kurdish-led administration is not a state. Its rudimentary courts lack due process and may not exist much longer. With their American protectors gone, the Kurds will face attacks by both Bashar al-Assad's regime and the Turkish army. They will probably cut a deal with Mr Assad. If their detainees wind up in Syrian jails, history suggests what may happen next. Mr Assad's dungeons have produced generations of radicals, who are occasionally set free when politically expedient.

That leaves one last option. "The Pentagon was very clear with us that there's a good chance they get sent to Guantánamo," says a congressional staffer. America has not added prisoners to the camp since 2008. President Barack Obama spent eight years trying to close it, and its population has shrunk from 242 detainees in 2009 to just 40 today. Democrats will probably oppose any attempt to reverse the trend.

Dealing with those who return will require a mix of trials, monitoring and rehabilitation. Police will need resources, and prosecutors ways to introduce sensitive evidence in open court. Deradicalisation programmes have merit, especially in prisons and for those brought to Syria and Iraq against their will or as children.

No Western politician wants to be responsible for bringing potentially dangerous radicals back home. But leaving them in Syria or dumping them on developing countries does not make the problem go away. It also sends a message that Western governments do not care about the millions of Syrian and Iraqi lives their citizens helped to destroy. ■

Israeli politics

Labour pain

As the Palestinian issue has faded, so have Israel's old left-wing parties

"PEACE HAS become a dirty word." That was the main reason given by Tzipi Livni (pictured) for quitting politics on February 18th. Over the course of two decades in the Knesset, Ms Livni, once a protégé of Binyamin Netanyahu, Israel's nationalist prime minister, came to support the establishment of a Palestinian state. But too many voters moved in the opposite direction. Her party, Hatnuah, was unlikely to win any seats in April's election, in which it will no longer take part.

The Palestinian issue was once the dividing line between left and right in Israeli politics. But as hope for a solution has waned, so too have the fortunes of left-wing parties. Most prominent among them is Labour, which sought peace with the Palestinians under leaders such as Yitzhak Rabin, Shimon Peres and Ehud Barak (all former prime ministers). In April it will be lucky to win a dozen seats (out of 120). To its left is Meretz, which may not win enough votes to be represented in the Knesset.

Roughly half of Israelis support a two-state solution, but three-quarters of them do not believe an agreement can be reached soon. The latest peace talks broke down in 2014. A decade of prosperity and relative stability under Mr Netanyahu has left Israelis comfortable with the status quo. When asked about their priorities, they usually place the Palestinian issue fourth, after security, the economy and education, says Dahlia Scheindlin, a pollster.

Labour's manifesto reflects this. It focuses on bettering the lives of the middle class. The party's leader, Avi Gabbay, refuses to disclose details of his peace plan and sees no reason to remove Israeli settlements in the West Bank. Without the Palestinian issue, though, little marks Labour out from most other parties. It long ago lost its socialist ideology. Mr Gabbay is a former telecoms executive who served as environment minister under Mr Netanyahu. Some call Labour's leadership "Likud light".

Not Mr Netanyahu, though. The prime minister has spent years trying to brand the left as a threat to Israel's existence. One campaign advertisement released before the election in 2015 suggested that a Labour government would open the door to the jihadists of Islamic State. Older Israelis remember Labour as the party that built the country; younger ones lack such reverence. The centre-left has become factious. Labour ended its alliance with Hatnuah last month. At least three parties will compete in April for a centre-left electorate that has not increased in size for a generation. After each loss at the polls, Labour boots out its leader. Mr Gabbay is the ninth party head since 2000. Likud has had just two.

Labour has failed to take many votes from Likud and is threatened by the emergence of new centrist parties and alliances. Benny Gantz, a former army chief, has launched a party that has taken much of Labour's support. More threatening, still, is a last-minute merger between Mr Gantz's party and Yesh Atid, headed by former chat-show host Yair Lapid.

Labour got a boost from a primary on February 11th that elected a diverse slate of candidates. Mizrahim (Jews of Arab descent) and women took many of the top spots. Even so, Labour will probably not win enough seats to lead the opposition, let alone form a government. After a decade of right-wing rule, perhaps just staying alive is an accomplishment. ■

Livni leaves the scene

The new alms-giving

Welfare states rising

DAR ES SALAAM AND DAKAR

African countries are quickly stitching together social safety-nets

UNDERNEATH THE mango tree that marks the centre of Kondo, a village in northern Tanzania, Mwanaidi Saidi prises open a green box. Inside are the 110,000 Tanzanian shillings ($47) the 35-year-old has saved since she joined the country's nascent welfare scheme. "The money helps me solve small problems," she says. It has helped her buy school uniforms for her four children, medicine for her ill mother and ingredients to make the samosas she sells by the side of the road.

Tanzania's main welfare scheme, known as the Productive Social Safety Net (PSSN), has expanded quickly since it was created in 2013. Today Ms Saidi's is one of 1.1m households, or about 10% of the total, that are enrolled. Recipients receive some money simply for being poor. They can earn extra cash from toiling on public-works projects or for making sure their children attend school and health clinics. On average, recipients are paid the equivalent of $13 per month.

Richer African countries such as Botswana and South Africa have operated welfare schemes for many years. Poorer ones are now rushing to do the same. Kenya has created several, including one that sends money to households in drought-stricken areas. Ethiopia's main welfare programme, which requires recipients to work, used to operate only in the countryside but is spreading to cities. From 2010 to 2015 the countries of sub-Saharan Africa launched an average of 14 schemes per year, up from seven per year between 2001 and 2009. These countries spend an average of 1.2% of GDP per year on social safety-nets, using a broad definition that includes pensions as well as support for children and the poor. That is only a little less than the average for developing countries (1.6%).

It is an extraordinary development. Many of the African countries building welfare systems today are far poorer than countries in Europe, Latin America and Asia were when they did the same. In sub-Saharan Africa as a whole, 41% of people subsist on less than $1.90 a day. Welfare alone cannot bring that proportion down to zero. But it helps. It also changes poor Africans' expectations of their governments.

One reason so many African countries are building social safety-nets is that they have become wealthier and more politically stable. Another is that they have lots of examples to copy. African countries have learned not just from each other but also from countries such as Brazil and Mexico. Attitudes are changing, too. Political leaders have often been flinty-hearted. Armando Guebuza, then the president of Mozambique, claimed in 2007 that "the lack of a habit of hard work" was perpetuating poverty in his country. But in Tanzania, argues Ladislaus Mwamanga, the director of the Tanzania Social Action Fund, the agency administering PSSN, poverty is no longer seen as a character flaw.

Donors increasingly see handing out cash as an efficient form of aid. Academics have shown that very poor people are not feckless; when you give them money, they spend it wisely. Fully 90% of the cost of Tanzania's programme is funded by donors such as the World Bank and the British and Swedish governments. Mr Mwamanga says that, since PSSN amounts to just 0.4% of GDP per year, "in theory" Tanzania could take on more of the burden.

Senegal also started distributing money to poor households in 2013. As in Tanzania, the programme has grown quickly, and now covers about 20% of the population. But the political context is quite different. Although many of the bureaucratic costs associated with Senegal's cash-welfare programme are paid by aid agencies, almost all the money distributed to paupers comes from the government. As a result, it has become a political football.

Pape Malick Gningue, the director of Senegal's main welfare scheme, calls it the "baby" of Macky Sall, the current president. Mr Sall promised to create the scheme in 2012 while running for the top job. Once in office, he insisted that it was rolled out quickly to every town and village in the country. Mistakes were inevitably made in the rush. But Mr Sall, who faces a re-election battle on February 24th, can point to it as something he has done for poor people. A meeting with welfare recipients in Darou Thioub, near Dakar, is briefly hijacked by a woman who loudly declares that the others should credit Mr Sall for the money they receive. She turns out to be a local politician for the president's party.

African welfare is hardly generous. In Senegal, households receive $43 every three months (though Tanzania's even smaller average payment of $13 a month is the equivalent of 21% of household disposable income). Families are large in both countries, so the money is spread thinly. The women in Darou Thioub say that they "eat" the cash within a few days. Most spend it on school fees or on tiny makeshift businesses, such as buying packets of soap powder which they divide and sell on.

But at least much of the money does actually go to poor people. In Senegal, an analysis in 2016 found that 93% of cash welfare recipients were living below the poverty line. That makes social safety-nets very different from things like fuel and fertiliser subsidies, which tend to go to middle-class people. Cash welfare may also reach the poor better than new schools and hospitals do. Aline Coudouel at the World Bank says that the poorest people often cannot reach such institutions, or are turned away when they do.

Welfare can be targeted too accurately at the poor. Lant Pritchett, a development ▸▸

economist at Harvard University, argues that there is a trade-off between precision and political consensus. A welfare programme that helps only the poorest people is likely to remain small and stingy because middle-class voters see no reason to expand it. Some schemes are abolished or run down when donor money dries up.

African countries may have found a way around this problem, however. In Tanzania the decision over who receives the money from PSSN is devolved to villages, where at public meetings residents discuss the merits of neighbours' cases. Auditors from the central government then check that the chosen lot are genuinely poor. Roping in local people as advisers and overseers of the scheme not only cuts costs; it also gives them a stake in it.

Mark Sefu, a 60-year-old man who lives in the same village as Mwanaidi Saidi, has some complaints about how the poor were chosen. "Fair? It wasn't fair at all!" he exclaims. He says he was penalised for having a house that was not ramshackle (one of the criteria used to evaluate recipients), even though it took him 15 years to build. And yet Mr Sefu concedes that the selection process "belongs to all of us".

Senegal's government also relies on local people to pick the neediest families. There, the result sometimes looks like patronage or even nepotism. In Thiaroye sur Mer, east of Dakar, one village has an eight-member "targeting committee". A woman on the committee, Oury Diagne, says that she is particularly keen to help a man who has been injured. The man and his wife live with many children in a clapped-out home that ought to be pulled down, she explains. Asked how she knows so much about the man, Ms Diagne explains that he is her half-brother.

Compared with the older, more bureaucratic social-safety nets in Europe, Asia and the Americas, the new ones in Africa can seem rather ropy and ad hoc. But they are gradually becoming less so. With help from the World Bank, Senegal is creating an impressive national social register containing many details about the country's poorest people. Its main welfare scheme is already beginning to feel permanent, because it has created a constituency in favour of its perpetuation. Ousmane Basse, Senegal's director of welfare strategy, says that the programme would be hard, if not impossible, to abolish.

The spectacle of an African government doing something specifically to help the poorest people in a country is novel. Governments have mostly tried to reduce poverty by promoting economic growth, which tends to mean courting businesses and building infrastructure. Growth is essential. But the best way to tackle deep poverty is to start at the bottom, with poor people themselves. ■

Congo and the wailers

No woman, no cry

GOMA

There is money to be made in the mourning business

DEBORAH NZIGIRE, a 65-year-old Congolese woman, is nervous when she sits down for her job interview. Her hands are clasped tightly together, her words are slow and deliberate; she is blinking too much. "What inspired you to pursue this career?" asks one of the two people on the interview panel. Her answer is garbled, she mentions money. When asked to give a demonstration, she giggles awkwardly and leaves the room. She comes back in crying.

"Bettina," she howls and throws herself to the ground. "Bettina, Bettina, why did you leave us?" She thumps the floor with a flattened palm, her body convulses with sobs as she moans and wails. The interviewer's eyes fill with tears. Mrs Nzigire (pictured) has got the job.

She is the first recruit in Gilbert Kubali's new enterprise to bring professional mourning to the east of the Democratic Republic of Congo. In the distant capital, Kinshasa, the mourning business is well-established and lucrative—you need not look far to find *pleureuses* ("criers") to hire for a funeral. But in Goma, a city of 1m people in the east, it has not yet taken off and Mr Kubali has spied an opportunity. "I hope to monopolise the market," he says.

Ostentatious grief is tied up with a traditional belief that the dead linger long after their pulses have stopped. "We believe that the dead person is not dead, they are watching us like a film," explains Mrs Nzigire. "If you do not cry they will be angry." Angry ancestors are known to come back and disrupt the lives of their progeny. Further, it is shameful for a family member not to cry at a loved one's funeral—and highly imprudent. Their insouciance may be interpreted as a sign that they were responsible for the death through witchcraft. One of the functions of the trained mourners is to elicit tears in others, too.

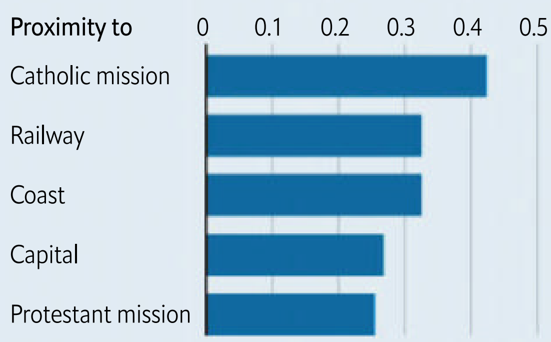
But the *pleureuses* are expensive. To hire ten women for a week of mourning costs some $1,500. On top of this the women expect food, drink and transport costs. This may be why the industry has not yet flourished in the east. There are more wealthy people in the capital.

Mr Kubali reckons, though, that if the women are good enough and if he advertises well, he will find customers. He plans to fly a professional out from Kinshasa to train his ten ladies.

As for the women, crying on demand is simple, says Mrs Nzigire. In a part of Congo that has been ravaged by raping militias, there is much pain. Financial worries haunt the population, 77% of whom have less than $2 a day. "In every moment there is some kind of problem... your mind is always turning, asking where can I find money?" she explains. "That makes you sad and you cry. We are always ready to cry." ■

Mission to educate

Africa, factors linked to educational attainment* for 14- to 18-year-olds, standard deviations



Source: "Intergenerational Mobility in Africa" by Alesina, Hohmann, Michalopoulos & Papaioannou, NBER working paper, 2019

*Chance of child becoming better educated than their parents per one standard-deviation increase in proximity

Geography lessons

Education in sub-Saharan Africa has come a long way. About 70% of children can expect to finish primary school, up from 45% in 1971. Progress though, has not been evenly spread. A new paper sheds light on why. The strongest predictor of whether children will finish primary school is their parents' level of education. But geography also plays a role. Children who grow up near big cities are more likely to climb the educational ladder. Living near certain colonial-era institutions, such as railways or mission stations, also improves children's chances of becoming better educated than their parents. Living near diamond mines or oil wells does not.

France

Spreading like poison

PARIS

A nasty brew—anti-Semitic, anti-black, anti-elite—is bubbling in France

When Hervé Berville was growing up in rural Brittany, he was often the only black child around. But, he says, he encountered scarcely any racism. Adopted by a French couple during the genocide in Rwanda in 1994, the lanky economist went on to be elected in 2017 to the National Assembly, for President Emmanuel Macron's party. Last year, when Mr Berville received a typed death threat by post at his parliamentary office, he threw it in the bin. When another arrived last month regretting the fact that he had "escaped the machetes", the deputy decided to speak out. "It was so violent," he says, and the atmosphere had shifted. "The border between threats, and acting on those threats, is shrinking."

A climate of hate is emerging in France. The targets are varied, apparently unconnected and shifting: Jews, journalists, the rich, policemen, members of parliament, the president. Sometimes violence is only threatened, as in Mr Berville's case; two of his (black) parliamentary colleagues received the same threat. At other moments violence has been perpetrated—against symbols (a ministry, luxury cars) as well as people, usually in connection with the *gilets jaunes* (yellow jackets) protests. That movement, three months old, has radicalised as it has shrunk. Some 1,700 people and 1,000 policemen have been wounded since the protests began.

When the *gilets jaunes* movement emerged last November, it was broadly a social protest and fiscal revolt. But the infiltration of ultra-left and extreme-right agitators, and the determination of a radical core to seek the overthrow of Mr Macron, has hardened the movement's edge. Weekly scenes of violent clashes with riot police fill French television screens and plumes of tear gas fill the air on the streets of Paris and other cities. This relentless backdrop seems to have legitimised a form of violent hate. What was once confined to the unhinged ramblings of social-media groups has erupted into public.

Earlier this month the Brittany home of Richard Ferrand, speaker of the National Assembly, was torched. Last week the constituency office in Le Mans of Damien Pichereau, another deputy from Mr Macron's La République en Marche (LREM), was destroyed. Mr Berville says that 100 deputies from his party have been the victims of warnings or attacks of some sort. Among them are many women. Aurore Bergé, another LREM deputy, was the recipient of a particularly crude threat. During one protest, an effigy of Mr Macron was decapitated. Christophe Chalençon, a *gilets jaunes* organiser, recently warned that "if they put a bullet in my head, Macron will end up on the guillotine".

Anti-Semitism is mixed into the brew. After falling for two successive years, the number of anti-Semitic acts in France surged by 74% in 2018. On February 19th, 80 graves in a Jewish cemetery in eastern France were sprayed with swastikas. Christophe Castaner, the interior minister, says that anti-Semitism is "spreading like poison". In recent days a bagel shop in Paris was defaced with the word "Juden", swastikas were painted on to street art depicting Simone Veil, a former minister and Auschwitz survivor, and "Macron Jews' bitch" was found sprayed on a garage door in the ▸▸

capital. Any link to the *gilets jaunes* is unproven. But last weekend *gilets jaunes* marchers were caught on video yelling "dirty Zionist shit" and "go back to Tel Aviv" at Alain Finkielkraut, a French philosopher of Polish origin, who was walking in the street near his left-bank home in Paris.

Threats of death and intimidation are nothing new to politics. And anti-Semitism has deep roots in the country, reaching back beyond Vichy France to the publication of Edouard Drumont's "La France Juive", a popular anti-Semitic text, in 1886. Nor is France a stranger to periodic spasms of violence, such as the May '68 uprising or the *banlieue* riots in 2005. "The specificity of the current period", wrote Alain Duhamel in *Libération*, a newspaper, "is not the violence but the hatred."

There is no precedent under the Fifth Republic for the level of publicly expressed loathing, says Jean Garrigues, a historian at the University of Orléans. He compares today's toxic mix of anti-parliamentarianism and anti-Semitism to the 1930s. If there is a link between these different strands it seems to be that those who are targeted are all regarded, rightly or wrongly, as part of the elite—or, more accurately, as part of an illegitimate, undeserving elite which is cheating the people. And those doing the most to promote this divide, at a time of eroding ideological attachments, are the country's populists.

Ever since Mr Macron upended the mainstream political parties at elections in 2017, political opposition in France has shifted to the extremes. "You are hated, massively hated," declared François Ruffin, a deputy from the far-left Unsubmissive France, to the president in an open letter late last year. Marine Le Pen, on the far right, blames the "agitators, revolutionaries, anarchists" of the far left for the *gilets jaunes* violence. But she just as often lays into the self-serving political elite herself. Her campaign slogan reads simply: "Power to the people".

In protest at the current mood, a march against anti-Semitism on February 19th drew a cross-party collection of politicians and some 20,000 people in Paris. Even Ms Le Pen laid flowers to victims of anti-Semitism; she has consistently sought to distance her party from its anti-Semitic past even as she trades on identity politics.

Ahead of a visit to the desecrated Jewish cemetery this week, Mr Macron described anti-Semitism as "the antithesis of all that is France". He is hoping that his "great national debate", a countrywide series of consultations and town-hall meetings, will counterbalance the hateful voices. Unfortunately, as the country prepares for elections to the European Parliament in May, in which the parties of Mr Macron and Ms Le Pen are the leading contenders, the harsh tone is unlikely to soften. ■

Foreign investment in Russia

Who needs it?

MOSCOW

The arrest of a prominent American investor rattles foreign businesses

One of modern Russia's oldest and largest investment funds, Baring Vostok Capital Partners (BVCP) was launched in 1994. It has raised \$3.7bn in capital, investing \$2.8bn into 80 companies across the former Soviet Union, including some of Russia's leading firms, such as its tech star, Yandex. *Vedomosti*, Russia's top business daily, called the company "the symbol of direct investment in Russia". BVCP's American founder, Michael Calvey, has been unwaveringly bullish about the Russian market through crises, recessions and geopolitical tensions, staying put even as other foreign investors wound down their businesses after Russia annexed Crimea and launched a war in eastern Ukraine. Even in a country where business disputes can get messy, he was one of the last people anyone would expect to find behind bars.

Yet that was exactly where Mr Calvey landed on February 15th, facing fraud charges carrying a sentence of up to ten years. His arrest, which came as government officials and business leaders gathered for a yearly investment conference in Sochi, sent shock waves through the Russian business world. Russian stocks slumped. Western business associations in Russia warned of the detrimental effect on the investment climate. Alexei Kudrin, head of Russia's audit chamber and a close confidant of Mr Putin, called the situation "an emergency for the economy".

The case seems to stem from a corporate conflict over Vostochny Bank, in which

BVCP holds a 52.5% stake. Prosecutors allege that Mr Calvey and his associates embezzled \$37.7m from the bank. Mr Calvey has called the charges baseless, and says they are the outgrowth of a clash with two minority shareholders, Artem Avetisyan and Sherzod Yusupov, whom Baring Vostok accuses of fraudulently withdrawing assets from a smaller bank of theirs ahead of a merger with Vostochny in 2017. The dispute has gone to arbitration in London. The case against Mr Calvey was opened after Mr Yusupov complained to the Federal Security Service (FSB). The Bell, an independent Russian news site, reported that Mr Avetisyan has close ties with the country's security services, including the son of Nikolai Patrushev, the hawkish head of Russia's Security Council.

In one sense, such a story is hardly unusual. As Boris Titov, Russia's business ombudsman, wrote in a column in support of Mr Calvey, the interference of *siloviki* (former and current members of the security services) in commercial activity is a "systemic problem". Russians even have a term for the illicit tactics, often employed in cahoots with crooked state authorities, used ▸▸

Calvey, a bull at bay

to seize assets: *reiderstvo*, or "raiding". BVCP's own list of ten successful investment principles includes "constructive relations" with the powers that be, a nod to those realities; it kept a famous Russian astronaut on its payroll to manage its own relations with the state.

Nor are attacks on large foreign commercial interests novel. Mr Calvey's arrest recalled the case of Bill Browder, a prominent American financier and one-time supporter of Vladimir Putin's who was expelled from Russia in 2005. (He became a fierce Kremlin critic after his lawyer, Sergei Magnitsky, died in a Russian prison.) Yet while Mr Browder, an activist shareholder, took on major state-controlled companies, Mr Calvey tended to stay away from industries of interest to the state, focusing instead on rising private companies in consumer sectors.

"If they can arrest Calvey, they are not afraid to arrest anyone," tweeted Michael McFaul, a former American ambassador to Russia. A veteran of Salomon Brothers and the European Bank for Reconstruction and Development, he became known as a straight-shooter with a knack for navigating in Russia. Arkady Volozh, the billionaire founder of Yandex, called him the "market standard of decency and lawfulness". German Gref, head of state-run Sberbank, Russia's largest lender, declared Mr Calvey "a decent and honest person". Kirill Dmitriev, the well-connected director of the Russian Direct Investment Fund, a state-backed sovereign-wealth fund, promised to "provide a personal guarantee" for Mr Calvey.

With Russia and America locked in a hostile standoff, and Congress preparing another set of sanctions on Russia, the arrest of a prominent American businessman threatens to become a political flashpoint—and a potential bargaining chip for the Kremlin. The judge's decision, a day after the arrest, to keep Mr Calvey in pre-trial detention for two months suggests that the case will not be resolved quickly or quietly. For the Western businesses still operating in Russia, the implications are chilling. Being a foreigner once provided a modicum of protection, says Alexis Rodzianko, president of the American Chamber of Commerce in Russia. "It makes every one of us now think, how far away am I from the cage?"

The Kremlin has said it hopes the case will not harm investment. Perhaps that is because there is so little left (see chart). The government's economic policy recognises as much. Its central concept is the idea of "national projects", infrastructure and other plans that rely largely on capital from the state and state-owned enterprises. In his yearly state-of-the-union speech on February 20th, Mr Putin nodded at the challenges entrepreneurs face. "Honest businesses should not have to fear criminal prosecution," he declared, a line that some interpreted as a veiled reference to Mr Calvey.

The president ordered the Agency for Strategic Initiatives (ASI), a government think-tank, to help build a platform for businesses to report on pressure from law enforcement. This may have a less constructive effect than the president hopes. For the director of the ASI's "New Business" department, whose responsibilities include initiatives to improve the investment climate, is Mr Avetisyan. ■

Germany's fear of China

Making Europe Great Again

MUNICH

China's rise inspires some revolutionary thinking in Germany

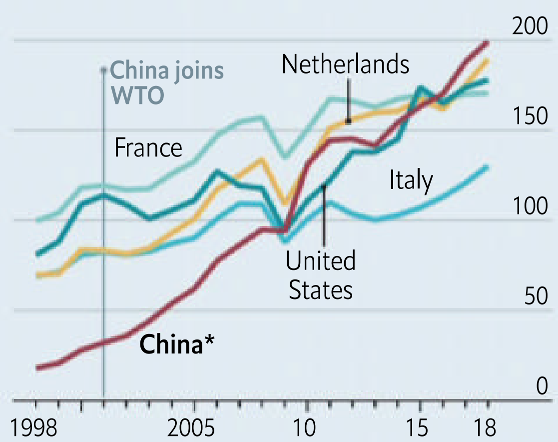
IT WAS AN endearingly optimistic line. For years Germany's China policy was guided by the motto *Wandel durch Handel* ("Change through trade"). There has certainly been plenty of trade (see chart), but the changes are not of the sort that were intended.

Originally Germany imported cheap Chinese consumer goods while exporting its expensive cars, machine tools and gizmos. But German companies soon discovered that operating in China often means giving up technology and navigating rules that tilt the pitch in favour of domestic rivals. More recently some *Mittelstand* manufacturers have started to fear that China will eat their lunch, as Chinese companies, clambering up the supply chain and backed by juicy state subsidies, have embarked on shopping sprees inside Europe. Germany is particularly exposed to China's new industrial policy.

These developments have sparked a change of attitude. "German business used to want the government to get out of the way," says Alexander Graf Lambsdorff, an MP from the liberal Free Democrats. "Now they find that reciting Hayek is no longer good enough." Meanwhile Xi Jinping's tightening grip on the Communist Party, and the party's hold on industry, has squashed any lingering hopes that China might be brought into the Western fold.

From opportunity to threat

Germany, total trade with selected countries, €bn



Source: Destatis

In January these concerns found dramatic expression in a paper from the Federation of German Industries (BDI), Germany's biggest business group. Where its members once saw a lucrative new market, they now see a "systemic competitor". The paper contains dozens of recommendations for European leaders, from tax breaks for research to investment in digital infrastructure. Its overriding message is that Germany and Europe must give up hoping that China will change, and instead produce policies to respond to its rise.

And so they have. This week Peter Altmaier, Germany's economy minister, and Bruno Le Maire, his French counterpart, unveiled a joint five-page industrial-policy manifesto "fit for the 21st century". It made no mention of China, but the subtext was clear. The pair propose joint action to boost Europe's capabilities in artificial intelligence, which Mr Altmaier's department has called the most important innovation since the steam engine. They have pledged €1.75bn ($2bn) to fund next-generation battery-cell production. Most strikingly, France and Germany want to grant the EU's governments power to overturn competition decisions made by the European Commission. The current rules, they believe, make it too hard for European firms to compete with Chinese state-backed giants.

Such proposals are nothing new in France, which once declared yogurt-making a "strategic" industry. But in Germany they are revolutionary. Its "ordoliberal" philosophy—that it is the job of the state to establish a framework for the private sector, including tight antitrust laws, and then let the market do its work—inspired the EU rules the government now seeks to rewrite. Little wonder Mr Altmaier's proposals have caused a fierce backlash at home. Lars Feld, an economics professor at the University of Freiburg, speaks for many when he declares himself "strongly opposed to this kind of mercantilist thinking".

China also threatens Germany's already troubled relations with America. The government is split over whether to bow to American demands to block Huawei, a Chinese technology giant, from building its 5G telecoms network. Spooks, hawks and diplomats say it should, but Huawei may offer a better service than its rivals at a lower price. Above all Germany wants to avoid being caught up in Sino-American tensions. Finding a telecoms provider closer to home that is as cheap and capable as Huawei could help with that. But it is not clear that Europe has got one. ■

Sex and the Vatican

Praying about preying

VATICAN CITY

As the Catholic church faces its scandals, the pope is implicated

"WE HEAR THE cry of the little ones asking for justice," said Pope Francis on February 21st to 100 bishops from around the world and other leading members of the Catholic hierarchy who had gathered in the Vatican for a four-day meeting on clerical sex abuse. The conference is the most conspicuous effort yet to extirpate the cancer eating at the world's biggest Christian church.

In the run-up to the meeting, a series of events had charged the atmosphere. Earlier this month, the pope admitted that there was truth in stories that nuns around the world had been raped by priests and bishops. This week a book by a French journalist, Frédéric Martel, was published, claiming that 80% of the clerics in the Vatican are gay. That may seem to have little bearing on the subject of the conference: there is abundant evidence to show that heterosexuals are as likely as homosexuals to prey on the young. But Mr Martel, himself gay, argues that sexually active homosexual priests are reluctant to report abusers for fear of being "outed" in revenge.

Five days before the start of the conference, in an apparent effort to assure the world of its determination to root out predatory clerics, the Vatican threw an ex-cardinal, Theodore McCarrick, out of the priesthood. Vatican investigators concluded that the 88-year-old former archbishop of Washington, DC, had had homosexual relations with people under his authority and abused at least one minor. He was the highest-ranking member of his church to be defrocked in modern times.

"Concrete and effective measures" were expected, the pope told the conference; but there are doubts about how far it will go. Last month he sought to deflate expectations. The delegates, he said, would "pray, listen to witness and have penitential liturgies, asking for forgiveness for the whole Church". They would also be given instruction on how to react to allegations of clerical sex abuse. And the pope said he hoped their meeting would yield rules for handling cases. Testimony from survivors will be heard during moments of prayer. The participants were also told to meet victims before travelling to Rome.

As the scandal has spread across the world since the 1990s, the focus has shifted from the conduct of individual priests to the role of their superiors in ignoring or covering up their behaviour. Francis has reacted defensively. In 2016 he shelved a plan to create a special tribunal to try bishops accused of failing to take action against abuse. And last year he leapt to the defence of a Chilean bishop accused of hiding abuse, saying he was a victim of "calumny"—before regretting those words.

Francis's own record has come under mounting scrutiny. As archbishop of Buenos Aires in 2010, the then-Cardinal Jorge Maria Bergoglio commissioned an investigation that cleared Father Julio Grassi of abuse claims. Seven years later Argentina's supreme court upheld Father Grassi's conviction and a 15-year prison sentence.

Just as serious, but potentially more dangerous for the pope, are claims surrounding the case of former Cardinal McCarrick. Last year Archbishop Carlo Viganò, the former papal nuncio (ambassador) in America, claimed that Francis had lifted restrictions that his predecessor, Benedict XVI, had imposed on the American prelate and entrusted him with a string of important diplomatic missions, despite having been told that he was a serial seducer of seminarians under his authority.

Mr Martel writes that members of the pope's entourage had told him the same, adding that the then-Cardinal's prey was above the age of consent and that his behaviour "was not enough in [Francis's] eyes to condemn him." The pope has declined to respond to Archbishop Viganò's claims. ■

Denmark builds a wall

Keeping foreign snouts out

BERLIN

A Danish fence against swine fever gets Germans hot and bothered

MARTIN ELLERMAN, the mayor of Harrislee, a town on the German-Danish border, is fuming. At the behest of the Danish government, a five-foot steel fence is being built along the 70 km (40-mile) border to prevent an influx of immigrants from the rest of Europe. Mr Ellermann thinks it an aesthetic affront that violates the European ethos of invisible borders.

The immigrants in question are wild boar, which can carry African Swine Fever (ASF). Although the disease has not yet been diagnosed in Germany, there have been outbreaks in eastern Europe and Belgium; and diseases travel fast among Europe's vast numbers of boar. The virus poses no threat to humans but it spreads easily to domestic pigs, killing nearly all it infects. There is no cure and no vaccine, so the Danes have opted for a radical solution: shoot all the boar in Denmark and keep out foreign ones.

Dangerous? Moi? It's all porkies

Eradicating an entire species (albeit temporarily) seems an extreme approach to agricultural insurance, but Denmark has almost three times as many pigs as inhabitants. An outbreak of ASF would threaten more than 30,000 jobs and more than €4bn ($4.5bn) of annual exports of pig meat, which account for half of the country's agricultural exports.

Jens Munk Ebbesen of the Danish Agriculture and Food Council, which is responsible for helping farmers bring home the bacon, says America, China and Japan will stop their imports of Danish pork if a single wild boar infected with ASF is detected in Denmark—as happened in the Czech Republic in 2017. Vincent ter Beek, editor of *Pig Progress*, is sympathetic to the Danish move. Although he says it is not a fail-safe, the porcine publication is pro-fence.

But critics say the fence will do more harm than good. According to Bo Oksnebjerg, the boss of the World Wildlife Fund in Denmark, only proper observance of rules on, for instance, using disinfectant and disposing of carcasses will offer protection against an outbreak of the disease; the new barrier, which reaches half a metre underground to stop boars from digging their way under it, will disturb flora and wildlife and will not prevent boar from crossing rivers along the border, for they are good swimmers. A pig of a problem, indeed.

Charlemagne | The secrets of the Saarland

What the outsize influence of a tiny state says about Germany

At the end of the annual Munich Security Conference on February 17th, most of the foreign- and security-policy elites in attendance jetted back to their countries. But Annegret Kramp-Karrenbauer, the pluri-syllabic new leader of the Christian Democratic Union (CDU), motored instead to St Ingbert, a sleepy town in western Germany. There the front-runner to succeed Angela Merkel as chancellor donned an apron and headcloth and, pushing a mop around a stage, performed a comedy routine as her alter ego, Gretl, a wisecracking cleaning lady with a thick Saarland accent. To laughter from the audience of local residents and politicians at the carnival-season *Volksfest*, "Gretl" grumbled about the wiles of federal politics: "What a mess," she despaired, divulging that she had been sent to Berlin to clean it all up.

The contrast between the salons of Munich and her skit in St Ingbert says something about the rise of Ms Kramp-Karrenbauer (known by her initials of AKK). Before her move to Berlin in October, she was the premier of the Saarland, a hilly federal state of only 1m inhabitants abutting Luxembourg and France. Over its history it has been French, German and, for a decade after the second world war, independent. In their singsong, French-influenced dialect, folk here still refer to the rest of Germany as the *Reisch* (empire). To other Germans it is an odd place. Presenting François Mitterrand with a plate of *Saumagen* (sow's stomach), Helmut Kohl apocryphally joked: "Eat up, or you're getting the Saarland back."

AKK is not the only Saarländer to overcome her state's marginal status. So did Peter Altmaier, Germany's economy minister, Mrs Merkel's closest cabinet ally, and a possible contender for the presidency of the European Commission. So, too, did Heiko Maas, Germany's foreign minister (from the Social Democratic Party, or SPD); Sabine Weyand, the brains behind the EU's negotiations with Britain over Brexit; and Oskar Lafontaine, the doyen of the socialist Left party. "The Heute Show", a satirical television programme, deadpans that the Saarland is the real centre of power in Germany.

It may not be a fluke. Saarländers have certain political strengths. One is charm. They are known for bon-vivant informality, with a Gallic knack for cooking and a greater propensity than other Germans to use the friendly *du* pronoun rather than the formal *Sie*. The state's smallness virtually puts its politicians on first-name terms with residents. Saarländers are linguists by necessity and have good links to Brussels and Paris, giving them advantages in European politics. Mr Altmaier, a clubbable, multilingual problem-solver whose dinner parties are the stuff of Berlin political legend, typifies this Saarländisch mix of conviviality and down-to-earthness. So do Ms Weyand's sardonic asides at the negotiating table and AKK's routine with the mop.

In substance, too, politicians from the Saarland have distinctive traits. The state long made its living from coal-mining—the last shaft closed in 2012—and is the most Catholic in Germany. The two traditions intertwine in local customs (Saint Barbara, the patron saint of miners, is revered), in a high degree of civic engagement (it has the densest network of volunteer organisations in Germany) and in a "Christian social" political culture emphasising egalitarianism. The local wing of the CDU, Germany's largest party, is more "socially oriented" and closer to trade unions than the party in other parts of the country, explains Tobias Hans, AKK's successor as premier. "Saarland was always marked or threatened by war," adds Oliver Schwambach, an editor at the *Saarbrücker Zeitung*, the state's most-read newspaper. He notes that Mr Maas's grandmother never moved but held three passports during her lifetime: "So people here hate conflict of any sort. Elections here are less angry, politics is more mild than elsewhere."

All of which starkly characterises AKK, whose identification with the Saarland is so strong that she is still known as the *Landesmutter*, or "state mother". As minister-president she was a modest, pragmatic consensus-builder and *Volksfest* regular who governed in a near-frictionless "grand coalition" with the centre-left SPD. She is socially conservative, opposing gay marriage. In the autumn she beat Friedrich Merz, a swaggering economic liberal from the Rhineland, to the CDU leadership, an anteroom to the chancellorship, by styling herself as a bridge-builder on polarising subjects like migration. She backed Mrs Merkel's decision to keep Germany's borders open in 2015, but insists there must be no repetition of those events. She is emotionally European and, those who encountered her in Munich concluded, has a good grasp of the world beyond Germany's borders.

The Reisch stuff?

Such typically Saarländisch traits made AKK Mrs Merkel's preferred successor. They also help to explain why the chancellor has relied on Mr Altmaier in the major policy dramas of her leadership; as chief whip during the euro-zone bail-outs, environment and nuclear minister during her great switch from nuclear to green power, chief of staff during the migration crisis and now economy minister amid Donald Trump's tariff wars. A reserved Protestant from the ex-communist east, the chancellor has a very un-Saarländisch background. But her cautious personality and centrist grand coalition make Merkelian Berlin a natural stamping-ground for politicians from that state. The likes of AKK thrive in a Germany that prefers stability over bracing reforms or ideological struggle.

That points to the great caveat to the Saarlandisation of German politics and the great question-mark over AKK in particular: can she offer more than continuity? An economic slowdown is looming; Europe is divided; and Mr Trump is challenging the global trade order and the NATO security umbrella that have made Germany rich and safe over the decades. Pragmatic, cohesion-loving small-c conservatism has marked the comfortable Merkel era, but Germany—like Europe—will need something more dynamic from its leaders in the coming years. Gretl may need a bigger mop. ■

Political realignments

Britain splinters

A group of breakaway MPs may not dominate British politics, but it could help shape the future

IT WAS SUPPOSED to be a quiet time in Westminster. But a week when the Commons was due to be in recess has instead seen the biggest political shake-up in four decades. It began on February 18th, in a conference centre overlooking Parliament. One by one, seven Labour MPs took to the podium to quit the party to which they had belonged for most of their lives, accusing its leader, Jeremy Corbyn, of racism, betraying voters on Brexit and being a national-security risk. Another Labour MP followed the next day, labelling Mr Corbyn and his allies Stalinist. And on February 20th three anti-Brexit Conservative MPs joined them. Theresa May, the prime minister, was running scared of her hard-right Brexiteers, they said. This coalition of MPs fed up with their parties, pictured above, has dubbed itself the Independent Group.

Brexit has heaped pressure on Britain's big political parties. The emergence of the Independent Group marks the biggest change since the Social Democratic Party (SDP) was formed by four ex-Labour ministers in March 1981. With 11 MPs—and rumblings of more to come, from both Labour and the Tories—the centrist former Labour MPs and liberal ex-Tories already make up the joint-fourth largest group in Westminster. But what difference will they make?

Some big obstacles stand in their way. Britain's first-past-the-post electoral system is unkind to small parties. The SDP peaked at 25% of the vote in the 1983 election; this translated into a measly 23 of Parliament's 650 seats. Most of today's rebels were already threatened with deselection by grumpy party activists, who will relish even more attacking them now they are independent candidates.

The 11 MPs also lack experience. Some, such as Chuka Umunna, are recognisable in Westminster but not household names. By contrast, the original "Gang of Four" behind the SDP consisted of former cabinet heavyweights, including a dashing foreign secretary and the most influential home secretary of the 20th century. Between them, the independents can muster only a few years as junior ministers.

This lack of experience is matched by a deficit of political nous. Their early decisions have left plenty for critics to home in on. All backed a "People's Vote" on Brexit, arguing that voters should be allowed another say since Brexit has failed to live up to its promises. Yet each has refused to fight a by-election, despite ditching the party for which they were elected. A principled stand against racism was undermined when one ex-Labour MP was forced to apologise for saying during an interview that ethnic minorities had a "funny tinge".

Yet the new group has reasons for optimism. It is hard for new parties to break through, but not impossible. In the 1920s Labour replaced the Liberals as one of the two dominant parties. One early poll puts the new group on 14%—not bad for MPs who have yet to form an official party, have no manifesto and whose main footprint is a website asking for donations.

More important, electoral success is not always needed to change British politics, as the rise of the UK Independence Party has shown, points out Robert Ford, a professor at Manchester University. UKIP peaked with two MPs, but still indirectly set the ▸▸

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Economist.com/Britain

course for Britain's departure from the EU.

What the 11 MPs offered their colleagues was a lesson in bracing honesty. It is easy to find Labour MPs who gripe about Mr Corbyn privately. But the hope of booting the Tories out of Downing Street is enough to keep them loyal, despite misgivings about, say, his foreign policy. Likewise, many Conservative MPs think Brexit is a disaster and their colleagues are lunatics, yet stay quiet in public. Moderates see the risk of a chaotic Brexit as worth taking if it keeps Mr Corbyn out of power. Released from the yoke of party loyalty, the MPs let rip at their former colleagues. Anna Soubry, a former business minister, said the battle for the Tory party was over as the extremists had won. There is still a moderate majority in the Commons, albeit one that has lost its voice. A flock of independent MPs may help to find it again.

Labour MPs expect further desertions. Yet the mood at the top is far from apocalyptic. Those close to the leadership admit that the departure of Luciana Berger, bullied into quitting by rampant anti-Semitic abuse, leaves a scar on the party. But the departure of the others—persistent critics who disagree with Mr Corbyn's left-wing economics—was met with a shrug.

Broadly, the breakaways are regarded with contempt. Mr Corbyn's allies are sceptical about the popularity of the technocratic fixes reminiscent of Tony Blair's era that were offered by the departing MPs. Others argued more simply that their former colleagues would merely keep the Tories in power.

Whether the Independent Group is a Blairite death rattle, as those around the Labour leader hope, will depend a lot on who else joins it. Tom Watson, Labour's deputy leader, warned that more MPs would follow unless the leadership did more to allay their concerns. Unexploded political issues, such as whether the leadership will eventually support a "People's Vote" on Brexit, could trigger a swathe of defections. Some at least are alive to the risk. John McDonnell, the shadow chancellor, who has his eyes fixed on Downing Street, pledged a "mammoth listening exercise" to stop more MPs quitting. On the other side, the Conservatives do not yet see an existential threat. The prospect of a chunk of Tory MPs breaking off *en masse* is remote, says one backbencher. Yet more high-profile defections are possible, especially from among those determined to stop a no-deal Brexit.

In Westminster it had long been assumed that Brexit would be like an asteroid crashing into British politics, triggering an extinction-level event for one or both leaders and perhaps for their parties. The dinosaurs could still be wiped out, but new species will emerge. A not-so-quiet week in Westminster has provided a peek at a possible brave new world. ■

Honda shuts its factory

Call my bluff

How Brexit matters in a devastating blow for British manufacturing

WORKERS AT HONDA's car plant near Swindon, in Wiltshire, were told not to report for work on February 19th. It was a bitter foretaste of an uncertain future. The previous day news leaked out that the factory will close in 2021. This will cost 3,500 jobs at Honda, and at least another 3,500 among its suppliers. Greg Clark, the business secretary, called it a "devastating" blow, not only to Swindon, where Honda is one of the largest employers, but to British industry as a whole.

The announcement was a shock, as Honda had earlier promised to remain committed to Britain. But it follows a slew of bad news for the country's car industry, which has a turnover of £82bn ($105bn), employs 186,000 people directly and accounts for 12% of Britain's goods exports. Earlier this month Nissan, another Japanese carmaker, said it would shift production of the latest version of its x-Trail, an SUV, from Sunderland to Japan. Ford is scaling back engine production in Bridgend, in Wales. In January JLR, Britain's biggest carmaker, confirmed 4,500 job cuts. Michelin, a tyremaker, is to close a factory in Dundee by 2020. Schaeffler, a German car-parts maker, is closing two factories, at Llanelli in Wales and Plymouth, with the loss of 500 jobs. Inward investment into Britain's car industry fell by half in 2018.

Excess Civic capacity

These companies are responding to big changes in the global car market. Falling sales in China have particularly hurt JLR. Emissions standards have been tightened, so both legislators and consumers have turned against diesel cars, such as the version of the x-Trail made in Sunderland, persuading Nissan to make petrol models in Japan instead. Honda's decision to close Swindon, where it makes about 150,000 Civics a year, is another piece of a wider global rejig. The firm will also shut its Civic plant in Turkey. As 90% of the cars produced at Swindon are exported to the North American and European Union markets, production of the Civic outside Japan will now be concentrated in America.

However Brexit also played a part in the decision-making. Honda has been bashing out cars at Swindon since 1989. Like Nissan and JLR, it has built up complex supply chains across Europe. This just-in-time manufacturing model is vulnerable to any hold-ups at the border, which are especially likely if there is a no-deal Brexit. Carmakers also worry about the risk of tariffs on exports to the EU, which average 10% on cars and 4.5% on parts.

Some manufacturers have been explicit about the malign effects of Brexit. In a reported call between Theresa May and business leaders on February 12th, Ford told the prime minister it was preparing to move all production out of Britain in the event of no deal. Nissan cited "continued uncertainty" around Brexit for its x-Trail decision. In contrast, Honda did not cite Brexit as a reason for closing the Swindon plant. But it surely played a part. A comprehensive free-trade agreement between Japan and the EU will eventually reduce 10% import tariffs to zero. So it makes little sense for Honda to keep producing in Britain when, outside the EU, it might face tariff barriers.

Just as Honda's decision bodes ill for other global carmakers, it also marks another phase in the end of Japan's love affair with industrial Britain. Margaret Thatcher, then prime minister, opened Nissan's Sunderland plant in 1986. The Iron Lady didn't open any old factory; she wooed the Japanese, selling Britain as a stable, low-cost manufacturing gateway into the EU. Since then some £50bn of Japanese investment has flowed into Britain.

In recent months Japanese diplomats and businessfolk have been unusually vocal in expressing concerns about Brexit, especially in a no-deal form. Brexiteers have been largely unmoved by Japanese companies' warnings, assuming that they were bluffing. Now it turns out that they were not. Two electronics companies, Panasonic and Sony, are shifting their European headquarters from Britain to the Netherlands, Nissan is scaling back, and now Honda is quitting. More firms may yet follow their example. ■

Bagehot | Labour's hard man

The Tories are wrong to dismiss John McDonnell as a Poundland Lenin. He is much more dangerous

Britain's two big parties are in a race to see which can fall apart fastest. The Labour Party is leading in numbers: eight MPs quit this week and Tom Watson, the deputy leader, hinted that many more may go if the leadership doesn't mend its ways. The Conservatives have managed just three defections, but even small numbers matter to a minority government trying to steer through the most controversial legislation in a generation.

Labour's defections have been described as the biggest challenge to Jeremy Corbyn's position since he won the leadership in 2015. Yet the most interesting person to watch as Labour tries to clear up the mess is not Mr Corbyn but his shadow chancellor, John McDonnell. Mr McDonnell is the only member of Mr Corbyn's entourage with the sense to try to restrain his fellow leftists from indulging their worst instincts—such as dismissing anti-Semitism claims as "Tory smears" and denouncing the defectors as the "traitorous eight". He is also the only one with the self-discipline to focus on the real prize—creating a Labour government.

Mr Corbyn and Mr McDonnell have been linked for so long that it is tempting to see them as Tweedledum and Tweedledee. They have spent their adult lives hanging out in the same fetid far-left subculture and supporting the same festering causes. But something odd has happened since they seized control of the party. Mr Corbyn has shrunk: he often seems just to be going through the motions. Mr McDonnell has grown. Like the Scarlet Pimpernel he is everywhere at once, giving interviews to Andrew Marr, holding town meetings, lunching with bankers. He is quite capable of sounding the familiar hard-left themes—Sir Nicholas Soames dismissed him as a Poundland Lenin when he called his grandfather, Winston Churchill, a "villain". But he is also fizzing with ideas for reinventing socialism in the age of the iPad.

Mr McDonnell has taken a more emollient approach to mainstream Labour MPs than Mr Corbyn. He has acknowledged that anti-Semitism is a genuine problem where Mr Corbyn has prevaricated. He immediately accepted that the Russians were responsible for poisoning people in Salisbury when Mr Corbyn again quibbled. Mr McDonnell makes a point of talking to all elements within the party—one of his favourite statements is that "my door is always open"—whereas Mr Corbyn spends much of his time in the bunker-like leader's office with his far-left aides. Luciana Berger, one of the eight resigning MPs who has also suffered some of the worst anti-Semitic abuse, has revealed that she has not met Mr Corbyn in 14 months.

There are lots of reasons why Mr McDonnell has grown in stature but Mr Corbyn has shrunk. He is cleverer not only than Mr Corbyn, which is not hard, but also than most MPs. He reads serious books (on a boating holiday last year he took along Aristotle's "Politics") and engages with serious thinkers from other parties. He is a Stakhanovite worker while Mr Corbyn is more Reaganite ("hard work never killed anyone, but I figure why take the chance"). But two qualities in particular make Mr McDonnell an especially formidable force on the left.

The first is that he has been toughened by experience. Mr Corbyn has lived an austere life but also a cosseted one—he grew up in a manor house in Shropshire, doted on by left-wing parents, before immersing himself in the agitprop culture of north London. Mr McDonnell has seen more variety. His father was a bus-driver and his mother a shop assistant. He trained for the priesthood before discovering girls and politics. He dropped out of school without any qualifications before returning to higher education as a mature student. And he and his first wife looked after ten foster children, some of whom had been abused (he was an hour late for one exam at Birkbeck because one of the children had run away).

The second is that he has a carefully thought-out ideology. Mr Corbyn does not so much have an ideology as an overwhelming sense of his own virtue, buttressed by a handful of slogans. This has made him maladroit in dealing with anti-Semitism because he treats it as an affront to his own moral purity. By contrast Mr McDonnell is steeped in Marxism-Leninism, with a heavy dose of Trotsky and Gramsci.

Ideologue and pragmatist

Jon Lansman, founder of Momentum, once noted that Mr McDonnell was "both more ideological and more pragmatic" than Mr Corbyn. It would be truer to say that he is more pragmatic precisely because he is more ideological. Every concession he makes to what he calls "practical moderation" is driven by a desire to bring his socialist vision of the future closer to realisation. He talks cleverly about replacing a traditional top-down bureaucratic version of socialism with a more democratic, bottom-up version. Rather than nationalising industries (except for a handful of utilities), he will force companies to give 10% of their shares to workers. But far from empowering ordinary workers, this could well empower far-left tribunes who are willing to devote their lives to meetings. He prefers running things to weaving ideological fantasies. He proudly describes himself as a "bureaucrat". The Labour Party figures he most admires are those who got things done—Clement Attlee, Nye Bevan and Gordon Brown.

Mr McDonnell now has something else on his side which, as a veteran Marxist-Leninist, he can only relish—the sense that the world is running out of control. The prospect of Brexit is already polarising politics and breaking political loyalties. That polarisation and breaking will become a lot worse if Britain crashes out of the European Union with no deal. Mr McDonnell may see the dreams of a lifetime destroyed if, say, 50 MPs were to abandon Labour for a new party. He could equally find himself the real leader of a Labour government if Theresa May's Conservative government collapsed. Whatever else you can say about Mr McDonnell, he is not the sort to let a good crisis go to waste. ■

Teaching in English around the world

Language without instruction

LAHORE AND LUCKNOW

More children in Africa and South Asia are being taught in English. That's often a bad thing

"ROLY POLY right, right, right. Roly poly left, left, left," sings a class of five-year-olds at a government primary school on the outskirts of Lucknow, a city in India's Hindi-speaking heartland. This English-medium school, one of seven that opened last year among the 215 government schools in the Sarojini Nagar administrative block, is part of an effort by the government of Uttar Pradesh, India's most populous state, to counter the rise of private schools. Private schools have been mushrooming in India—private-sector enrolment rose from around a quarter of pupils in 2010-11 to over a third in 2016-17—and in Sarojini Nagar there are 200 registered private schools and many more unregistered ones. One of their main attractions is that the great majority of them use (or claim to use) English as the language of instruction.

As a recruitment drive, the policy seems to be working. A school nearby saw its enrolment rise over 50% in six months when it switched the medium of instruction from Hindi to English last April. As an education policy, however, it is not ideal.

The language in which children are taught can be hugely contentious. Colonial history determines its political salience. Where colonial powers wiped out the indigenous population, such as in America and Australia, it is hardly an issue: the colonial language has crushed indigenous ones, though a few of these are making a comeback (see United States section). In places that were colonised unsuccessfully or not at all—such as Europe, Japan and China—indigenous languages rule. But controversy erupts in countries with a century or two of effective government by a colonial power—in South Asia and Africa, for instance—where the colonial language retains considerable sway.

In sub-Saharan Africa, only Tanzania, Ethiopia and Eritrea do not use a colonial language at all during primary education. Others use either English or French. That is partly because of inertia. Developing curricula and printing books in local languages is expensive, and doing so in scientific subjects in which the terminology is in English is difficult. Keeping English or French is also, in some places, politically convenient. Where tribes compete for power, the colonial language can be less controversial than the local ones. And then there is the self-interest of the elites, usually the only people who can speak the colonial language properly. "They have a huge return to their linguistic capital" when it is the official language, says Rajesh Ramachandran, of the Alfred Weber Institute for Economics in Heidelberg, Germany. The bias in favour of English is sometimes ferociously enforced: Rose Goodhart, a teacher in Ghana, has seen children beaten for speaking in their mother tongue.

It is not just inertia and coercion that work in favour of English. It is also, these days, popular demand. English is the language of technology. In Africa and South Asia, most higher education is in English, so those who aspire to a college education must master the language. "In higher studies, like medicine and engineering, English is a must," says Atul Kumar Srivastava, president of the Association of Private Schools of Uttar Pradesh, and headmaster of St Basil's School, Lucknow.

English-medium education is no longer the preserve of the elite. Sameena Asif, whose husband is a street hawker, sends her three children to private school in Lahore, Pakistan. "They won't get a degree or a job if they can't speak English. I have a BA in Urdu, but it's useless. I'm embarrassed that I was educated in Urdu."

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Many state governments in India, like that in Uttar Pradesh, are establishing or expanding English-medium education. All primary schools are English-medium in Jammu & Kashmir; Andhra Pradesh announced last year that its elementary schools would convert to English; others are experimenting on a smaller scale. In Pakistan, the Punjab provincial government announced in 2009 that it would go English-medium, and Khyber Pakhtunkhwa announced the same in 2013.

The medium clouds the message

Yet there are problems associated with much English-medium schooling. Visitors soon discover that, except in elite establishments, interviews in most "English-medium" schools have to be conducted through an interpreter, in the local language, because neither teachers nor pupils speak much English. At the Lucknow primary school, the head teacher and two out of four teachers speak reasonably good English, but the other two little. Since most of the pupils' parents are illiterate, they are unlikely to be aware of that.

Such difficulties are reflected in the findings of much research into the educational outcomes of English-medium schooling. The most-often cited study into private versus government-school outcomes in India, carried out in Andhra Pradesh in 2013, found that on average pupils in private schools performed a bit better than those in government schools. But pupils in Telugu-speaking private schools did considerably better in maths than those in English-medium schools.

History provides some intriguing examples of the effect of being educated in the mother tongue or some other language. A policy change in South Africa introduced in 1955 by the apartheid government used the medium of education to sharpen the divide between whites and blacks, increasing the years of schooling that children got in their mother tongue. Two extra years of mother-tongue schooling, instead of schooling in Afrikaans or English, raised both literacy and wages, according to a recent study of historical data.

A similar effect was seen in Ethiopia after the downfall of the Derg, a communist military dictatorship, in 1987. The Derg had mandated that education be in Amharic, a Semitic language with its own script, very different from Oromigno, a Cushitic language spoken by the Oromo people and written in the Latin script. A study from 2017 looking at Oromo children educated just before and just after the change showed an 18-percentage-point increase in literacy. Newspaper readership was also 25% higher among the mother-tongue-educated people, which very likely meant greater political participation.

Of course, parents may be more concerned that their offspring speak English, rather than that they learn history or arithmetic. They may think it worth sacrificing some of the knowledge and understanding that can be gained from being educated in the mother tongue for better prospects in the labour market. But there seems not to be a trade-off. A forthcoming study looked at 12 schools in Cameroon which taught children in Kom rather than, as is standard practice, English, during the first three years of school. Not only did Kom-medium children perform better in all subjects than English-medium ones in third-year tests; in the fifth year they even outperformed English-medium children in English.

"Parents are right that speaking English works for a child," says Zia Abbas of The Citizens' Foundation (TCF), a charity that runs 1,500 schools in Pakistan at which children are taught in Urdu. "But they don't understand the difference between English as a subject and English as a medium of instruction. The children end up not learning English, and not learning anything."

Some governments have taken this on board. In Pakistani Punjab the new Pakistan Tehreek-e-Insaf government, which took power in the province last year, is to reverse the previous government's move from Urdu to English. "We don't have enough qualified teachers," says Murad Raas, Punjab's education minister, "and children in the rural areas can't learn in English. They must be taught in a language they understand." Punjab is developing a new Urdu-medium curriculum.

Uganda has implemented mother-tongue instruction for the first four years in 12 different languages, and seen big improvements in learning in some languages, though not all. Kenya, too, is moving in the mother-tongue direction. Last month the government introduced a new curriculum which includes a half-hour lesson in "literacy"—in the mother tongue—every day.


Please sir, what's English?

The infinite variety of language means that even the choice of mother tongue is not an easy one. Urdu is the mother tongue of only a minority of Pakistani children. In Punjab most families speak Punjabi at home. So why does TCF not teach Punjabi children in Punjabi? Because, says Riaz Kamlani of the charity, "there are a dozen languages in Pakistan, and we don't have the resources to use them all as a medium." Urdu is a compromise.

These complexities mean that mother-tongue teaching requires careful planning. Ben Piper, who leads a USAID-funded literacy programme in government schools in Kenya, found, to his surprise, that children taught in their mother tongue learnt less maths than those taught in English or Swahili (the mother tongue of only a minority of Kenyans). The problem, he realised, was that teachers are assigned jobs by a central agency, without regard to their mother tongue, so they often do not understand the local language in which they are supposed to teach. In Ghana Elorm Apatey was teaching in an English-medium junior high school in the Volta region. To help his pupils, he also spoke to them in Ewe, his and their mother tongue. But because there are so many dialects of Ewe he had to employ linguistically talented pupils to translate for those who did not understand his Ewe.

The complexity of the linguistic landscape in many countries argues not for abandoning mother-tongue teaching, but for developing layered curriculums that ease children into learning other languages. TCF is doing that for the inhabitants of the Thar desert, in a remote part of Sindh province. Their mother tongue is Dhatki. Sindhi, the provincial language, is quite close to that. Urdu, the lingua franca of Pakistan, is necessary but less familiar. English is hardest of all, but as desirable to the Thari people as to anybody else. So the curriculum will start children off in Dhatki and gradually introduce them to the other languages they will need as citizens of Pakistan, and of the 21st century. English will be a subject, not a medium.

Such linguistically sensitive schooling demands more resources than most governments can afford. Instead, more pupils are likely to be taught in English, despite the drawbacks that entails. Their parents will make sacrifices to buy what they believe to be an advantage for their children. "If our children don't speak English, they can't excel in today's world," says Rukayat Tanvir, whose husband is a shopkeeper in Lahore, and who sends five children to an English-medium private school. "It gives me pleasure to hear my daughters speaking English even though I can't understand what they are saying." ■

Corporate climate resilience

After the deluge

WEST GLOCESTER, RHODE ISLAND

Some businesses are getting to grips with the effects of global warming. Most are ignoring the problem

NESTLED IN A forest an hour's drive from Providence, Rhode Island, sits what some employees call "the world's biggest facility for property destruction". Here workers for FM Global, an engineer-cum-insurer, set fire to wall cladding, hurl projectiles at reinforced glass or test roofing designs for the gusts of wind they can take before tearing off. The experiments are designed, monitored and replicated with laboratory precision, beams Louis Gritzo, FM Global's head of research. All simulate what wildfires, hurricanes and other natural disasters could do to the structures of its customers, which include such well-known names as Disney, Caterpillar and the Massachusetts Institute of Technology.

Mr Gritzo's job is to help future-proof assets—corporate headquarters, factories, theme parks, campuses and the like—worth a total of $10trn globally. When Hurricane Maria swept away most of Puerto Rico's thriving pharmaceuticals sector in 2017, the building belonging to Mylan, a drugmaker which works with FM Global, was one of the few in its neighbourhood left intact. A strengthened roof had withstood 150mph winds. Mylan kept churning out medicines and FM Global was spared a big payout.

Nature has always disrupted business. But global warming is making the task of dealing with it more urgent. Hastened by feeble progress on curbing greenhouse-gas emissions, businesses face wetter floods, fiercer wildfires and stormier storms than in the past (see Books and Arts section). Hotter, more humid days imperil the productivity both of employees and equipment such as that in data centres.

It is not only storms and floods that are a threat. Climate change is also responsible for a lack of water where it is needed. Last summer low levels on the Rhine grounded barges that BASF, a German chemicals giant, uses to ferry its products. Industrial firms fret constantly about water supply. "We are the last in line," behind residents, farmers, and other businesses, sighs an executive at a big Indian conglomerate. In January PG&E, a utility facing billions of dollars in liabilities over its possible role in sparking wildfires in California, which proliferate as the state grows more parched, filed for bankruptcy protection.

"Business is no longer business as usual," says R. Mukundan, chief executive of Tata Chemicals, part of another Indian conglomerate based in Mumbai (a city that was the victim of an epic deluge around the time of Maria). Some creditors, investors and insurers murmur similar sentiments. So do senior executives touring Mr Gritzo's lab. Those worries have grown louder in the past year or two, he reports.

There is reason to be concerned. Last August analysts at Schroders, an asset manager, looked at 11,000 listed global ▸▸

companies and estimated that properly accounting for physical climate risk could on average shave 2-3% off their value. Some sectors would take a bigger hit: utilities and oil and gas stand to lose 4-4.5% (see chart). Some firms face potential losses of up to 20%. Most have no idea of their exposure, suspects Andrew Howard of Schroders.

Climate nonchalance pervades many a corner office. One senior European oil executive says that he worries more about snow for his upcoming skiing holiday than he does about his company's rigs. Bosses have plenty of things on their minds—from trade wars and Chinese hacking to artificial intelligence and the future of work. Those that do profess to think about climate change volunteer stories about their latest solar panels or renewables contracts rather than the physical threat to their infrastructure. But recurrent droughts, floods, heatwaves and storms can all hurt—particularly in a world of complex, just-in-time supply chains readily thrown out of whack. "All reasonable boards should be asking themselves these questions," declares Bjorn Haugland, vice-president of DNV GL, a Norwegian maritime-services firm. Why aren't they?

Calm before the storm

A dearth of data is one reason. Peter deMenocal at Columbia University has been bringing executives and investors together with academics to discuss climate vulnerabilities since 2015. Scientists feel more comfortable talking in terms of general, long-term trends, he explains. Risk managers want information they can use, about specific threats to specific facilities over a specific (and brief) time period. They tend to fall back on old tools such as flood maps, which presuppose a stable environment. But with the climate changing, "500-year floods" may come far more frequently—just ask Houston's oilmen, who suffered them in 1979, 2001 and 2017.

A few companies aim to bridge the data gap themselves. Microsoft obsesses over "georedundancy": where best to locate its cloud servers so that they are close to customers yet unlikely all to be taken out by a single disruption. Like FM Global it relies on climate models, not historical data. Royal DSM, a Dutch chemicals company, employs half a dozen people to unpick climate risks at its 250 locations worldwide, and has produced a detailed threat map.

A cottage industry of climate consultants, often claiming to use cleverer, more granular climate models, has mushroomed to assist companies' efforts. Acclimatise, a British firm in the business for 14 years, now advises around 40 big corporations (and dozens of public-sector bodies and NGOs). Four Twenty Seven, based in Berkeley, California, screens hundreds of thousands of facilities for exposure and sensitivity to climate risks. In 2017 it ranked the preparedness of France's 40 biggest firms (LafargeHolcim and Solvay, two materials producers, scored lowest, admen at Publicis and Capgemini's consultants topped the table, and manufacturers were clustered in the middle). Jupiter, another upstart in the Bay Area, is run by a former research assistant to William Nordhaus, an economist who last year won the Nobel prize for his climate-related work. McKinsey, Oliver Wyman and other big consultancies are getting in on the action, too.

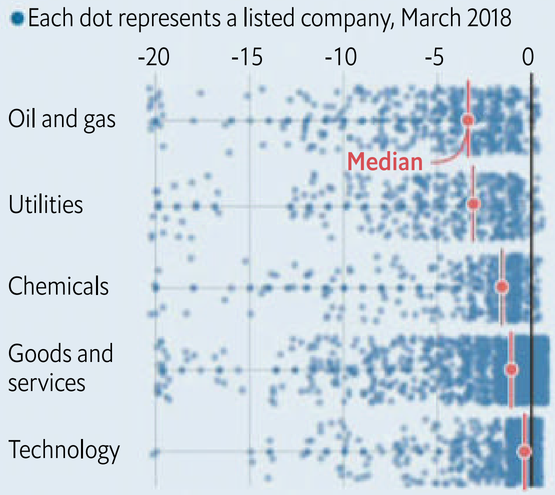
Better data will help. But they do not solve a second problem: first-mover disadvantage. "Unless you've faced disruption, building slack into your supply chain is an inefficiency—if others aren't doing it," says Mr Howard of Schroders. Four Twenty Seven will not disclose its clients, apologises its founder, Emilie Mazzacurati, because firms do not want to appear vulnerable. "You will be penalised [by the market]," grumbles the sustainability chief of a big European food company. Easier to wait for disaster to strike, then write it off as a non-recurring expenditure, he shrugs.

"Ninety percent of the time risks are being accepted only after they happen," says Rodney Irwin from the World Business Council for Sustainable Development, which unites green-minded companies. According to S&P Global, a rating agency, in 2017 just 15% of companies in the S&P 500 index disclosed effects on earnings from weather-related events. Under 5% of firms quantified the damage—an average hit to profits of 6%.

The Taskforce on Climate-Related Financial Disclosures, under the auspices of the Financial Stability Board, a global grouping of regulators, issued reporting guidelines in 2017, including for physical risks, but these remain voluntary. "One way to keep risk undisclosed is not to look at it," says John Firth, who co-founded Acclimatise. Consider the experience of a multinational carmaker, as revealing as it is commonplace. Its procurement chief relates a hailstorm that struck a factory in the tropics. The response, to erect a roof over the forecourt, was "reactive", he admits. The incident did not prompt a systemic look at risks elsewhere, let alone investments to pre-empt them.

Under the weather

Potential change in enterprise value from climate change, worldwide, %



Source: Schroders

That is because, in the absence of reporting requirements, "cold accounting logic undermines the economic rationale to actively manage climate risks", explains Rowan Douglas of Willis Towers Watson, an insurance broker. Although climate risks have risen, insurance premiums and borrowing costs—two signals to which the real economy responds—have not grown much costlier. Policies are typically written for one year, so an incremental shift in risk can be hard to discern. Moreover, the price of premiums also depends on other factors, such as availability of capital, with which the industry is awash. It coped with record insured catastrophe losses of $135bn in 2017 without so much as a hiccup. Signals from creditors have been similarly muted.

Climate of uncertainty

Rating agencies are gradually incorporating physical climate risk into their scores. In 2017 environmental and climate considerations led S&P Global to alter 106 corporate ratings, mostly downwards, roughly double the number two years earlier. In 42 cases physical risks were chiefly to blame. In January S&P cut its rating of Edison, an American utility, citing exposure to wildfires. Fitch, another rater, warned that "multi-notch downgrades cannot be ruled out." A third, Moody's, last year warned that wildfires threatened PG&E's solvency.

PG&E's woes stem from legal liabilities, not a direct hit to operations. But its fate should make climate-blind CEOs nervous. On the hook for billions of dollars in damages beyond its policy cover, then downgraded by rating agencies, it found itself locked out of the insurance market. Credit dried up and bankruptcy beckoned. When a big unacknowledged risk comes to light, market signals can become very loud, very quickly, cautions a short-seller eyeing climate-vulnerable firms.

Compare that with DSM's approach. In drought-prone places identified by its survey the company is helping nearby towns harvest water, not least to keep local employees healthy and productive. It badgers the authorities to bring in pre-emptive measures, such as more resilient infrastructure. "We provide jobs, you provide protection," Feike Sijbesma, DSM's chief executive, told politicians. Tata and other firms in climate-stressed India have long taken similar steps, for similarly hard-nosed reasons. As the future unfolds, this strategy should bring bigger rewards than hiding your head in the sand. ■

Karl Lagerfeld

Following Kaiser Karl

BERLIN

The death of its creative mastermind raises questions over Chanel's future

"I AM VERY grounded, just not on this earth," was one of numerous *bon mots* from Karl Lagerfeld, who died on February 19th. Mr Lagerfeld, born in Hamburg 85 years ago, may not have felt he belonged on this planet but he knew very well what its wealthier inhabitants wanted to wear. As one of the great artists of French couture alongside Christian Dior, Coco Chanel and Yves Saint Laurent, Mr Lagerfeld made Chanel, where he was creative director for over 35 years, the multinational brand it is today. His death will ensure that Parisian gossips, already abuzz with rumours about the future of the fashion house, will have plenty to chat about.

Chanel's owners, Alain and Gérard Wertheimer, owe their vast fortune to Mr Lagerfeld's tenure at the fashion house. When the brothers hired him to take over, the brand had become "old hat" in Mr Lagerfeld's words. The boxy suits that had been Coco Chanel's signature design appealed mostly to middle-aged women. Mr Lagerfeld modernised the Chanel look with longer, thinner lines and snazzy details. A workaholic, he hardly ever took time off, designing around 14 collections a year ranging from couture to high-street fashions. "To design is to breathe, so if I can't breathe, I'm in trouble," he often said.

The extravagant and costly fashion shows for which Chanel became renowned also had a purpose. A 115-foot rocket that simulated a blast-off surrounded by models, or a fake supermarket stocked with Chanel washing powder, ketchup and pasta, created a stir which helped not only the sales of exquisite, expensive frocks but also hugely profitable accessories such as sunglasses and perfume. Those around him also had an unusual instinct for the fashion business. Jacques Helleu, the firm's long-serving head of marketing, understood the importance of protecting a luxury brand. Chanel fought for its intellectual property long before other fashion houses realised the importance of doing so.

A once closely guarded secret—the rewards of the diverse portfolio of handbags, scent, cosmetics, clothing, jewellery and shoes, and fierce protection of its brand—was revealed last year. The firm's financial results, released for the first time in its 108-year history, showed revenues of $9.6bn in 2017 and an operating profit of $2.7bn.

Chanel's cash and cachet are attractive propositions. Bernard Arnault, the boss of Moët Hennessy Louis Vuitton (LVMH), the world's biggest luxury-goods group, is said to have coveted Chanel for years. Philippe Blondiaux, Chanel's chief financial officer, last year denied any plans to sell or seek a stockmarket listing.

An insider says the Wertheimer brothers had vowed to keep Mr Lagerfeld in his job until he died. Will the plans for Chanel now change? A sale still looks unlikely, according to Dirk Boventer of Atreus, a retail consultant. Alain, the chief executive, announced that Mr Lagerfeld would be succeeded by Virginie Viard, his closest and most trusted associate for some 30 years. Ms Viard will need to make a mark. Until she does, Chanel without Mr Lagerfeld is less of a trophy for potential investors. ■

Nvidia

Not a pretty picture

Diversification is a good idea. So is minding your core business

THE CHIP-DESIGN business is enjoying a "golden age", declared John Hennessy and David Patterson, two gurus of computer design, earlier this month (Mr Hennessy chairs Alphabet, Google's parent company). The shift to cloud computing, the rise of specialised computing tasks such as artificial intelligence (AI) and the slow death of Moore's Law have conspired to create a growing market for "accelerator" chips designed to speed up drastically certain common types of calculation.

One of the standard-bearers for this trend is Nvidia, an American firm that makes graphics-processing units (GPUs), customised chips designed to produce the demanding visuals in modern video games. Those chips, it turns out, are also well-suited to the sorts of calculations needed by everything from complex climate simulations to machine learning. Tweaked versions of Nvidia's GPUs can now be found in supercomputers, data-centres and cars. Excitement about such opportunities helped propel the firm's share price to a peak of $289 in October.

Since then its shares have tumbled. On February 14th the firm reported dire quarterly results. Revenues had fallen by 24% from the same period last year, and profits by 49%. Jensen Huang, Nvidia's founder and boss, described it as "a turbulent close to what had been a great year".

Despite its ambitions to diversify, Nvidia still makes most of its $11.7bn of annual ▸▸

revenues from selling chips to gamers (see chart on previous page). And it was the firm's gaming division that posted the biggest slump, with revenue falling by 45% in the latest quarter compared with the year before. Nvidia's gaming numbers include money it makes from selling GPUs to cryptocurrency miners, a bubble that has recently burst. But that is not the whole story.

The firm's newest "Turing" chips, which support an advanced graphics technique called ray-tracing, have sold slowly. Ray-tracing gives more realistic lighting but requires huge amounts of computing power. For that reason it has not generally been used in games. Only a handful of big titles currently support it. Even without ray-tracing, the chips offer decent performance improvements over the firm's previous products. But Nvidia's chips are also generally faster than those from AMD, its only significant competitor in gaming, and that has encouraged it to raise prices (Turing graphics cards can cost $1,500). Charging big sums for a modest improvement has, unsurprisingly, proved tough.

Nvidia's terrible quarter will probably prove to be a blip. The firm expects revenues to recover next year. All but one of the non-gaming divisions grew in 2018. As cloud computing grows and AI becomes more prevalent, demand for Nvidia's products will increase. But it faces growing competition. Bigger chipmakers such as Intel are eyeing similar markets. Many of Nvidia's potential clients, including Google and Microsoft, are entering the chip-design business themselves. Facebook announced an AI chip on February 18th. Navigating all that will require much of Mr Huang's attention. So will keeping his core customers happy. ■

Bartleby The new aristocrats of power

Executives rule their companies. Why not their countries?

THIS AUTUMN "Downton Abbey", a film based on the British television series, will be released and audiences will once more be transported back to the days when a powerful elite was surrounded by subservient staff who catered to their every need. But the modern versions of Lord and Lady Grantham are in the headlines every day. Chief executives are today's aristocracy. Chauffeurs ferry them around and private jets whisk them overseas. The best chefs provide the meals in their corporate dining rooms.

Corporate headquarters are the modern equivalent of country estates, spreading over prime acreage in Silicon Valley or dominating the skylines of New York and London. Walls are decorated with fashionable art, rather as the aristocracy used to hang a Canaletto or Rembrandt in the drawing room.

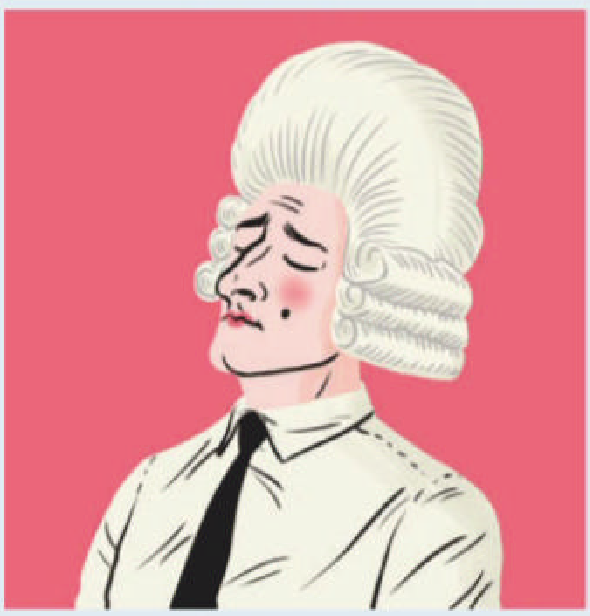
There is even a social "season" for executives which kicks off every January at the Davos forum in Switzerland. And executives will be seen in the best seats at sporting events like the Superbowl or Wimbledon. A few will buy their own sports teams, as a marker of their status.

Executives have joined celebrities as the subject of public fascination. In recent weeks the British press has been filled with allegations about the way Sir Philip Green, a retailer, has treated his staff. On the other side of the Atlantic the headlines have been dominated by the divorce of Amazon's founder, Jeff Bezos, and his feud with the *National Enquirer*, an American scandal sheet.

Of course, there are some differences between CEOs and the landed gentry. Executives work a lot harder than the aristocrats ever did and, with the exception of family firms, their positions are not hereditary. But like the landowning blue-bloods before them, bosses have been tempted to display their talents on a wider stage: the government. In America this tradition is long-standing. Robert McNamara took his organisational and number-crunching talents from the Ford Motor Company to the Vietnam war, albeit with unhappy results.

A more recent development has been executives trying their hands at elected politics. The trend began with Silvio Berlusconi whom voters hoped would bring his business skills to the Italian economy. A businessman now occupies the White House and two other executives, Howard Schultz of Starbucks and Michael Bloomberg of the eponymous data firm, may become candidates for president in 2020.

Businesspeople have the wealth to fund their campaigns. Many enjoy some name recognition and they tend to have close allies in the media who can support their cause (Mr Berlusconi had direct ownership of a media group). Entrepreneurs can also promote themselves as apolitical outsiders, above the partisan fray, a role once played by generals like Charles de Gaulle or Dwight Eisenhower.



The business elite may not be confined to a single party. In 18th-century Britain, the aristocrats divided into Tories and Whigs, depending on their attitude towards issues such as constitutional monarchy and the established church. You can still divide business elites into Tories who emphasise low taxes and reduced regulation and Whigs who focus on social liberalism and the environment. The next few decades may see them battle for electoral favour.

The problem is that running a country and a company involve quite different skills. Italy's recent record of dire economic growth began during Mr Berlusconi's tenure. His time at the top of ExxonMobil did not make Rex Tillerson an effective secretary of state. A chief executive has financial targets to meet and a few board members and important shareholders to keep happy. Politicians are judged on a wider set of goals, many of which may be beyond their control. Those coming from business also have conflicts of interest, which blind trusts do not entirely eliminate.

Nor is it likely that a dalliance with electoral politics will improve the image of an executive's own company, or of business in general. Entrepreneurs have always been able to claim that they were above petty politics and focused on creating wealth and jobs. Now they will get the blame for all that goes wrong, toxifying their brands in the process. As wits are already pointing out, nobody who has been in a Starbucks toilet will assume that Mr Schultz is qualified to clean up the country. If you think there is a lot of anti-elitist sentiment now, just wait until the voters are asked to choose between two billionaires.

Economist.com/blogs/bartleby

JAB Holding

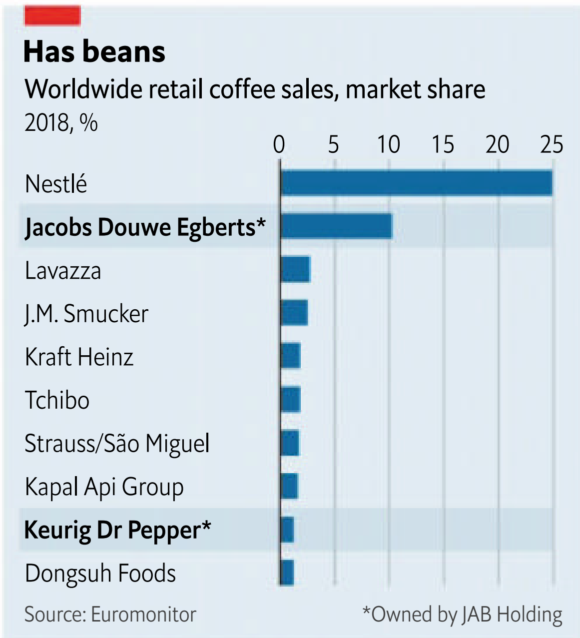
Storm in a coffee cup

The tactics of a voracious dealmaker are upending coffee trading

BRAZIL, GUATEMALA or Kenya are the sorts of exotic locations that most people would associate with the cup of coffee that kickstarts their day. But increasingly it is Luxembourg that is providing the coffee business with an industrial shot of caffeine. JAB Holding, a private-investment company based there, has rapidly become the world's second-largest coffee retailer and roaster. On February 14th the firm, which looks after the fortune amassed in the chemicals industry by Germany's secretive Reimann family, said it planned to list its coffee empire in a couple of years.

JAB has paid dearly to secure around 12% of the global retail market, second only to Nestlé, which accounts for a quarter of sales. Italy's Lavazza, the third-biggest roaster, is tiny compared with the top two (see chart). JAB has coughed up tens of billions of dollars since 2012 on acquisitions of retail brands such as Jacobs Douwe Egberts and coffee-shop chains including Peet's and, most recently, Britain's Pret a Manger, which it bought for £1.5bn ($2bn) in May. The spending spree on coffee and other sectors could weigh on the group's balance-sheet. Both Moody's and Standard & Poor's, two credit-rating agencies, recently warned that JAB's appetite for deals might lead to a downgrade.

Paying such frothy sums has also led JAB to stir up a "very traditional" supply chain, says Antti Belt of BCG, a consultancy. Coffee companies, such as JAB, which process beans and then market and sell them either in a packet or a cup, already grab most of the profits of the business. They buy raw beans from traders, who earn tiny margins—generally 1-2%—for much of the work. Roasters rely on traders' expertise to blend different beans to balance strength and body (often associated with Brazilian beans) with flavour and acidity (from African or Central American ones).



Until a few years ago, traders would usually get paid within 30 days. To raise cash JAB lengthened payment terms to up to 300 days. Finding financing to cover the gap has squeezed traders' slender margins. "These guys have money, but they're not banks," says Oscar Schaps of INTL FCStone, a brokerage. The banks lending to traders may take into account the financial position of their biggest customers. So the traders' borrowing costs could rise if the roasters' credit standing were to deteriorate.

Big traders, such as Swiss-based ECOM or Germany's Neumann, face a less favourable balance of power. They rely on the big buyers in a fragmented industry. JAB's tactics are compounding other problems. Bumper harvests have pushed bean prices below $1.20 a pound, forcing farmers to sell at a loss. Traders are also struggling to cover costs. Some could see their best staff leave. Andrew Kerr, a headhunter, says salaries are "starting to ease off" in Geneva, the world's centre for coffee trading.

One answer for traders may be greater scale. Consolidation would allow costs to be cut while increasing negotiating power. More investment in storage, ports and transport would help them take greater advantage of arbitrage opportunities across the globe. That should position them well to meet Asia's growing thirst for instant coffee. Another strategy would be to capitalise on the trend for pricey gourmet brews that boast traceability and sustainability. Small independent roasters have sprung up in richer cities. They are looking for specialist traders with direct links to farmers. The dominant roasters have also woken up to high-end coffee. Nestlé paid around $425m in 2017 for Blue Bottle, a fancy Californian chain. Supplying them with top-quality beans may be another way for traders to escape the grind. ■


There's an awful lot of coffee in Luxembourg

Huawei

Crossed wires

America and its allies disagree about the threat from the Chinese firm

THE "FIVE EYES" is probably the world's most comprehensive spying agreement. Originating in Allied intelligence-sharing during the second world war it now links together the signals-intelligence agencies of America, Australia, Britain, Canada and New Zealand. Despite its undercover nature, its members are having a very public disagreement over what to do about Huawei.

The big Chinese technology firm makes everything from set-top boxes and routers to smartphones. Western worries concern back-end equipment of the sort used to construct mobile-phone networks. Huawei has quickly caught up with established firms in that market, such as Ericsson and Nokia, particularly when it comes to the machines necessary to run fast "fifth-generation" (5G) networks. As its gear has been installed around the world, worries have grown that it might contain "back doors"—deliberate security flaws inserted to allow the Chinese state to conduct espionage, or even to attack phone networks themselves.

America is waging a campaign against Huawei around the world. In two recent speeches Mike Pence, America's vice-president, urged allies to shun the firm's gear. He mentioned a Chinese law passed in 2017 ▸▸

that would require firms to co-operate with the country's intelligence services. Australia has already banned Huawei's equipment. Japan has passed laws that seem designed to target the firm. In December Canadian police arrested Meng Wanzhou, the daughter of Ren Zhengfei, Huawei's founder, at America's request. She—and Huawei—are charged with evading American sanctions on Iran.

Support for America's tough stance is not universal. The most prominent exception is Britain, which allows Huawei's kit but scrutinises it at a laboratory run by the National Cyber Security Centre (NCSC), part of GCHQ, Britain's electronic-spying agency. On February 20th, speaking at a security conference in Brussels, Ciaran Martin, a member of GCHQ's board, gave the spooks' view. GCHQ has probed Huawei's hardware and code for years. It found no evidence of back doors but discovered that Huawei's code is a spaghettified mess full of holes and weak security.

Despite those criticisms, Britain's conditional seal of approval is important for Huawei as a counterbalance to American pressure. Germany and Italy also seem reluctant to ban it. Germany recently opened a test laboratory similar to the one in Britain. New Zealand has blocked an application by Spark, a phone network, to use Huawei's gear on national-security grounds. But it has not blacklisted the firm outright. Poland, which arrested both a Chinese Huawei employee and one of its own citizens on espionage charges in January, has pleaded for Western unity.

Huawei itself points out that no evidence of back doors has ever been found and argues that implementing them would be commercial suicide. The firm's tone is both conciliatory and defiant. Mr Ren has described American concerns as "politically motivated" and said that the country will be unable to "crush" his firm. Huawei has said it will address Britain's criticisms but that doing so will take years.

The arguments are about more than coding. Huawei is a Chinese champion. As an aspirant superpower, China sees technology as a vital national interest. The incumbent superpower, America, thinks similarly and a technological cold war is developing between the two. Britain, pondering its place in the world after Brexit, is a traditional ally of America but is also courting Chinese investment.

Canada's position is the trickiest of all, at least for now. Its government must decide by March 1st whether Ms Meng's extradition hearing can go ahead. In what are widely seen as reprisals for her arrest, two Canadian citizens have been detained in China. A third has been sentenced to death for drug-smuggling, after initially being sentenced to 15 years in prison. Expect the temperature to carry on rising. ■

Autonomous cars

It takes a village

Why retired people could be ideal passengers in self-driving cars

NEW TECHNOLOGIES, from the Walkman to the iPhone, have tended to be adopted first by the young. But when it comes to self-driving cars, the most logical early adopters are the retired. That, at least, is the conclusion reached by Voyage, a startup based in Silicon Valley. It is testing its autonomous vehicles (AVs) in The Villages, a retirement community in Florida with a population of 125,000 people. Retirement towns are ideally suited to AVs for three reasons, says Oliver Cameron, Voyage's CEO.

First, the environment is simpler and easier for an AV to navigate than a bustling city centre. Speed limits are lower, road layouts are less complex and there are fewer other vehicles. Second, there is strong demand for mobility. Active retirees want the ability to get around but they may not want the expense and hassle of owning a car. For residents who are unable or have lost the confidence to drive, summoning a vehicle when needed has obvious appeal. Prototype AVs have attracted criticism and outright hostility from locals in some parts of America. Voyage has been warmly welcomed in The Villages, says Mr Cameron.

Third, there is a clear road to a large market. The Villages is America's largest retirement community and one of the fastest-growing residential areas in the country. "We expect it to be the first city in the world to adopt AVs as the primary means of transport," says Mr Cameron. The number of such communities is growing fast as America ages.

There are other reasons why retirement communities and AVs fit together neatly. People generally prefer to retire to warm, sunny regions, so there is little risk of snow confusing an AV's sensors. Because the roads are private property, there are fewer reporting requirements on AV operators and the regulatory situation is much simpler. And because everyone is retired, demand for rides is consistent throughout the day, which should make it easier to handle peaks without the need for a large fleet.

Voyage is now operating six prototype AVs in The Villages, with safety drivers on board for the time being to monitor performance and handle unexpected situations. It is also testing in a retirement community in San Jose. As part of its deal to become the exclusive provider of AV services in these places, Voyage granted a 0.5% stake in the firm to the owners of the two communities. That helps align incentives, says Mr Cameron. The final pricing model has yet to be decided. But he favours monthly contracts covering a certain number of trips (just as mobile-phone plans provide set amounts of calls and data).

Replacing car ownership for the aged may be easier than providing ride-sharing for young urbanites. "The state of the art in AVs is not ready for downtown San Francisco," says Mr Cameron. A 93-year-old woman who rode in one of Voyage's cars told him that she recalls travelling in a horse-drawn cab as a young girl. In old age, some people retreat into their past. But some Americans in retirement may already be living in the future.

Retired but not without drive

Schumpeter | The conglomeroach

Conglomerates will never die out. But their form is evolving

INDUSTRIAL CONGLOMERATES have long been considered the megafauna of the corporate world: big beasts like mastodons, who were condemned to extinction by spear-wielding corporate raiders in the 1980s. But a better analogy is with cockroaches because, against the odds, conglomerates have refused to die out. They flourish in most climates and are highly adaptive. And they have long been considered pests—at least to shareholders and business-school professors, if not to their numerous employees.

Today the industrial world is in full cockroach-extermination mode. There has recently been a slew of proposed break-ups and spin-offs, most notably at America's General Electric (GE), United Technologies Corp (UTC), DowDuPont and Honeywell, and at their European counterparts, ThyssenKrupp, ABB, and Siemens. UTC's Greg Hayes, a strapping chief executive who drives a pickup truck and tells it like it is, says that even Warren Buffett's Berkshire Hathaway and Jeff Bezos's Amazon are too big to manage. While investors tolerate Berkshire and the digital conglomerates for now, the double standard will not last for long.

There are several reasons why executives at industrial firms have a soft spot for unwieldy structures, despite the fact that shareholders usually detest them. The biggest is megalomania: bosses believe they are best placed to run empires. Executives also place undue emphasis on history, conventional wisdom and emotional ties. In order to break up a conglomerate, all of these arguments usually have to be confronted.

The experience at UTC is illustrative. Last year, after adding Rockwell Collins to its Pratt & Whitney aerospace business thanks to a $30bn takeover, it said it would spin off UTC's two other divisions, lifts, and temperature and security, retaining aerospace as its focus. The break-up came only after a painstaking effort by Mr Hayes, a UTC veteran, to convince himself and the board that the old sprawl was no longer viable. All the excuses had to be taken on.

First history. The firm dates back to the 1920s, when Pratt & Whitney was part of the granddaddy of aerospace monopolies with Boeing and what would become United Airlines. When that was broken up in the 1930s it became United Aircraft, changing its name to UTC in 1975, after which it bought Otis, a lift company, and Carrier, created by the inventor of air-conditioners.

In 82 years UTC has never missed a dividend, added to which it is now worth more than GE, an ailing rival in whose shadow it long stood. So it was not obviously begging to be put out of its misery. When Mr Hayes first presented the board with his proposal for a break-up, half of its members resisted, as did some shareholders.

On top of that was conventional wisdom. For years it had been axiomatic that UTC needed the cash from the lucrative servicing contracts of Otis and Carrier to support the long-cycle, capital-intensive development of jet engines. But no one had ever checked. When Mr Hayes did, he discovered it was an "old wives' tale"; each business made enough cash to sustain itself and the dividend. That helped clinch it with the board.

Yet even then, a chief executive's natural inclination to preserve the legacy of his forebears runs against the logic of focus. As he puts it, "It's hard for me emotionally to go from a $75bn [sales] business in 2019 to a $50bn aerospace business." But Mr Hayes says that, ultimately, he knew that it was the right thing to do.

Had he not broken up the company, others might have done it for him. That is because the resistance to change inside companies is increasingly overwhelmed by external forces, particularly from active investors anxious to boost returns. Shortly before Mr Hayes announced the break up of UTC, two hedge funds, Third Point and Pershing Square, started breathing down his neck. They may have come late to the process, but they are a symptom of a bigger change in the world of investment. As low-cost, index-tracking funds grow, active asset managers are under pressure to justify their fees, which makes them more likely to support break-ups. Hence the recent surge in activist campaigns. Lazard, a bank, says their number soared to a record 247 globally last year, up by 17% from 2017.

Even in developing countries, where conglomerates have long maintained their superiority, the tide may be turning. Bain, a consultancy, has studied such "dinosaurs" in India and South-East Asia and found that for years they outperformed more focused "pure-play" firms, because of better access to raw materials, regulatory favours and brains. But as local capital markets have developed, the advantages have eroded. Last year Bain reported that in 2007-16 a sample of 102 conglomerates underperformed a group of 287 more single-minded firms.

Spreading disease

Such developments make it tempting to think that it is curtains for the cockroaches. Yet new forms are evolving. In another report, Bain noted that last year was the first time global M&A activity was dominated by deals taking firms into new lines of business, rather than ones to build scale, which generate synergies. Examples were Amazon buying PillPack, an online pharmacy, and Alibaba buying ele.me, a Chinese food-delivery business. Amazon's move into logistics, which has recently rattled incumbents such as XPO Logistics, FedEx and UPS, reinforces the trend.

For the time being, investors are tolerating these fashionable firms in a way that they no longer do the sprawling metal bashers. Perhaps, says Jerry Davis of the University of Michigan, that is because shareholders have mastered the art of valuing conglomerates that own traditional hard assets but still struggle with those holding nascent digital ones. Hence they give bosses like Mr Bezos the benefit of the doubt. But once markets evolve further and businesses mature, firms like Amazon will discover the drawbacks of probing into every nook and cranny. By then the activists will probably be crawling over the digital cockroaches, who will resist break-ups—just like their industrial forebears. ■

Also in this section

Tax avoidance

Reclaiming the booty

KINGSTON, JAMAICA

Hundreds of billions of dollars a year are lost to corporate tax avoidance. Some countries are seeking help to deal with the problem

PORT ROYAL, at the mouth of Kingston harbour, was once the largest city in the Caribbean, its population swollen by privateers paid by the English and the Dutch to attack Spanish ships. When the practice of issuing such "letters of marque" faded in the 17th century, crews went rogue. As pirates, they continued to use the Jamaican port as their base and to spend their loot there, earning it a reputation for unparalleled debauchery.

Jamaica still has a piracy problem, but today's buccaneers are in surrounding territories. Unenamoured by Jamaica's 25% corporate income-tax rate, some international firms with operations there find ways to shelter profits using the British Virgin Islands and other nearby tax havens.

The scale of this plunder is unclear—Jamaica publishes no estimate of its corporate-tax gap. But the problem is serious enough to lead the government to seek outside help. Since 2017, auditors from Tax Administration Jamaica (TAJ), the national tax authority, have received training to help them identify and challenge the tax planning of large firms. The assistance is offered by Tax Inspectors Without Borders (TIWB), a programme backed by the OECD and the UN.

Jamaica is not alone in suffering leakage. Estimates of uncollected revenues vary. The OECD reckons that exchequers worldwide lose $100bn-240bn a year to corporate tax avoidance. An IMF study in 2016 suggested that the total could be over $600bn—equivalent to a quarter of all corporate tax collected globally. Avoidance has grown in line with intangible assets, such as intellectual property, which are easier to shift to tax havens than physical assets. An analysis of American multinationals and their international subsidiaries in 2017 found that the share of profits declared elsewhere for tax purposes had risen from 5-10% in the 1990s to 25%. Poor countries are hit hardest because they rely more on corporate tax revenues than rich countries, and because international tax rules, originally crafted to suit advanced economies, are stacked against them.

In Jamaica international investors are particularly active in tourism, mining and food and drink. As the economy has recovered from a debt crisis, so have profits. Transactions that move income offshore—for instance via a travel group's online-booking portal, charging a local affiliate for its services—can be perfectly legal. But international rules, overseen by the OECD, state that such "transfer pricing" should be at an arm's-length, market rate. There is room for subjectivity—and gaming.

In the past the TAJ was outgunned, its auditors struggling to master the complexities of cross-border transfer pricing. Change came in 2015. A new law required large taxpayers to provide more information on transactions, placed more onus on companies to show pricing was justified, and introduced bigger fines and even prison terms for transfer-pricing breaches. In 2017 TIWB parachuted in Steffen Scholze, a veteran auditor from Germany's federal tax office, for a two-week mission, to teach his 70 counterparts at the TAJ the tricks of the trade. He has since returned six times.

Irate of the Caribbean

Companies claim that the new law and TIWB's intervention have raised compliance costs. At a recent event in Kingston, a local tax partner from EY, an advisory firm, went further, hinting at an image problem for TIWB: the average Jamaican might see it as another case of "white foreigners telling us what to do". But Mr Scholze says audits "provide certainty, which companies need". The extra data requirements don't involve much extra work: "they already have more than 90% of what we're after." ▸▸

The TAJ appears happy with the help it has received. As one auditor explains, TIWB has helped it "cut through the fluff" when companies provide documents, and to get better at negotiating with firms and their well-paid advisers when disagreements arise over the pricing of transactions.

"Recently a team came back from meeting one company so excited," relates another TAJ auditor. For the first time ever when dealing with a large taxpayer, "our people did the talking and the other side sat dumb", struggling to answer the questions. The hope, she says, is that when one firm receives a bill, others in the same industry take note and perhaps even ask for an audit to clarify their tax position—as happened in Liberia when the tax authority began targeting mining companies with TIWB help.

Such audits move slowly, typically taking two years including appeals. The first of those done by the TAJ under TIWB's wing is nearing an end. (The resulting bill can be paid electronically, but the company still has to collect a paper receipt from a kiosk at the TAJ.) The sums involved are not huge: one of the bigger cases is set to bring in "potentially" J$350m ($2.6m), says an official. But TIWB is lean. For every dollar spent, over $100 of extra revenue is collected, says James Karanja, who heads its secretariat.

Having answered 52 calls for help in Africa, Asia, Latin America, the Caribbean and eastern Europe since 2015, the programme is set to reach 100 by 2020. A recent addition is Papua New Guinea, which wants help unravelling logging groups' tax affairs. It is also helping Indonesia decipher the reams of data received under global tax-information-exchange initiatives.

TIWB will need to evolve as it grows, not least because international corporate-tax rules are in flux. These are no longer up to the job. Multinationals can too easily exploit mismatches between national laws to divert taxable profits or even make them vanish. But rewriting the rules is proving tricky. A first stab, led by the OECD in 2015, dealt with some of the most aggressive types of avoidance but failed to secure global agreement on taxing the digital economy. It also ducked a big structural question: why continue to base the rules on the arm's-length principle, when multinationals exist precisely so that market prices need not apply in intragroup transactions?

The digital impasse has forced a rethink. After consulting the 127 countries in its "Inclusive Framework", the OECD last month floated the idea of "reconsidering" transfer-pricing rules and "go[ing] beyond" the arm's-length concept. This marks a shift, says Alex Cobham of Tax Justice Network, an NGO. America long defended the transfer-pricing status quo. But since its big domestic tax reform under President Donald Trump, it has shifted its position on the international rules. The final destination is unclear, but the direction is towards better alignment of where tax is levied with where economic activity takes place. That could mean greater taxing rights for "source" and "market" countries (ie, where firms produce things and the home of their customers and digital users); fewer taxing rights for countries where parent firms are domiciled, often rich ones; and less scope for profits to be booked in tax havens with flimsy justification, says Pascal Saint-Amans, the OECD's tax chief.

He is hoping for a global solution by the end of 2020. Mr Cobham believes "we're closer now than ever before to the kind of open, global discussion of tax rules that could finally redress some of the glaring inequalities in the distribution of taxing rights that lower-income countries face." But better-off OECD countries are unlikely to cede their outsize rule-setting power and taxing rights without a fight. The situation is "unstable", admits Mr Saint-Amans.

Radical reform is far enough away as to be of no immediate concern to the team tutored by Mr Scholze. The TAJ auditors are bracing for more transfer-pricing tussles. There is talk of bringing in another international expert to beef up expertise in banking and telecoms, two industries with which the German number-cruncher is less familiar. But, as auditors' confidence grows, so do worries about talent being lured away. Multinationals and tax-advisory firms have reportedly been circling the team. Anyone for privateering? ■

Banks and tax evasion

Lactose intolerance

A gamble in France could cost UBS dear

THE MOST intriguing bit of the six-week tax-evasion trial of UBS in France late last year was dairy-themed. Prosecutors accused the Swiss bank of keeping coded notes to track how many "milk cans"—units of money—had been moved to Swiss accounts by tax-dodging French clients. UBS denied having any such parallel accounting system. A former manager insisted the notes related to bankers' bonuses, not tax-shy funds.

France's Tribunal de Grande Instance, its high court in Paris, did not buy that explanation. On February 20th it found the Swiss bank guilty of helping thousands of rich French clients set up undeclared accounts, potentially containing over €10bn ($11.3bn), between 2004 and 2012. It fined the bank an eye-watering €3.7bn and added an additional €800m in damages for the French state.

In a fine state

If upheld, it would be more than 12 times larger than France's previous record criminal corporate fine, of €300m against HSBC, another bank—and not far short of the roughly $5.5bn that dozens of Swiss banks have collectively paid out to the United States, their tormentor-in-chief, in tax-evasion cases over the past decade. UBS paid American authorities $780m in 2009, in a case widely considered more egregious than its alleged French transgressions.

The bank could have settled for much less—around €1bn—but chose to gamble, calling French demands "irrational" and politically motivated. That decision will look spectacularly unwise if the appeal the bank was quick to announce fails. UBS says it "strongly disagrees" with the verdict, which is "based on the unfounded allegations of former employees". It insists that "no offence in France was established". Speaking outside court, UBS's general counsel called the ruling "incomprehensible".

Investors will certainly be struggling to understand how the bank got itself in a position of facing penalties equivalent to 92% of last year's net profit. Worse, the potential hit is far from covered: at the end of 2018 UBS had the equivalent of €2.1bn set aside to cover possible losses from litigation and settlements.

The bank must now try to overturn a decision which, it claims, "effectively applies French law in Switzerland". Meanwhile, the odds of other big firms targeted by France risking a trial rather than coughing up to avoid time in the dock have surely lengthened hugely.

Remittances to North Korea

Going for broker

SEOUL

The secret channels for funnelling money into North Korea

IN FEBRUARY 2018 Jessie Kim found out that she had been sending money to a dead man. Ms Kim, now a 27-year-old student in Seoul, fled North Korea for China in 2011. She had been sending her father in Yanggang province in the North around $1,000 a year since she arrived in South Korea in early 2014. Two years later she doubled the contributions, working several part-time jobs, after her aunt told her that her father had been in an accident and needed money for medical bills. But another call from her aunt last winter, claiming that her father was asking for yet more money, made her suspicious. "He wasn't the kind of man to ask his daughter for money," she says. Ms Kim made enquiries through the broker who had facilitated the transactions. She eventually found out that her father had died in the accident in 2016 and that the money had gone to her aunt's family instead.

Ms Kim's case illustrates the pitfalls of supporting relatives in a country that is all but cut off from global communications and financial-services networks. Ordinary North Koreans are not allowed to receive money or even phone calls from abroad. Foreign banks are hesitant to handle any transaction associated with the North, for fear of falling foul of sanctions, intended to curtail its nuclear programme, that have been imposed by America and others.

Yet the relationship between the 30,000-odd North Korean refugees in South Korea and their relatives back home shows that the North is much less closed than at first appears. A growing proportion of those who have settled in the South manage to send money home. In 2018, 62% of refugees surveyed by the Database Center for North Korean Human Rights (NKDB), an NGO in Seoul, said they had transferred funds to relatives or friends in North Korea, up from 50% in 2013. Most respondents say they sent between $500 and $2,000 a year, which was mostly spent on basic living expenses, health and education. The annual total may run into the tens of millions of dollars.

That is low compared with remittances from workers sent abroad by the state, which are estimated to be in the hundreds of millions. (Sanctions require that these overseas workers return home by the end of this year.) But it is substantial both relative to North Korean GDP per person, reckoned to be between $1,000 and $2,000 a year, and as a share of income earned by North Koreans in South Korea, who make around $1,300 a month on average. The majority of recipients live in North Hamgyeong and Yanggang on the northern border with China, the home provinces of most of those fleeing the North. (The proximity to the Chinese border also enables communication using smuggled Chinese SIM cards.)

Settling up

The money is sent through a sophisticated network of brokers in South Korea, China and North Korea. Like the majority of refugees, these are usually women; often less compelled to work for the state, they are more active in the North's informal economy than men. If a refugee in South Korea wants to make a transfer, she may contact a broker in the North who owes a smuggler in China. The refugee may offer to pay some portion of the broker's debt; in return, the intermediary gives an equivalent amount to the refugee's family in the North, usually in dollars or Chinese yuan. The system is based on trust—and extravagant fees. The broker who facilitates the transaction takes a cut of around 30%. Uninitiated participants with weak networks may fall victim to scams, says Ms Kim, though she claims they are rare: wronged customers can get their brokers into trouble by reporting them to the Chinese or North Korean authorities.

In a few cases, money flows the other way. A small number of refugees surveyed by NKDB said that they had received money from relatives in the North. But those who make it abroad are vastly more likely to be able to support their relatives. That this complicates relationships is not lost on Ms Kim. "I didn't know my father was dead for two years because my aunt lied to me," she says. "But I understand why she did it." ■

Wirecard

Shooting the messenger

When is a ban on short-selling justified?

THOSE WHO profit from the misery of others are not often popular. Short-sellers, who try to make money by selling borrowed shares and buying them back later at a lower price, have long been viewed with suspicion. They are blamed for exacerbating price falls so that they can reap bigger returns. In times of market stress authorities often ban them. In 1610 regulators in Amsterdam forbade short-selling, blaming it for a fall in the value of the Dutch East India Company. Two centuries later Napoleon prohibited it as an act of treason.

On February 18th BaFin, Germany's financial regulator, banned investors from taking new net short positions in Wirecard, a German digital-payments firm, after its share price fell by over 40% in under three weeks. The crash marked a swift change in its fortunes. In 2018 Wirecard displaced Commerzbank, a 149-year-old lender, in the DAX 30, an index of Germany's biggest firms.

Wirecard was worth €20.7bn ($23.6bn) on January 29th, just before the *Financial Times* reported that Edo Kurniawan, a senior executive in the company's Singapore office, was suspected of using fraudulent accounting techniques to inflate reported revenues. The share price slid. On February 1st it fell further when the same newspaper reported that Rajah & Tann, a law firm commissioned by Wirecard to investigate the allegations, had presented preliminary evidence to senior management in May 2018 suggesting the offences were a part of a pattern of book-padding. On February 8th, as Wirecard's Singapore office was visited by the police, its market value fell to €11.7bn.

The firm refutes the reports, claiming that the *Financial Times* has acted unethically. Its management says an internal investigation is ongoing, and that a second, external investigation by Rajah & Tann is still under way and has produced "no conclusive evidence of criminal misconduct". The firm says it is working closely with the police in Singapore. It says it plans to take legal action against the *Financial Times*.

Investors in Wirecard remained spooked until BaFin intervened on February 18th. The regulator cited Wirecard's "importance for the economy" and the "serious threat to market confidence" following the collapse in its share price. Wirecard processes payments for 250,000 merchants, including Aldi and Lidl, two of Germany's biggest retailers, and numerous ▸▸

airlines. The value of Wirecard rose by 16% after the regulator took action.

The ban may have been a risky move. The regulator is meant to act in the public interest. This is the first time BaFin has used the measure to protect a single company. (In 2008, with the financial crisis in full swing, they restricted short-selling of 11 bank stocks.) Crispin Odey, a hedge-fund manager with short positions in Wirecard, has claimed that BaFin has opened the door to potential lawsuits. In his view, according to reports by Bloomberg, the regulator should have ensured that Wirecard's employees did not engage in any wrongdoing before it took action.

Action might be justified if markets have been manipulated. Prosecutors in Munich say they are looking into possible violations of securities regulations. But the *Financial Times* has rejected allegations of unethical reporting or market manipulation as "baseless and false".

Despite their unpopularity, short-sellers perform useful functions in markets. They help prevent bubbles from forming and are adept at rooting out malfeasance. Studies find that in the months before financial fraud at a company is revealed, short-selling of its stock tends to spike. Jim Chanos, a well-known short-seller, famously predicted the demise of Enron, an energy-trading firm that went bust in 2001.

BaFin claims Wirecard had been the target of repeated "short attacks." But short-selling a company that is suspected of false accounting does not undermine markets—rather, it is a sign they are working. Making Mr Chanos give up his short position would not have saved Enron from bankruptcy, after all. He was the messenger, not the problem. ■

Buttonwood Smooth operators

The true appeal of private equity

JOHN MCGAHERN'S novel, "That They May Face the Rising Sun", is set in a remote corner of Ireland. There is a lake, a church, two bars and not much else. Gossip is prized but in short supply. Much of it is concerns John Quinn, a womaniser who has buried two wives and is looking for a third. His quest takes him to Knock, a shrine to the Virgin Mary, which has become a place to find a partner. Like many pilgrims, John Quinn is outwardly pious. But his mind is fixed on earthly matters.

The masking of intent may also be true of visitors to the temple of private equity. On the surface, investors in such funds might hope to harvest a reward—an "illiquidity premium"—for locking up their money for five to ten years. That allows private-equity funds time to turn sluggish businesses into world-beaters. The pitch is seductive. Capital has flooded in as readily as pilgrims flock to the shrine at Knock.

Perhaps, though, private equity's pilgrims are really after something else. These institutional investors may face limitations on how much they can borrow. Private equity offers a way round such constraints: it is liberal in its use of debt to juice up returns. And that is not all. The value of privately held assets are not assessed all that often. That is a plus for those who, for ignoble reasons, would like not to be told how volatile their investments are.

This is a conclusion of a new paper from AQR Capital Management. Its authors look at the returns on private-equity purchases ("buy-outs") of American businesses. They find that, after fees, private equity outperformed the S&P 500 index of large companies by an average of 2.3% a year between 1986 and 2017. That is quite the winning margin. But on closer examination, it looks less impressive. Buy-out targets tend to be small firms that are going cheap—that is, they have a low purchase price relative to their underlying earnings. An investor would have achieved higher returns from a basket of small-capitalisation "value" stocks than by putting his money in private equity.

The edge that private equity had over large listed stocks seems also to have dulled. In the past decade returns have been no better than the S&P 500. This may be because more capital is chasing buy-out targets. Private-equity funds once purchased businesses that were much cheaper than S&P 500 firms, says AQR. But the gap in valuations has closed.

Why are pension funds still so keen to push money into private equity? A tenet of textbook finance is that investors can build a portfolio that fits their preferences by choosing the right mix of equities, the risky asset, and cash, the risk-free asset. Nervous types might keep most of their assets in cash. At the other extreme, a risk-loving investor may wish to borrow (ie, have a negative cash holding) so that stockholdings exceed 100% of his capital. An investor with a limited ability to borrow can instead turn to private equity. Its funds take on $1-2 of debt for every $1 of equity.

The AQR authors point to another appeal. Illiquid assets, such as private-equity holdings, are not revalued in line with the price of publicly traded companies—"marked to market"—all that often. A common practice is to rely on self-appraisals. These tend not to reflect the day-to-day fluctuations in the price of listed firms. All this makes for artificially smooth returns.

Such smoothing has several advantages. When stock prices fall, the value of private-equity funds appears to fall less sharply. A mixed portfolio of public and private equity will look less volatile than a pure portfolio of listed stocks. The true riskiness of private equity would only become apparent in a prolonged bear market. Otherwise, it appears to offer diversification, albeit of a specious kind.

Some investors are forced to sell stocks (to "de-risk") when prices fall, to comply with solvency rules. In such cases a bit of returns-smoothing is helpful, as a rigid marking to market would oblige investors to sell stocks at rock-bottom prices. That said, capital tends to flood into private equity when markets are booming. A lot of buy-outs will then be at peak prices.

The best private-equity funds are skilful investors. But the discretion they all have over how they report returns makes it hard for investors to judge who the best are. One study finds that half of funds claimed to be in the top quartile. Still, smoothed returns and leverage may be what investors are really after. Like lovelorn pilgrims to Knock, they will treat any other reward as a bonus.

Soyabeans

Soy sources

ROCKWELL CITY, IOWA

Trade wars have upended the global soyabean market

"WE'VE BEEN gambling up to this point," says Tim Bardole, a soyabean farmer from Iowa. After the price of soyabeans crashed last summer (see chart), he held on to most of his harvest and waited for the market to recover. But seven months later, and with large loans to repay, he sold up. "We decided we'd better take what we have," he says.

The cause of the crash was a 25% tariff on American soyabeans imposed by China, the world's biggest importer, as one shot in the trade war between the two countries. Yet peace is supposedly in the offing. The two countries are locked in negotiations over a deal, ahead of a deadline of March 1st that has been imposed by America (though on February 19th President Donald Trump declared the timing to be flexible). That Mr Bardole cut his losses despite those talks is not that surprising. Even if the tariff is lifted—which is far from certain—the past year's disruption will probably leave a permanent scar.

The trade war caught American soyabean farmers at a particularly bad time. They had just planted a bumper crop, encouraged by strong demand and a drought in Argentina, a competitor. When the tariff was implemented it was too late to switch to other crops such as corn. Demand from China—which in 2017 accounted for 60% of American exports—collapsed. The result was a glut.

To replace American beans China has ramped up its imports from Brazil, pushing up prices in South America. Meanwhile the European Union, Mexico and even Argentina have been tempted by low American prices—but not enough to replace lost Chinese demand. To help American farmers cope, Mr Trump's administration handed them a one-off payment of $1.65 per bushel ($61 per tonne). Without it Mr Bardole would have lost money on this year's crop. He might have sold his crop anyway, but the support has allowed others to sit on theirs. Farmers will have 25m tonnes of beans in stock at the end of this year's selling season, according to an official estimate, up from 12m tonnes last year.

Crushing it

Soyabeans

Sources: International Grains Council; Gro Intelligence

In January Liu He, China's deputy prime minister, said China would buy 5m tonnes of soyabeans after meeting Mr Trump. Even so, the pace of Chinese purchases is a fraction of what it would ordinarily be around this time of year.

If the tariffs are lifted, some Chinese demand will recover. The billions of dollars'-worth of infrastructure that facilitates American sales to China is still in place. And China could turn back to America for other reasons. To cope with the loss of American exports of soyabeans, for instance, it has lowered the minimum protein content in pig feed. But that risks hogs' health and can stunt their growth. Furthermore, Chinese pig farms have been hit by a nasty bout of African swine fever, forcing farmers to cull 5-15% of their hogs, according to Michael Magdovitz of Rabobank, a firm that specialises in financing agriculture. But this should prove temporary.

Despite all this, many are sceptical that Chinese demand will ever fully recover. "It was nice" to have guaranteed demand from China, says Mr Bardole, but "those days are gone." Others worry that the Chinese will respond to this episode by investing more in developing Brazilian agricultural infrastructure, permanently decreasing their reliance on America.

Not everyone is pessimistic. The current situation "is nothing compared with what we went through in the 1980s," says Randy Souder, another Iowan farmer. He remembers that he coped with low prices then by producing more efficiently. If some farmers are forced out of business, he reckons others will "pick up the acres" and spread their equipment costs over a larger area of land.

Prices have crept up in recent months. Mr Magdovitz says they have been supported by the limited Chinese purchases, optimism that a deal will be agreed and Mr Trump's subsidies. America's economy as a whole may not depend on exporting to China. But if recent experience is anything to go by, soyabeans are an exception. ■

Free exchange | Pillar of strength

In a new book, Raghuram Rajan argues that weakened communities threaten liberal democracy

Until recently, economists' prescription for struggling places was bloodless: let them die. "Some towns cannot be preserved", this newspaper argued in 2013, attracting a larger-than-usual volume of correspondence from dissenting readers. But the electoral successes of Donald Trump and the campaign to yank Britain out of the European Union (EU) have shaken the dismal science. Prominent economists have begun to consider what an efficient response to geographic inequality might look like. In a paper published in 2018, for example, Benjamin Austin, Edward Glaeser and Lawrence Summers of Harvard University argued for employment subsidies targeted at struggling places.

The reconsideration of place-based policies can often seem grudging—something to be tolerated, in order to keep those on the losing end of regional inequality from embracing populism or killing themselves with drugs. Economists' reluctance is understandable: efforts to help struggling communities might well deter people from moving when they would otherwise have relocated to more promising places. But it is also short-sighted, argues Raghuram Rajan, an economist at the University of Chicago and the former head of India's central bank. In a compelling new book, "The Third Pillar: How Markets and the State Leave the Community Behind", he argues that communities are not so much a source of friction inhibiting the smooth operation of the global economy, as an indispensable part of a healthy society.

Mr Rajan believes in markets but has often made himself the bearer of awkward economic news. In 2005 he soured the mood at an annual conference of central bankers by asking whether financial innovation had made the world a riskier place. In a book published in 2010 he argued that the policies that unwittingly led to the global financial crisis, for example mortgage subsidies, were often responses to economic "faultlines", such as inequality; those faultlines are still in place, ready to wreak future havoc. "The Third Pillar" similarly urges economists to recognise a blind spot. The places where people grow up, live and work are not simply agglomerations of economic activity. They shape people's identities and "anchor the individual in real human networks". Communities provide leverage to those who might otherwise find themselves bullied by the state or by markets. Their function has changed dramatically since pre-industrial times, but communities remain a critical piece of social infrastructure.

That community matters might seem a banal observation to non-economists. But it sits inconveniently alongside many aspects of an economist's worldview. Economic progress has often meant the replacement of personal, community interactions with efficient but more impersonal ones. The less sentimental people are about where they live or who they work for, the more readily they can move in response to market pressures, boosting productivity and limiting the damage from creative destruction. Community-based economic activity, by contrast, can be inefficient. Lending a friend money or caring for an ailing relative seem like nice things to do. But larger and more transparent financial markets attract more funds and expand access to credit, while a market for care work allows for welfare-enhancing specialisation and trade.

Mr Rajan acknowledges the negative effects of tight-knit communities. The book provides a short history of the evolution of community, state and market in Europe, which begins in the stifling world of the feudal manor. Community relationships governed nearly every aspect of life, maintaining order and stability at the cost of economic stasis and oppression. Disruptions to that world created the conditions for the maturation of the state, and for economic progress. As the world became more interconnected, states and markets assumed roles once played by the community—from insuring against hardship to funding investment.

Communities today can still be intrusive and intolerant. But they also provide support, inspiration and a backdrop for people's emotional and spiritual lives. Communities, furthermore, are where the abstractions of global economics and politics become real. Strong states and deep markets might have enabled unprecedented prosperity and individual liberty, but they are prone to excesses. It has often fallen to communities to correct imbalances of power. Mr Rajan points to social movements, born of community action, that were responsible for the spread of primary education and the expansion of the franchise.

I think we're alone now

The past half-century has been difficult for the third pillar, however. Globalisation and technological change have deprived many places of sources of employment and wealth. Regions' fates seem increasingly determined from afar, by supranational organisations like the EU or by fickle global financial markets. Trade and technology have transformed many industries into winner-takes-all affairs. Opportunity has become concentrated in expensive superstar cities, which attract the most talented members of communities and leave everyone else without such opportunities. Mr Rajan reckons that the weakening of communities that has followed these trends makes the world vulnerable. The frustrated residents of struggling places mistrust elites, and seek meaning instead in the ugly politics of populist leaders.

Promising solutions are hard to come by. Still, Mr Rajan offers reasonable recommendations. Devolution of policymaking authority might invigorate community spirit. Governments should also practise "responsible sovereignty", he reckons, and limit unnecessarily disruptive forms of economic integration, like reckless financial globalisation. But the thrust of "The Third Pillar" is that society matters after all. Having been insufficiently mindful of this over the past few decades, business and government leaders may have little option but to brace themselves for frustrated communities demanding change. ■

The American Association for the Advancement of Science

Voyages to strange new worlds

WASHINGTON, DC

This year's meeting of the AAAS looked at crop biology, the origin of heavy elements, how species raft around oceans and the problems of flying to Mars

SENDING PEOPLE to Mars is a daunting prospect. It would take astronauts at least nine months to get there, they might spend a year on the planet itself, and they would then spend another nine months on the journey home. During that time they would be exposed both to high radiation levels and to the increasingly irritating tics and habits of their fellow crew. It is hard to say which of these would be more likely to result in someone's death.

But though the scientific value of such a mission is questionable, as a propaganda stunt it would be unequalled. America's space agency, NASA, is therefore looking into ways of preserving both the physical and the mental health of putative Martian voyagers. And, at this year's meeting of the American Association for the Advancement of Science (AAAS), held in Washington, DC, several presentations described work towards that end.

One such effort is the NASA Twin Study, full results of which are to be published in the next few months. The AAAS meeting was, however, given a taster.

The NASA Twin Study took advantage of identical-twin astronauts Mark and Scott Kelly. Scott was launched to the International Space Station in 2015 for a 12-month tour as station commander. Mark remained on Earth for the same period. Both men gave regular samples of blood, urine and so on for scientific analysis. Both also undertook batteries of physical and mental tests. Not knowing exactly what might change in the men's bodies, ten teams of researchers spread across America combed through the samples and results to track as many molecular, cognitive and physical changes as possible.

As Chris Mason of Weill Cornell Medical College told the meeting, these teams found lots of surprises. For example, Scott's telomeres got longer during his sojourn in space. Telomeres are strands of DNA that cap the end of chromosomes in a cell's nucleus. They normally get shorter as that cell divides and ages.

Dr Mason then compared the operation of Scott's genes with those of his brother back on Earth. Genes in Scott's body associated with the immune system, he found, became highly active. This was also true of the cellular machinery associated with repairing DNA. "It's almost as if the body is in high alert," he said, which would not be surprising given the stresses of space flight. Another surprising observation was the presence of a lot of mitochondrial fragments in Scott's blood. Mitochondria are tiny structures within a cell which release energy from sugar. They tend to get into the bloodstream only when cells are damaged or dying of stress.

From Scott's point of view, the good news is that almost all of the thousands of changes catalogued in his body reverted to normal soon after he returned to Earth. This suggests that, for the most part, a healthy human body recovers well from the stress of space flight. But however detailed the Twin Study has been (and it was in fact the most detailed scientific portrait of human beings ever made) a sample size of two is still rather limited. In the coming years NASA is planning dozens more long- ▸▸

Also in this section

duration tests on people, including tracking astronauts heading to the moon in preparation for future trips to Mars.

When Scott returned from the space station, he said that "teamwork makes the dream work" when it comes to a successful mission in space. Cutesy. But it was an apt statement. Understanding how teams function, how they go wrong and how to prevent social problems will be a critical element of any successful mission to Mars.

Such a mission might involve half a dozen people, perhaps from different cultures, cooped up together for some three years in a space no bigger than a typical family home. There would be no emergency-escape strategy. One of the attempts being made to model these conditions is that of Noshir Contractor, a behavioural scientist at Northwestern University, in Illinois. As he told the meeting, he has been studying the dynamics of groups of people isolated for long periods in the Human Exploration Research Analogue, a facility at the Johnson Space Centre in Houston, Texas. Here, volunteers are locked away for up to 45 days at a time on mock space missions. They are poked and prodded, physiologically and psychologically, and monitored day and night.

Send in the clown

Something researchers have already learned from these experiments is that certain personality characteristics are essential to helping groups work well together. A good group needs a leader, a social secretary, a storyteller and a mixture of introverts and extroverts. Intriguingly, by far the most important role seems to be that of the clown. According to Jeffrey Johnson, an anthropologist at the University of Florida who has spent years examining relations between people in Antarctic crews overwintering at the South Pole, the clown is not only funny, he is also smart and knows each member of the group well enough to defuse most of the tensions that might arise during long periods of close contact. This sounds rather like the role of a jester in a royal court. The clown also acts as a bridge between different groups of people—in Antarctica the clowns linked scientists on the base with the tradesmen who also worked there. In groups that tended to fight most or to lose coherence, Dr Johnson found, there was usually no clown.

Even if a perfect, balanced group of astronauts is assembled for a Mars mission, however, things could still go awry. On December 28th 1973, for example, the three crew members of *Skylab*, an early American space station, decided to cut off contact with ground control and refused to do any of their assigned tasks—something they called a "work slowdown". Newspapers at the time referred to this incident as the first strike in space.

Dr Contractor's group wanted to understand what happened on *Skylab* and whether or not the crew's reaction could have been averted. They took transcripts of conversations that had occurred on *Skylab* over the many years it had hosted astronauts, and applied textual and network analysis to them to try to understand the nature of relations between the people who had been on the station.

The cause of the strike, they found, was that the crew's close ties with one another had become detrimental to their relationship with the team back on Earth. Crew members had started using a lot of negative words about their daily tasks. They complained bitterly to each other about their workload, but never shared these thoughts with those in ground control. The signal of problems was so clear in this analysis that Dr Contractor's team reckon they would have been able to see the strike coming a week before it happened.

On a future mission to Mars, ground control would thus be well advised to have transcripts of conversations showing details of who talks to whom, how quickly people respond to each other and what the sentiment of each conversation is. Dr Contractor and his colleagues are creating algorithms that can crawl through these data and predict when there could be problems between members of the crew, or between the crew and the ground.

Predicting problems is just the start. Ground-control teams monitoring the flight could help with crew conflict near to Earth, but on a mission to Mars the astronauts will need to operate autonomously, given the large communications delays. NASA's engineers are therefore working on software that can be used to analyse data about a crew's behaviour in real time and provide a sort of digital counselling service, helping them find ways to mitigate any problems. "Good mental health on a mission is not the absence of conflict, but how you handle that conflict," said Thomas Williams, a specialist in human factors at the Johnson Space Centre.

All this detailed understanding of teams will have uses far beyond lengthy space missions, the researchers hope. Behavioural scientists are already trying to apply such "people analytics" to the understanding of sentiments within companies. They might, perhaps, replace performance surveys, monitor inclusion and diversity, identify high potential or put together dream teams for certain tasks.

Building a perfect team for a long mission to Mars will not be easy, says Dr Contractor, and there is much to learn yet. But if human beings are ever to travel to other parts of the solar system, then understanding the behaviour of those who will be crewing the hardware should make a successful voyage far more likely. ■

Nitrogen fertilisation

Fixed!

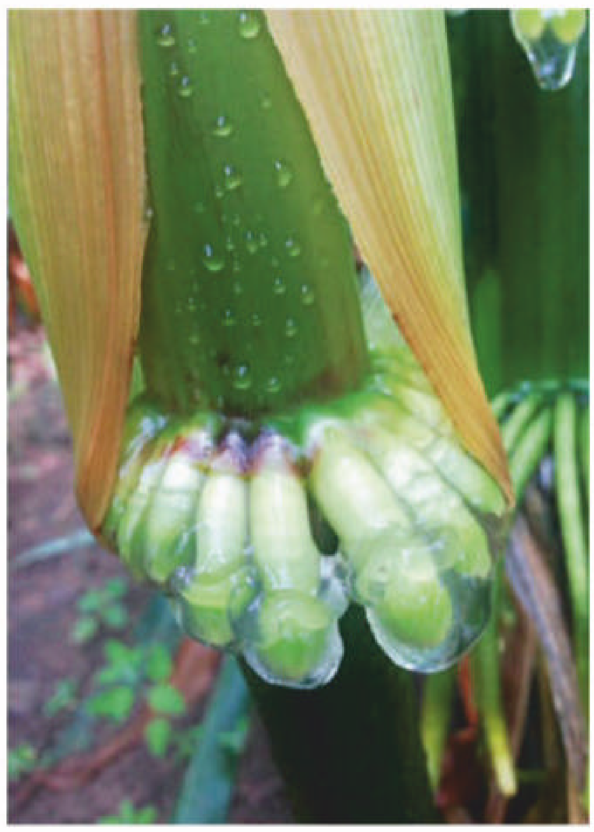
WASHINGTON, DC

A big obstacle to agricultural productivity may soon be overcome

PLANTS NEED nitrogen to make proteins and DNA. But though this element is abundant in the air, they have failed to evolve the biochemical apparatus needed to break up nitrogen molecules and combine the resulting atoms with other elements (a process called "fixing") in order to feed it into their biochemical pathways. Some bacteria have, however, managed this trick. And some plants, notably legumes, have worked out how to play host to these nitrogen-fixing bacteria by encouraging them to invade the cells of their roots, and by growing special root nodules to encourage such cohabitation.

At the moment, farmers overcome the inability of most crops to fix nitrogen either by crop rotation (planting fields with legumes every few years to refresh the soil with nitrogenous compounds) or by applying artificial fertiliser. But fertiliser, on which about half of the world's food production now relies, costs money and (a more modern worry) is manufactured using a lot of fossil fuel in the form of natural gas. It has therefore long been a dream of agricultural scientists to fit out cereal crops with their own bacteria-hosting nodules, or similar organs, so as to permit them to fix their own nitrogen.

Jean-Michel Ané of the University of Wisconsin-Madison is one of those working on this problem. He told the AAAS meet-



Dripping with promise

ing of two approaches that he and his colleagues are following. One involves an evolutionary analysis of the way legumes became bacteria-friendly in the first place. The other is the identification of a type of symbiotic nitrogen-fixing that does not rely on root nodules.

The crucial insight behind the first of these approaches was the realisation that the association between legumes and bacteria is similar to a more widespread one between land plants and fungi. Most plants have fungal hyphae growing in their roots. Occasionally this is a parasitic relationship, but usually it is mutualistic. The plant feeds sugars and amino acids to the fungus. The fungus supplies the plant with water and minerals. Analysis of the genes involved in the plant side of this deal suggests that plant-fungal symbiosis goes back to the first land plants. The genes in question permit intimate association between fungal hyphae and plant cells, and the molecular pathways involved are similar to those that let nitrogen-fixing bacteria sit inside legume root cells.

Genetic tweaking

Dr Ané and his colleagues have also worked out the evolutionary origin of nodule formation. This is a result of mutations in genes that control the formation of lateral roots in legumes. What seems to have happened is that, about 60m years ago, relevant changes in the symbiosis genes and the root-formation genes came together in the ancestor of modern legumes. The team's mission is to recapitulate this fortuitous coincidence in other crops, by genetic tweaking. At the moment they are studying the effects of promising-looking tweaks on root cultures of poplar. They picked poplar as a model for their experiments because it has a well-understood genome and is fairly closely related to the legume family. Their ultimate target is rice—the third most widely grown crop in the world.

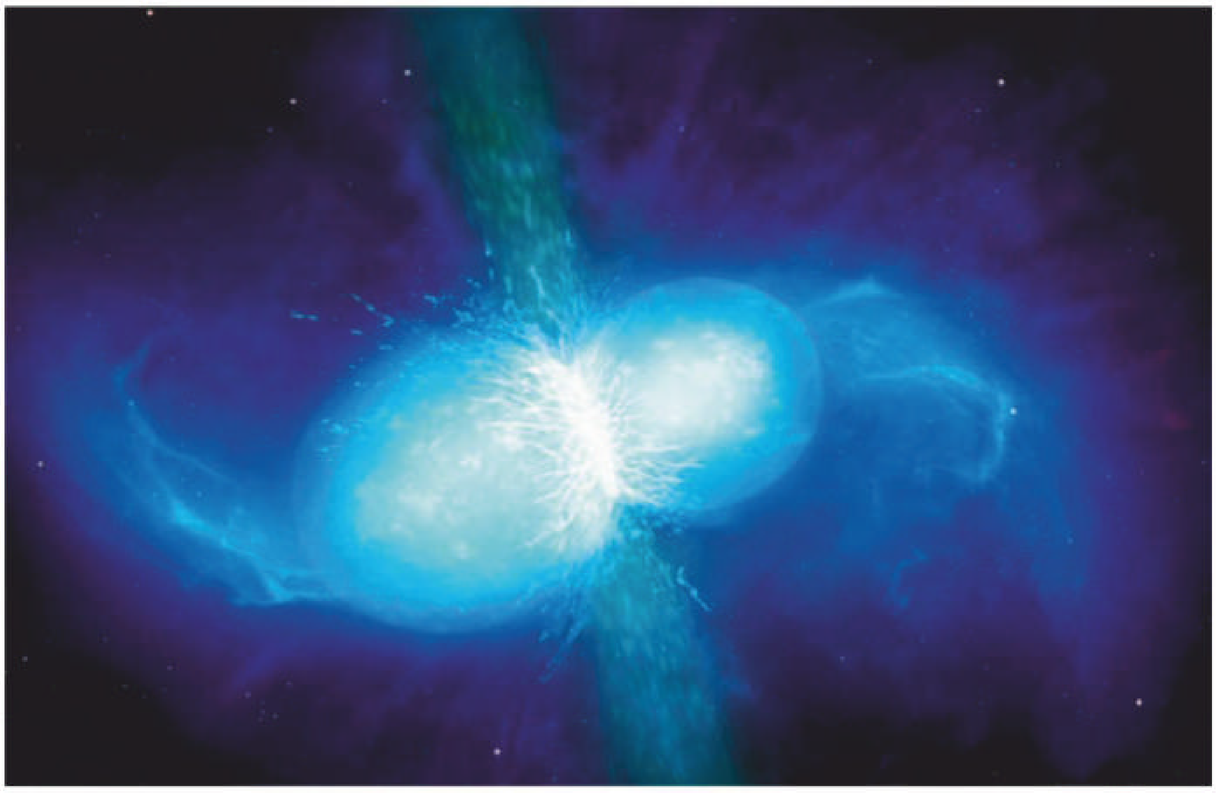
The most widely grown crop of all, though, is maize, and this cereal is the subject of the second approach Dr Ané and his colleagues are taking. Some years ago the properties of a strange form of maize, which is grown by farmers in the Sierra Mixe of Oaxaca state, in Mexico, were brought to the world's attention by Howard-Yana Shapiro, chief agricultural officer at Mars, an American confectionery company, and an adjunct professor of agriculture at the University of California, Davis.

Sierra Mixe maize is a giant crop, standing five or six metres tall when fully grown. What intrigued Dr Shapiro, however, was that it needs neither fertiliser nor crop rotation to flourish. It also, he noticed, has a strange anatomy. It puts out aerial roots (see picture on previous page). These are a feature that plants such as mangroves (which live in saline coastal areas) and epiphytic orchids (which cling onto trees and have no contact with the soil) use to collect water from the air. Such roots were, though, previously unknown on maize. Moreover, far from absorbing water when conditions are damp they actually ooze gel when it rains, and this gel drips off them onto the soil.

Analysis of the gel showed that it was fixing nitrogen. The aerial roots, in other words, are hosting nitrogen-fixing bacteria and using them to fertilise the surrounding soil. Hence the lack of need for fertiliser or crop rotation.

Six-metre-tall maize plants, even ones with the ability to fix nitrogen, are unlikely to find favour with the intensive farmers of the rich world. But maize is maize, and Dr Ané, Dr Shapiro and their colleagues have managed to cross-breed aerial roots into more manageable plants, which are being tested experimentally. They have also, by searching old literature, found that gel-dripping aerial roots were reported on a strain of sorghum at a conference in India in 1984, though the matter was never followed up.

Dr Ané is now doing so. Though sorghum is not as dominant or as widely traded as maize or rice, it is still important. If any of these crops could be encouraged to fix nitrogen routinely, that would simplify and improve farmers' lives enormously. ■



How heavy elements are made

The ultimate nuclear reactor

WASHINGTON, DC

A lot of the periodic table came from the collision of neutron stars

LIVING THINGS are star stuff. Other than hydrogen, which comes from the Big Bang, which marked the birth of the universe, the familiar elements of which flesh is composed—carbon, oxygen, nitrogen and so on—were created by the energy-releasing process of nuclear fusion that powers stars. But fusion has its limits. The balance of forces inside an atomic nucleus means that creating an element heavier than iron (number 26 on the periodic table) consumes energy, rather than releasing it. Further up the table, beyond lead (number 82), nuclei tend to fall apart spontaneously. In other words, they become radioactive.

To synthesise elements heavier than iron—and particularly those heavier than lead—therefore requires a lot of work. Some of this work happens in stellar explosions called supernovae. Calculations suggest, however, that even supernovae would be hard put to explain the abundance of the heaviest elements, including metals such as gold and platinum as well as radioactive ones like uranium. One hypothesis is that these elements are the products of collisions between ultradense objects called neutron stars. And, as Brian Metzger of Columbia University told the AAAS, that hypothesis has now been confirmed by data.

The neutron-star hypothesis of nucleosynthesis also depends on supernovae, but at one remove. Neutron stars are the collapsed leftovers of particular types of supernova involving stars with eight or more times the mass of the sun. During the course of such events the exploding star's core collapses, creating pressures so great that most of the electrons and protons of the atoms within are forced to merge, to create neutrons. The resulting object is therefore small (with a radius of around 10km) and has the same sort of density as an atomic nucleus. A sugar-cube-sized piece of it, in other words, would weigh as much as a mountain.

A single neutron star cannot create new elements. But two neutron stars orbiting each other might. The pair will gradually lose energy, in the form of low-power gravitational waves, and will come closer and closer together as a result. Eventually, they will collide, creating an explosion called a kilonova that is accompanied by an enormous gravitational wave. This explosion throws neutrons in all directions.

On Earth one established way of making heavy elements from light ones is by neutron bombardment. In this process existing nuclei absorb neutrons, becoming heavier but also unstable. In the reverse of what happens when a neutron star is created, neutrons within the bombarded nuclei then spit out electrons and turn into protons. The upshot is a more massive nucleus, and one with more protons in it. More protons means a higher atomic number. The nucleus in question has thus been transformed into a heavier element.

In effect, this is a small-scale version of what happens after a neutron-star collision. The liberated neutrons bombard any matter in the surrounding space, giving each of the atoms in that matter a large number of serial upgrades of their atomic numbers. The only problem with this theory was that until recently no one had seen a kilonova, and so it was not known for sure that they existed. As Dr Metzger described, that changed on August 17th 2017 when LIGO, a gravitational-wave detector in North America, made its first observation of a neutron-star collision. It took place a long time ago in a distant galaxy in a constellation called Hydra, but gravitational waves travel at the speed of light, which is finite, so there was a considerable delay in the arrival of the signal on Earth.

Precious knowledge

In the wake of the gravitational wave, optical telescopes looked to its source. That let astronomers collect spectra from the explosion and thus determine which elements were created. Kilonova GW170917, as the event was called, ejected material equivalent to 5% of the sun's mass. Among much else, this ejection produced gold (around ten Earth masses' worth) and platinum (50 Earth masses' worth).

Kilonovae are rare events, happening perhaps once every 10,000-100,000 years per galaxy. They would have been commoner in the past, when the short-lived, high-mass stars that create neutron stars were more abundant. Even so, elements with atomic numbers above 26, whether generated by supernovae or neutron stars, make up only 0.1% of the mass of atoms in the universe.

Future observations using LIGO (which is being upgraded) and forthcoming detectors in Japan and India will permit more refined analysis. It now, though, seems clear that, while human bodies are composed largely of star stuff, part of the jewellery they wear started life in a kilonova. And the scarcity of those precious metals, which makes them so desirable, is a direct consequence of the rarity of kilonovae. ■

Biogeography

The hitch-hiker's guide to the Pacific

WASHINGTON, DC

A long-term natural experiment hints at how species disperse

THAT SPECIES might spread overseas by hitching lifts on floating vegetation is an idea going back to Charles Darwin. It is a plausible thought, but hard to test. A test of sorts has, however, been made possible by the tsunami that struck the Pacific coast of Japan in 2011, in the wake of a submarine earthquake.

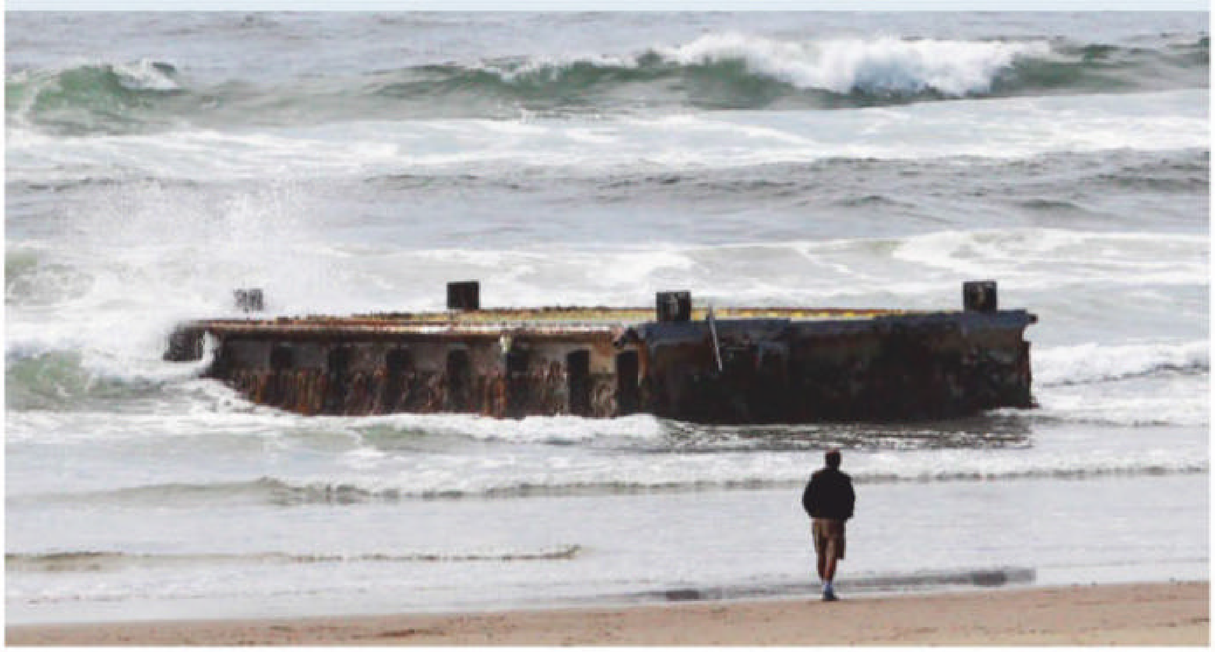
The incursion and regression of this tsunami dragged with it millions of pieces of debris, many of them buoyant. After a year or so some of the debris started arriving on the coast of North America—and it is arriving still. James Carlton, of Williams College, Connecticut, and his colleagues have been studying the living creatures on board pieces of it, and Dr Carlton gave a round-up of what they have so far found to an audience at the AAAS meeting in Washington.

Disappointingly for lovers of Darwin's vision of land animals moving from place to place on natural rafts, an intensive examination of 634 objects, ranging from a plastic bottle to a floating dock 20 metres long that had been ripped free of its moorings (see picture below) failed to reveal any terrestrial species. A lot of marine ones turned up, though, providing work for an army of 80 taxonomists wielding the latest genetic barcoding equipment.

The current species count is 379—mostly animals but also some seaweeds—of which two-thirds are alien to North American waters. The majority of the animals are invertebrates such as molluscs, polychaetes and bryozoa. But not all. A few fish made it across the Pacific, too. Indeed, some of the fishing boats that had been swept away by the wave supported veritable ecosystems.

One, for example, had what Dr Carlton described as a "tide pool" in its stern. This contained a population of barred knifejaws, a species of black-and-white-striped reef fish. Another was home to 20 yellowtail amberjacks.

The knifejaws, in particular, are interesting because they are local to the northwest Pacific. Since the arrival of the tsunami debris, however, a group of them has been found in Monterey Bay, California—an area which is intensively studied because of a nearby marine-biology laboratory. Whether this new knifejaw population will prosper remains to be seen. But even if it has only a transient existence its establishment suggests that, even if land animals have difficulty making the crossing, for marine creatures Darwin was correct.



The tyranny of metrics

Every step you take

In a world where everything is quantified, power will accrue to whoever is keeping score

MEASUREMENTS PERVADE life and society. Infants are weighed the moment they blink into the world. Pupils are graded. Schools are judged on their students' performance, universities on graduates' job prospects. Companies monitor the productivity of employees while CEOs watch the share price. Countries tabulate their GDP, credit-rating agencies assess their economies, investors eye bond yields. The modern world relies on such data. It would cease to function without them.

The numbers are proliferating. As ever-greater swathes of human activity are subsumed by the digital revolution, so they too can be calibrated. Uber riders earn stars for their back-seat behaviour. Social-media posts attract "likes". Users of dating sites are assigned desirability scores. Apple's iPhones tell their owners how many hours they have spent peering into their screens. Wristbands measure footsteps; apps can track sleep patterns and sex. As recently as the start of this decade, people who voluntarily observed themselves in this way had a cultish name, the "quantified-self movement". That urge is now the premise of one of Apple's latest products, a watch that keeps tabs on the wearer's heart rate.

If everything people do and every step they take is tracked, they lose the freedom to act independently of such oversight, writes Steffen Mau, a German sociologist, in "The Metric Society". Published in German in 2017 and now in Sharon Howe's English translation, Mr Mau's book is a wide-ranging tour through rankings and ratings, stars and points, charts and graphs. When these technologies become embedded in society, he argues, life is reduced to checkboxes. Faith in experts is replaced by devotion to figures. Meanwhile, power is transferred from individuals to those who create and maintain the scoring systems. These in turn can be gamed and their purposes perverted.

The Metric Society. By Steffen Mau. Translated by Sharon Howe. *Polity; 200 pages; $22.95 and £15.99*

The numbers game

Take the World Bank's annual comparison of business regulations around the world. One country stood out in its latest ranking: China, which had languished in 78th place the previous year, jumped to 46th. India seemed to have improved, too, rising 23 spots, to 77th. Those remarkable ascents have less to do with the ease of doing business in those places than with their governments' determination to achieve good grades. Some 40 people work in a Chinese government unit dedicated to improving its World Bank score; perhaps 200 toil in India's. At least 60 countries have teams that focus on the index. Conversely, a change in methodology can lead to precipitous falls. In 2016 Chile's performance slumped after one such rejig, which some attributed to political machinations.

These days, though, it is not only technocrats who have cause to fret about skewed metrics. Consider the role played by misinformation on Facebook in the American presidential election of 2016. For a relatively small sum of money by the standards of American political campaigns—about $1.25m a month—Russian propaganda reached 126m people. How did the Kremlin get such a bang for its buck? "They tracked the size of the online US audiences reached through posts, different types of engagement with the posts (such as likes, comments, and reposts), changes in audience size, and other metrics," according to an indictment by Robert Mueller, the special counsel investigating Russian interference in the vote.

The algorithms that power Facebook's news feed are opaque, but it doesn't take a state-backed operation to work out part of the method. From around 2013, media companies across the world began to pander to Facebook's tastes, turning out increasingly emotional pieces to entice readers to click on links. Publishers monitored emerging trends using an online service called CrowdTangle (later bought by Face- ▸▸

book); they tracked traffic to their own websites using Chartbeat, another measurement tool. Some rewarded staff on the basis of these numbers. Some websites cynically exploited touchy issues of social justice to bring in traffic from Facebook.

It became a self-fulfilling prophecy. A piece would appear on a website, attract attention from others through Facebook, be re-written and re-posted on Facebook, and soon it was all over the internet, morphing into a genuine news event. At the same time readers were being tracked by Facebook, CrowdTangle, Chartbeat and dozens of other outfits as they idly clicked entertaining-looking links. The position of the cursor, the amount of time spent on the page, the depth to which they scrolled—all were recorded, analysed, packaged and sold. Did these articles fulfil the basic journalistic function of informing their readers? Or, on the contrary, did readers' clicks determine what was written? To judge from the hysterical, hyperpartisan tone of much of the ensuing coverage, it was the clicks.

If such techniques can change how countries design regulatory regimes and what the media publish, the direct effects on individuals are even greater. "In the age of the metric society," writes Mr Mau, "individuals constitute bundles of data in which their personal worth is encoded." When different sources of data are linked together, it becomes possible to paint an eerily complete picture of a person, and to predict with some accuracy both their net worth and their future behaviour.

This is already the case in car insurance, where some drivers voluntarily attach devices to their vehicles that transmit reports to their insurers. American health insurers reduce premiums for non-smokers and exercise fanatics. All-round surveillance is coming to the workplace, too. In 2015 BP gave 25,000 fitness trackers to staff as part of a health-insurance scheme. The next year the *Daily Telegraph*, a British newspaper, installed heat- and motion-sensors under employees' desks. (They were removed after protests.) Elsewhere, score-keepers have begun to appraise people in the round. In China, for example, Zhima Credit, a popular private service, measures "personal characteristics", "online behaviour" and "interpersonal relationships", among other things. A high rating entitles people to a fast-track visa for Singapore.

For good drivers, hard workers, athletes and the financially prudent, all this might seem an unalloyed good. For everyone else—and few people tick every virtuous box—the metric society may prove a means for faraway data overlords to capture power and entrench inequality in the guise of efficiency. It risks descending into a 21st-century dystopia that is almost as bleak, in its impersonal way, as those imagined in the darkest novels of the 20th. ■

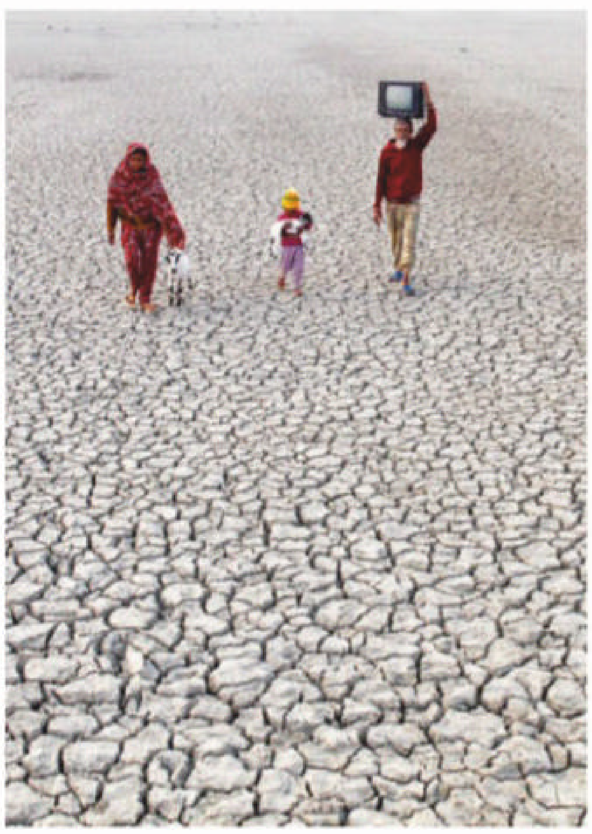
Be afraid

The end of normal

The Uninhabitable Earth: Life After Warming. By David Wallace-Wells. *Tim Duggan Books; 320 pages; $27. Allen Lane; £20*

CLIMATE CHANGE is a devilish problem for humanity: at once urgent and slow-moving, immediate and distant, real and abstract. It is a conundrum for writers, too. Relegating it to a human-interest story—a Bangladeshi displaced by rising sea levels, say—downplays its civilisation-wide significance; sticking to scary forecasts—200m climate refugees by 2050, the UN warns—diminishes its visceral relevance. That may be why, for all its existential gravity, the subject has yet to produce a great work of literature. It lends itself instead to dystopian science-fiction, or to compendiums of scary science facts, sometimes derided as "climate porn". The latest in that genre, "The Uninhabitable Earth" by David Wallace-Wells, is unabashedly pornographic. It is also riveting.

Mr Wallace-Wells, an editor at *New York* magazine, freely admits that he is not an environmentalist. He has never willingly gone camping, and rarely recycles. Nor is he an environmental reporter. He is a voyeur, seduced at first by stories that appeared allegorical—Arctic scientists trapped by melting ice on an island inhabited by polar bears, or a Russian boy killed by anthrax from a reindeer carcass uncovered by thawing permafrost.



The unbearable hotness of being

Yet, as the author makes starkly clear, global warming is no parable. Far from being a problem only for future generations, it is wreaking havoc now. Five of the 20 worst fires in California's history blazed in 2017; the deadliest incinerated the town of Paradise last year. Floods are becoming wetter, droughts drier and hurricanes fiercer. Such calamities, Mr Wallace-Wells notes, are not the "new normal"; they mark "the end of normal", as climate change tips Earth beyond the conditions that allowed humans to evolve in the first place. And that is with barely 1°C of man-made warming since the industrial revolution.

Things will get much worse. The world is on course to become at least 3°C hotter than in pre-industrial times. Within a few decades, this could mean that temperatures in Mecca render the *haj* physically impossible for many of the 2m Muslims who make the pilgrimage each year. With a rise of 7°C— plausible if humanity remains wedded to fossil fuels—swathes of Earth's equatorial band would become uninhabitable. Even if warming did not exceed 2°C, as stipulated in the Paris climate agreement of 2015, rising seas may engulf $1trn-worth of American property.

"Numbers can numb," Mr Wallace-Wells writes. Yet like fellow climate-porn addicts, he cannot resist piling statistic on dismal statistic. In the hands of a lesser writer, this litany of woe might have degenerated into one of the dry treatises on which he draws. But whereas his chapters—on the impacts of extreme weather, sea levels, human health, economic consequences and so on—echo reports by the Intergovernmental Panel on Climate Change, his elegant, accessible prose does not.

He has a point when he says that exercising caution over warning signs is tantamount to complacency. Occasionally, however, he could exercise a bit more of it himself. For example, he acknowledges that humans are an adaptive species, then cites projections of lives lost to heatwaves, air pollution and the like, which typically do not factor in adaptation measures.

He nevertheless gets the big things right. His insistence that electing leaders with climate-friendly policies matters immeasurably more than forgoing a plastic straw in your cocktail is surely correct. Yet he is perversely optimistic: because humans are responsible for the problem, they must be capable of undoing at least some of it, he thinks. If Americans' carbon footprints matched those of average Europeans, the United States would emit less than half as much carbon as it does.

The book does not dwell on the policies that might achieve such outcomes; it is more expository than prescriptive. Some readers will find Mr Wallace-Wells's outline of possible futures alarmist. He is indeed alarmed. You should be, too. ■

Troublesome frontiers

Walking the line

The Border: The Legacy of a Century of Anglo-Irish Politics. By Diarmaid Ferriter. *Profile Books; 192 pages; £12.99*

WHENEVER AN INTER-STATE border is inserted into a hitherto seamless terrain, the consequences will range from the farcical to the tragic, and many will be unexpected. It matters a lot whether the border is hard or soft. A key point is not merely how strictly it is policed, but whether sharp differences in tax and regulations create incentives for smuggling. Those are some of the lessons of Diarmaid Ferriter's timely historical essay on the 310-mile (500km) boundary that came into existence on the island of Ireland in 1922, when 26 of its counties formed the new Irish state, while six stayed in the United Kingdom.

A decade later, as part of an "economic war" between the two countries, Britain imposed a 40% duty on Irish livestock, and cross-border cattle-smuggling became virtually uncontrollable. The beasts were herded over the frontier by boat and truck and on foot at all hours of the night. The illicit drovers sometimes had to contend with somewhat harder criminals who, posing as policemen or customs officers, seized their animals and made off into the darkness. In the same year, Ireland slapped duties on coats, underwear, shoes, frocks, bread, jam and chocolate, prompting contraband in the other direction.

In such situations, the law quickly becomes an ass. In the 1970s, when contraceptives were still banned in the Irish republic, a family-planning campaigner went south with 40,000 condoms in his station wagon; his insistence that they were all "for personal use" was met with good-humoured banter by an Irish police patrol. Nor did the economic and regulatory nonsense stop when Britain and Ireland became partners in the European club in 1973. For a while, the vagaries of agricultural subsidies from Brussels made it worthwhile to spirit the same cow or pig backwards and forwards across the line many times.

But the border had its unfunny side, too. Life became pretty hellish for people living nearby during the Troubles, whether or not they were directly involved in the war between British security forces, which included many local recruits, and Irish republicans. Many of the 200-plus roads that linked rural communities were declared "unapproved" and partially destroyed; travelling on those that were still open meant coping with queues, checkpoints and searches.

After studying recently unclassified files, Mr Ferriter notes that politicians on both sides of the frontier responded to this tragicomic situation with dishonesty. Irish luminaries such as Eamon de Valera both abhorred partition and found it quite convenient. It enabled old-time nationalists of his hue to fashion the new state using a Gaelic, Catholic ethos without having to worry about northern Protestants, whose heritage was different. Meanwhile London's politicians, whatever their public commitment to keeping Northern Ireland in the union, often let slip their hunch that Irish partition might not last for ever. Winston Churchill, the book recalls, was no exception. During the second world war, he was positively keen to trade Irish unification for access to Ireland's ports or, better still, Irish entry into the war. It was de Valera who balked.

Now that the border's hardness or softness has become the biggest single problem in Britain's exit from the European Union, further oddities may be in store. On the face of things, right-wing British Tories and hard-line Ulster Unionists seem determined to maintain the inter-Irish border, even if that means stiffening it a bit. But that will only make a lot of people in both parts of Ireland, and some in Britain too, even more determined to remove the boundary altogether before this strange animal reaches its centenary. ■

American food

Roux the day

A beloved Louisiana dish is a stew of culture and history

Gumbo Life: Tales from the Roux Bayou. By Ken Wells. *W.W. Norton; 288 pages; $26.95 and £18.99*

GUMBO IS A stew, usually served over rice. On that Louisianan cooks can agree. After that, things become contentious. Should roux, a fat-and-flour mixture, form the foundation of gumbo? Usually, but not always. And what sort of fat? These days most chefs prefer vegetable oil or butter; in colonial Louisiana, the fat of choice was bear lard. What is the right thickener—okra, filé powder (pounded sassafras roots, a Choctaw contribution) or neither? Most believe the dish should never contain fin-fish, but it can accommodate almost anything else: chicken, sausage, shellfish and, in harder times, rabbit, squirrel, whelk and smoked raccoon. There are as many ways to cook gumbo as there are people who make it.

Its origins are disputed. They are partly African: *ki-ngombo* is the word for "okra" in several West African languages, and gumbo is a close cousin to the okra soups served across that region, whence most enslaved people in Louisiana came. But it also betrays Native American and European influences; cooks across Louisiana and beyond claim to have invented it. In this way, gumbo embodies the cultural confluence that makes New Orleans and its environs unique—more tropical, French and African than anywhere else in America. ▸▸

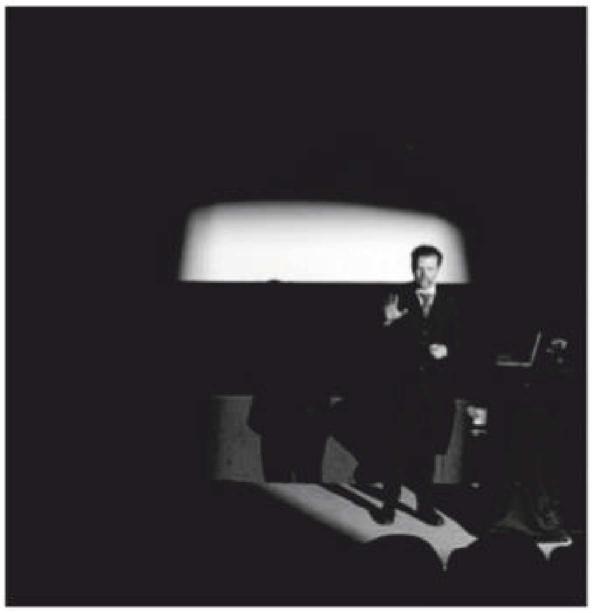
As Ken Wells writes in his delightful book, southern Louisiana is "the last redoubt of southern Europe in America and like the continental French, Spanish and Italians, our people don't eat to live, they live to eat." In no other part of America does food play such a central cultural role. Nowhere else between Maine and San Diego can people of all means eat as consistently well (superior boudin, a delicious, heavily spiced sausage made of pork, offal and rice, is sold at petrol stations). But, as anyone lucky enough to be invited to dinner by a Cajun or Creole friend knows, the best food, and in particular the best gumbo, is found in private homes.

Mr Wells takes readers into dozens of kitchens, none rendered more lovingly than his mother's. Bonnie Toups grew up in southern Louisiana and left school when she was 12—both because her family, like many others, was desperately poor and because, in early-20th-century Louisiana, speaking French in the classroom was forbidden. She married an Arkansan (no culinary rivalry there), and they brought up their children on a sugar plantation in the bayou. In her daily efforts to feed a large, boisterous family she routinely conjured up "something that flies so close to love that it must be love itself." Her gumbo is classic: chicken, smoked sausage, filé powder stirred in at the end.

The author's affinity for his home region never curdles into chauvinism; he happily admits that decent gumbo can be found in San Francisco, New York and Chicago. But he is clear about the reason why: because so many people have left the bayous. The mill that employed his father closed. The public lands where he learned to hunt and fish have been parcelled out to private owners and sequestered behind "No Trespassing" signs. Every year around 15,000 acres of marshlands—the pantry that generations of rural cooks drew upon—vanish, because of subsidence, a rising sea level and the impacts of flood protection and the oil-and-gas industry.

Yet the book's tone is more affectionate than elegiac. What lingers in the memory is less the food itself than the warm descriptions of the people who cook it. Gumbo is an inherently social dish; it is rarely made for fewer than a dozen diners, and even more rarely, in your correspondent's experience, prepared without a crowd. It will include whatever ingredients the chef can defend adding.

Not long ago Brett Anderson, the restaurant critic for the *New Orleans Times-Picayune* (one of journalism's most enviable jobs), opined on gumbo created by an Indian-born chef that contains delicious additions such as Kashmiri chilli powder and curry leaves; and on another made with smoked chicken and Thai curry. Gumbo, like America, contains multitudes. ■



The power of speech

Do not think of a white bear

BERLIN

A speaker turns lectures into a performance art

A BEARDED SWEDE in a three-piece suit stands at a lectern. Spotlit, Erik Bünger tells his listeners about an exchange between Ludwig Wittgenstein and Bertrand Russell in 1911. According to Wittgenstein, Russell could not say with certainty that there was no rhinoceros in his study. Mr Bünger (pictured) says he is not interested in who was right, but in why Wittgenstein chose a rhinoceros. "There was certainly an elephant in the room," he concludes. "And that elephant was a rhinoceros."

Laughter ripples through the audience at Video Art at Midnight (VAM), a monthly event at Berlin's beautiful Babylon cinema. A series of video artists, including luminaries such as Wolfgang Tillmans, have shown work at VAM in the decade since its inception. Mr Bünger instead offers a lecture performance. In the 40 minutes of "The Elephant Who Was A Rhinoceros", he leads the auditorium through a series of connections. The spectral rhinoceros turns into a metaphorical elephant, which becomes a white bear, which (Mr Bünger says) will flash in listeners' minds when they are told not to think about it. A cultural history of language takes in Adam's naming of the animals in the Garden of Eden, cave paintings and the invention of the alphabet. Invert the letter A, Mr Bünger says, and you see the devil and his horns.

Gradually the amusement is muted as listeners begin to question what he is doing—and, indeed, what they are doing. To begin with, they "can follow everything, feel surprise and even laugh," says Renia Vagkopoulou, Mr Bünger's wife, who has seen all his performance works many times. At some point, things become more complex, as people are forced to interrogate their responses. "Some even get a little shocked. What starts as a theoretical exercise becomes more and more personal."

By getting the audience to grapple with its own role, Mr Bünger's work fits into an established artistic tradition, says Manuel Olveira, an expert in the lecture form and director of MUSAC, a contemporary-art gallery in León, Spain. He cites John Cage's "Event" of 1952 (which incorporated a talk on Buddhism), Dan Graham's "Performer/Audience/Mirror" of 1975 (in which the artist narrated his own movements and observations), and Andrea Fraser's "Museum Highlights" of 1989 (in which she posed as a guide to the Philadelphia Museum of Art). Like Mr Bünger, each raised questions about how knowledge is produced and disseminated. "Lecture performance is a vibrant category within the wider performance medium," says Adela Yawitz, a Berlin-based curator, mentioning several other practitioners. The form is fluid, she notes: performances can be live or taped, discrete or combined with other media.

Performance art is not the only means by which lectures have broken free from formal education. Internet streaming has led to the rise of TED talks, which attract billions of clicks a year, as well as boosting the audience for stand-up comedy. Mr Bünger admits to being inspired by comics such as Larry David and Louis CK, and concedes that, at first sight, his art may seem reminiscent of formats such as TED. But at a deeper level, he insists, "my lecture performance is the absolute antithesis of TED". He sees short video talks as "vehicles of pure solutionism": hard questions reduced to slick formulae. For him, lecture performance lays bare the imbalance of power between lecturer and listener, and highlights the alchemy of language.

His previous work evoked similar themes. "A Lecture on Schizophonia" (2009-2011) explored the impact of recorded speech. "The Third Man" (2010) dealt with the aura of song, roping in ABBA and Kylie Minogue. "The Girl Who Never Was" (2014) tells the serpentine story of a child whose voice was once thought to have been captured on a primitive audio recording, but who turned out not to have existed. "I'm placing a voice in the heads of my listeners," Mr Bünger explains of that piece. "Most will see the girl in their mind's eyes—she will come to exist."

Human speech, maintains Mr Bünger, "refuses to follow the binary logic" of truth and falsehood or past and present. It is more slippery and magical than that. When the lights go on in the Babylon cinema, the magic seems to have worked. "Now, whenever you see an A, you will see something else," chuckles Mats Birgert, one half of the video-art duo Birgert and Bergström. "That's what art is about." ■

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Economic & financial indicators

Economic data

	Gross domestic product % change on year ago latest		quarter*	2018†	Consumer prices % change on year ago latest		2018†	Unemployment rate %		Current-account balance % of GDP, 2018†	Budget balance % of GDP, 2018†	Interest rates 10-yr gov't bonds latest,%	change on year ago, bp	Currency units per $ Feb 20th	% change on year ago
United States	3.0	Q3	3.4	2.9	1.6	Jan	2.4	4.0	Jan	-2.4	-3.8	2.7	-22.0	-	
China	6.4	Q4	6.1	6.6	1.7	Jan	1.9	3.8	Q4§	0.3	-3.9	2.9 §§	-92.0	6.72	-5.7
Japan	nil	Q4	1.4	1.0	0.3	Dec	1.0	2.4	Dec	3.7	-3.5	nil	-7.0	111	-3.3
Britain	1.3	Q4	0.7	1.3	1.8	Jan	2.3	4.0	Nov††	-3.9	-1.3	1.2	-41.0	0.77	-7.8
Canada	2.1	Q3	2.0	2.1	2.0	Dec	2.3	5.8	Jan	-2.8	-2.2	1.9	-42.0	1.32	-4.5
Euro area	1.2	Q4	0.8	1.9	1.6	Dec	1.7	7.9	Dec	3.5	-0.7	0.1	-63.0	0.88	-8.0
Austria	2.2	Q3	-1.9	2.7	1.9	Dec	2.1	4.7	Dec	2.1	-0.2	0.5	-39.0	0.88	-8.0
Belgium	1.2	Q4	1.2	1.4	2.0	Jan	2.3	5.5	Dec	0.5	-1.0	0.6	-40.0	0.88	-8.0
France	0.9	Q4	1.1	1.5	1.2	Jan	2.1	9.1	Dec	-0.8	-2.6	0.6	-41.0	0.88	-8.0
Germany	0.6	Q4	0.1	1.5	1.7	Dec	1.9	3.3	Dec‡	7.5	1.4	0.1	-63.0	0.88	-8.0
Greece	2.4	Q3	4.3	2.1	0.4	Jan	0.6	18.5	Nov	-1.9	-0.1	3.8	-61.0	0.88	-8.0
Italy	0.1	Q4	-0.9	0.8	0.9	Jan	1.2	10.3	Dec	2.6	-1.9	2.9	73.0	0.88	-8.0
Netherlands	2.0	Q4	1.8	2.5	2.2	Jan	1.6	4.4	Dec	10.3	1.2	0.2	-57.0	0.88	-8.0
Spain	2.4	Q4	2.8	2.5	1.0	Jan	1.7	14.3	Dec	0.9	-2.7	1.2	-23.0	0.88	-8.0
Czech Republic	2.4	Q3	4.1	2.8	2.5	Jan	2.2	2.2	Dec‡	0.8	1.0	1.9	-1.0	22.6	-9.2
Denmark	2.4	Q3	3.2	0.9	1.3	Jan	0.8	3.8	Dec	6.1	-0.4	0.2	-59.0	6.57	-8.2
Norway	1.7	Q4	1.9	1.7	3.1	Jan	2.8	3.8	Nov‡‡	7.5	7.0	1.7	-35.0	8.60	-8.8
Poland	5.7	Q3	7.0	5.1	0.9	Jan	1.7	6.2	Jan§	-0.5	-0.9	2.8	-76.0	3.82	-12.0
Russia	1.5	Q3	na	1.7	5.0	Jan	2.9	4.9	Jan§	6.6	2.7	8.5	130	65.7	-13.9
Sweden	1.7	Q3	-0.9	2.2	1.9	Jan	2.0	6.5	Jan§	2.0	0.8	0.3	-58.0	9.31	-13.0
Switzerland	2.4	Q3	-0.9	2.6	0.6	Jan	0.9	2.4	Jan	9.6	0.9	-0.3	-46.0	1.00	-7.0
Turkey	1.6	Q3	na	3.1	20.4	Jan	16.3	12.3	Nov§	-3.6	-1.9	15.2	329	5.32	-28.4
Australia	2.8	Q3	1.0	3.0	1.8	Q4	2.0	5.0	Jan	-2.4	-0.6	2.1	-80.0	1.40	-9.3
Hong Kong	2.9	Q3	0.3	3.4	2.6	Dec	2.4	2.8	Dec‡‡	3.0	2.0	1.8	-29.0	7.85	-0.4
India	7.1	Q3	3.3	7.3	2.0	Jan	4.0	7.1	Jan	-2.7	-3.6	7.5	-12.0	71.2	-8.9
Indonesia	5.2	Q4	na	5.2	2.8	Jan	3.2	5.3	Q3§	-2.8	-1.9	7.9	139	14,043	-3.0
Malaysia	4.7	Q4	na	4.7	0.2	Dec	1.0	3.3	Dec§	2.2	-3.7	3.9	-14.0	4.07	-4.2
Pakistan	5.4	2018**	na	5.4	7.2	Jan	5.1	5.8	2018	-5.3	-5.1	13.1 †††	427	139	-20.3
Philippines	6.1	Q4	6.6	6.2	4.4	Jan	5.3	5.1	Q4§	-2.8	-2.8	6.4	-46.0	52.1	0.3
Singapore	1.9	Q4	1.4	3.2	0.5	Dec	0.4	2.2	Q4	17.9	-0.5	2.1	-26.0	1.35	-2.2
South Korea	3.2	Q4	3.9	2.7	0.8	Jan	1.5	4.5	Jan§	5.1	0.3	2.0	-82.0	1,124	-4.5
Taiwan	1.8	Q4	1.5	2.6	0.2	Jan	1.4	3.7	Dec	12.8	-0.5	0.8	-24.0	30.8	-4.9
Thailand	3.7	Q4	3.3	4.1	0.3	Jan	1.1	0.9	Dec§	6.9	-3.0	2.3	-31.0	31.1	1.3
Argentina	-3.5	Q3	-2.7	-2.0	48.9	Jan	34.3	9.0	Q3§	-6.0	-5.7	11.3	562	40.5	-50.7
Brazil	1.3	Q3	3.1	1.2	3.8	Jan	3.7	11.6	Dec§	-0.8	-7.1	7.1	-132	3.71	-12.4
Chile	2.8	Q3	1.1	4.0	1.8	Jan	2.4	6.7	Dec§‡‡	-2.5	-2.0	4.1	-43.0	653	-8.7
Colombia	2.6	Q3	0.9	2.6	3.1	Jan	3.2	9.7	Dec§	-3.2	-2.4	6.7	6.0	3,115	-8.1
Mexico	1.8	Q4	1.2	2.1	4.4	Jan	4.9	3.6	Dec	-1.7	-2.5	8.4	64.0	19.2	-2.8
Peru	2.3	Q3	-8.3	3.9	2.1	Jan	1.3	5.7	Dec§	-2.0	-2.5	5.6	64.0	3.32	-2.1
Egypt	5.5	Q4	na	5.3	12.7	Jan	14.4	8.9	Q4§	-2.2	-9.5	na	nil	17.6	0.8
Israel	2.8	Q4	3.1	3.2	1.2	Jan	0.8	4.3	Dec	1.7	-3.0	2.0	10.0	3.61	-3.3
Saudi Arabia	2.2	2018	na	1.5	-1.9	Jan	2.5	6.0	Q3	6.1	-5.3	na	nil	3.75	nil
South Africa	1.1	Q3	2.2	0.9	4.0	Jan	4.5	27.1	Q4§	-3.4	-3.9	8.8	74.0	14.0	-16.0

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index Feb 20th	% change on: one week	% change on: Dec 31st 2018
United States S&P 500	2,784.7	1.2	11.1
United States NAScomp	7,489.1	0.9	12.9
China Shanghai Comp	2,761.2	1.5	10.7
China Shenzhen Comp	1,448.2	4.2	14.2
Japan Nikkei 225	21,431.5	1.4	7.1
Japan Topix	1,613.5	1.5	8.0
Britain FTSE 100	7,228.6	0.5	7.4
Canada S&P TSX	16,031.2	2.6	11.9
Euro area EURO STOXX 50	3,259.5	1.8	8.6
France CAC 40	5,196.0	2.4	9.8
Germany DAX*	11,402.0	2.1	8.0
Italy FTSE/MIB	20,304.2	1.6	10.8
Netherlands AEX	540.0	0.7	10.7
Spain IBEX 35	9,181.1	2.2	7.5
Poland WIG	60,409.3	0.8	4.7
Russia RTS, $ terms	1,194.4	0.3	12.0
Switzerland SMI	9,315.6	1.7	10.5
Turkey BIST	101,971.3	0.3	11.7
Australia All Ord.	6,175.8	0.6	8.2
Hong Kong Hang Seng	28,514.1	0.1	10.3
India BSE	35,756.3	-0.8	-0.9
Indonesia IDX	6,512.8	1.5	5.1
Malaysia KLSE	1,726.2	2.4	2.1

	index Feb 20th	% change on: one week	% change on: Dec 31st 2018
Pakistan KSE	40,279.4	-0.7	8.7
Singapore STI	3,278.4	1.0	6.8
South Korea KOSPI	2,229.8	1.3	9.2
Taiwan TWI	10,272.5	1.8	5.6
Thailand SET	1,645.4	-0.6	5.2
Argentina MERV	36,503.5	-1.4	20.5
Brazil BVSP	96,544.8	0.7	9.9
Mexico IPC	43,178.0	2.1	3.7
Egypt EGX 30	15,213.5	1.8	16.7
Israel TA-125	1,436.3	1.1	7.7
Saudi Arabia Tadawul	8,567.2	-0.6	9.5
South Africa JSE AS	55,691.6	2.1	5.6
World, dev'd MSCI	2,083.6	1.5	10.6
Emerging markets MSCI	1,049.3	0.7	8.7

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2018
Investment grade	172	190
High-yield	477	571

Sources: Datastream from Refinitiv; Standard & Poor's Global Fixed Income Research. *Total return index.

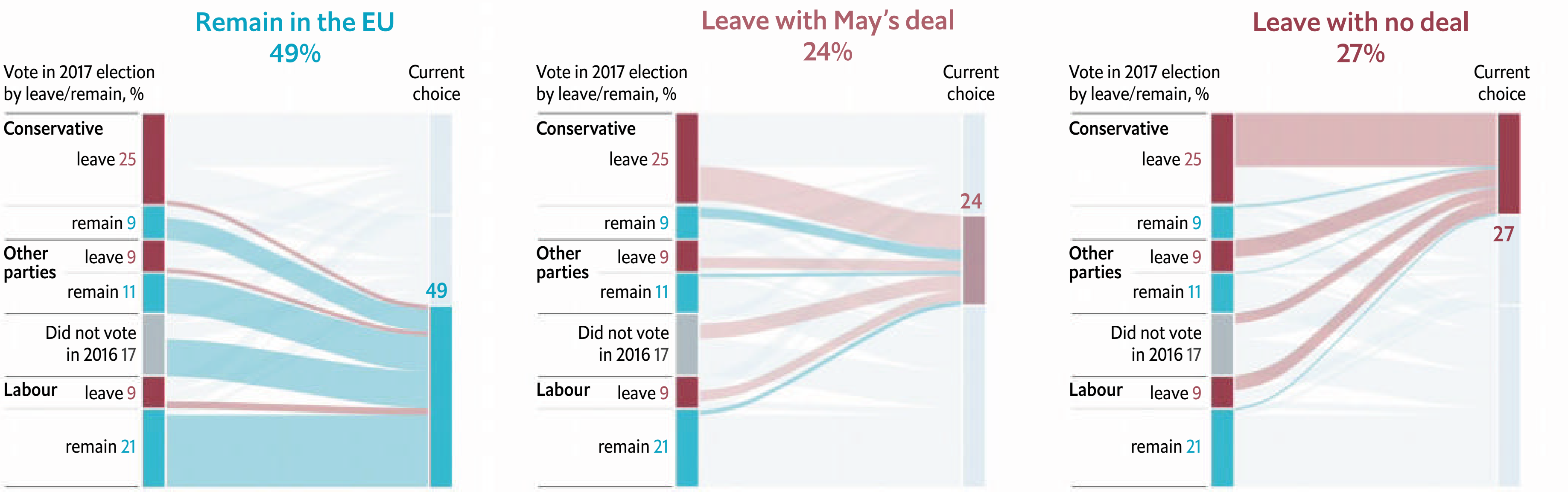
Commodities

The Economist commodity-price index 2005=100	Feb 12th	Feb 19th*	% change on month	% change on year
Dollar Index				
All Items	139.0	139.0	0.4	-9.7
Food	147.0	145.7	-0.8	-6.0
Industrials				
All	130.7	132.1	1.9	-13.6
Non-food agriculturals	121.9	123.7	1.0	-10.8
Metals	134.4	135.7	2.3	-14.6
Sterling Index				
All items	196.2	194.1	-0.1	-3.0
Euro Index				
All items	152.9	152.5	0.6	-1.7
Gold				
$ per oz	1,309.5	1,337.8	4.4	0.1
West Texas Intermediate				
$ per barrel	53.1	56.1	5.8	-9.2

Sources: CME Group; Cotlook; Darmenn & Curl; Datastream from Refinitiv; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit **Economist.com/indicators**

→ **Views on Brexit have barely shifted since 2016, but leavers are split over Theresa May's deal**

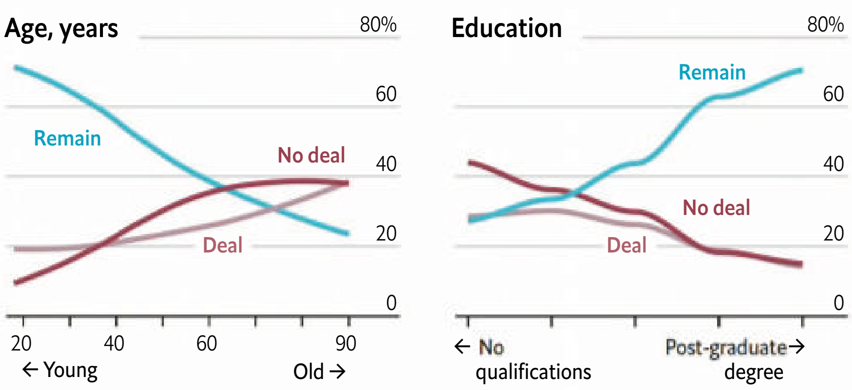


Most likely remain supporter
A 25-year-old woman with a postgraduate degree and a household income above £50,000 a year. She is very interested in politics, and voted Labour in 2015 and 2017

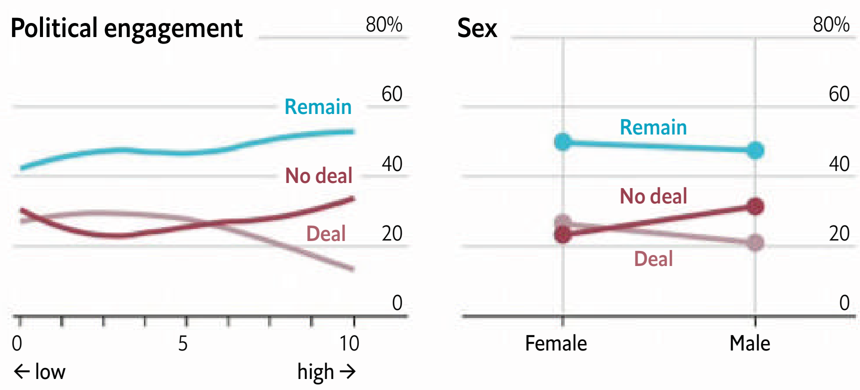
Most likely deal supporter
A 75-year-old woman with a secondary-school education and a household income above £50,000 a year. She has little interest in politics, and voted Conservative in 2015 and 2017

Most likely no-deal supporter
A 55-year-old man who left school aged 16 and has a household income below £20,000 a year. He is very interested in politics, and voted UKIP in 2015 and Conservative in 2017

→ **Age and education strongly predict current views on remaining in the EU, but not on May's deal versus no deal**



→ **More politically engaged voters, particularly men, prefer remain or no deal to May's compromise**



Sources: YouGov; *The Economist* Based on 90,000 British adults surveyed November 27th to December 9th 2018

The centre cannot hold

A polarised electorate has little desire for the government's compromise

AFTER 52% OF Britons voted to leave the EU in 2016, stunned observers wondered when and how Brexit would occur. The picture is scarcely clearer today. In January Parliament rejected the withdrawal pact agreed on with the EU by Theresa May, the prime minister. Yet a majority of MPS oppose leaving without a deal. And neither Mrs May nor Jeremy Corbyn, the opposition leader, backs a second referendum, which could undo Brexit altogether.

Eventually the public will have its say on the handling of Brexit, be it in a referendum or a general election. Voters are outraged. In a recent poll, 75% of respondents said that "politicians are not up to the job".

Yet voters are as split as Parliament is. Late last year YouGov, a pollster, asked 90,000 Britons if they preferred Mrs May's accord, leaving without a deal or staying in the EU. Just as in 2016, a narrow majority of those expressing an opinion wanted to depart. Few have changed their minds: 90% of leave voters and 84% of remainers would vote the same way today. However, leavers have split over Mrs May's plan, with 24% of respondents supporting it and 27% choosing no deal. Among leavers from her own party, 55% prefer no deal to her plan.

Using YouGov's data, *The Economist* has built a model of the odds of each respondent backing each Brexit option. The referendum divided Britons by age, income, schooling and party: old, poor Tories with little education chose to leave, while rich young Labourites with degrees wanted to remain. Based on these variables, the model reliably identifies both no-dealers and remainers. People with the most remain-friendly profiles were 94% likely to pick remain, and those with the most anti-EU traits were 90% likely to want no deal.

In contrast, fans of Mrs May's deal have less in common with each other. The highest chance the model gives to a respondent backing it is just 58%. That will make them harder to target in get-out-the-vote efforts.

Moreover, rather than sitting between no-dealers and remainers on age, income, schooling and party, deal supporters look like no-dealers, with two exceptions: interest in politics and Y chromosomes. Men who follow politics closely prefer the ideological end-points of leaving with no deal or remaining. Women, especially those who mostly ignore politics, are more open to the deal. Sadly for Mrs May, people bored by politics are also unlikely to vote.

Mrs May hoped her deal would be seen as a fair compromise between EU membership and a hard Brexit. In fact, the issue is so divisive that her plan is the least popular choice. The prime minister says she opposes a new referendum out of respect for the voters' verdict in 2016. Another possibility is that she fears what would happen if the people did vote on her plan. ■

Remembering a robot

Opportunity, a rover on Mars whose time there exceeded all expectations, was declared lost on February 12th

IT TRAVELLED more than 500m kilometres simply as a passenger, sleeping dreamless, vacuum-packed. The five-and-a-half-month voyage was devoid of all interest until the very end, when the spacecraft lost 20,000kph of its velocity in just over six minutes as it plunged through an alien sky to the desert below. Parachutes spread and airbags deployed. The package bounced, rolled and came to rest.

Opportunity still had 45km to go.

Four hours after landing on January 25th 2004, it opened its eyes. Its makers, back on Earth, looked through them at a landing site as perfect as they could have wished for. Opportunity's landing on Meridiani Planum, a little south of the Martian equator, had not been a particularly precise affair—it could have come down anywhere in an ellipse some 100km long and 18km wide. But by chance the spot where it had ended up, about 25km from the centre of the target, was inside a small crater dug out by a meteorite impact. On the side of that crater the scientists saw straight away the distinctive strata of sedimentary rock. Nothing of the sort had ever before been seen beyond the Earth. It was exactly the type of thing the robot had been sent to find.

Opportunity was officially MER-B, the second of the two rovers of the Mars Exploration Rover programme; MER-A, Spirit, had landed a few weeks earlier in the great Gusev Crater, almost half the planet away. Unofficially, it was Oppy, and often a she. The two rovers' missions were due to last 90 sols—a sol being the 24 hours and 40 minutes it takes Mars to turn on its axis. Faced with that time limit, Opportunity's minders were thrilled not to have to spend any of those precious sols just looking for interesting rocks.

For the first 56 sols, Opportunity never strayed more than ten metres from that propitious landing site. It took pictures with its various cameras, ground holes with its little rasping drill, dug a trench by spinning one wheel while it kept the others locked, measured the spectra of various minerals. The scientists concluded that the sediments they saw had been laid down in a salty dying sea. If that had been all Opportunity had ever told them, the mission would have been counted a great success.

But on Sol 57, it ventured out into the wider world.

Guided by pictures from satellites above, Opportunity headed for a deeper crater, Endurance, a kilometre or so away. It drove down into it and looked around further, poking and prodding for the rest of the year. A human geologist might have accomplished as much or more by way of assessment in a leisurely afternoon. But the nearest human geologists were on another planet, and likely to remain there for some decades to come.

After climbing back out of Endurance—no one had known whether it would be able to—Opportunity was sent off to inspect the jettisoned heat-shield that had protected it as it burned down through the Martian atmosphere, now a glinting monument on the pockmarked plain. It was not the only thing that had fallen from the sky. As it rolled on, Opportunity came across a meteorite, its lithology distinctively un-Martian. Later it took a little video of Phobos, the larger of Mars's small moons, passing as a shadow across the face of the Sun.

On Sol 946, in September 2006, Opportunity reached Victoria Crater, seven kilometres from its landing site, 800 metres across. Its makers knew that the 90-sol lifetime they had promised for Opportunity and Spirit was conservative, a low bar to ensure some kudos for "mission accomplished". But none had expected it to be surpassed by a factor of ten.

That said, it had not all been plain rolling. Opportunity had spent a few harrowing sols stuck in sand at Purgatory Ripple; later, one of its steering motors failed. While it was exploring Victoria it was caught in a global dust-storm that cut it off from Earth and covered its solar panels with dirt. Happily, though, the same winds that drove the storms also blew the panels clean, or cleaner, after their passing. A joint in the shoulder of its robot arm, dicky since the mission started, finally seized up.

On March 30th 2011, Sol 2,155 of its mission to Gusev, Spirit failed to check in with Earth by radio as scheduled; it was never heard from again. Opportunity continued its long trek to Endeavour crater, 1,000 times larger than the crater in which it had started off. The point where it reached the rim was named Spirit Point, in memoriam. On August 6th 2012 a newer, bigger rover, Curiosity, landed at the foot of Aeolis Mons, thousands of kilometres away. Opportunity looked after itself for nine days to allow the scientists and engineers to make a fuss of the newcomer, then set out to study the intriguing smectite clays that a European orbiter had detected on Cape York, a peak further along Endeavour's rim.

In Perseverance Valley

As the unexpected years went by, Opportunity continued along the hilly rim of Endeavour until it came to Perseverance Valley, which cuts through towards the crater floor. It was heading down the valley when, on June 10th 2018—Sol 5,111, well over seven Martian years of service—another dust storm cut it off from Sun and Earth. When, after months, the global storm subsided, the rover's minders, now family, waited for its solar panels to be blown clean. It appears they were not. After over 1,000 messages attempting to restore contact, Opportunity was declared lost on February 12th.

If more than a handful of people ever get to explore Mars in person, surely one day someone will follow its tracks down Perseverance, looking for the mast on which its cameras are mounted—separated for stereoscopy, easily anthropomorphised—to honour a pioneer who travelled far and provided insight after insight into the history of Mars. Until then, imagine her as she was photographed by the orbiting HiRise camera after first reaching the scalloped rim of Victoria, looking down onto its rolling dunes: a tiny speck perched on a promontory peak, a new planet swimming before her eagle eyes, watched in silence from the skies. ■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