

The Economist

Kim Jong Won
The art of the hollow deal

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How strongmen subvert democracy



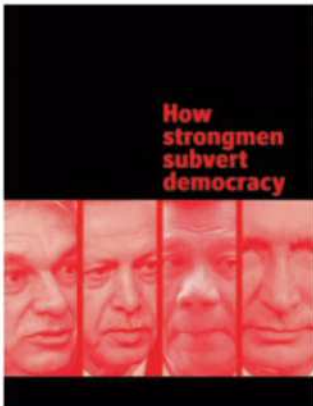


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Politics



Donald Trump and Kim Jong Un, **North Korea's** dictator, held a summit in Singapore. Mr Kim promised “complete denuclearisation” in exchange for American security guarantees. Mr Trump called it “a very great moment in the history of the world”. Critics noted that North Korea has always broken such promises in the past.

South Korea's ruling party won provincial and municipal elections by a landslide, capturing 14 of 17 governorships. It marked the first time that liberal candidates had ever won in several south-eastern provinces. The popularity of Moon Jae-in, the president, has been buoyed by the recent detente with North Korea.

Hundreds of people stormed government offices in **Vietnam** to protest against a draft law that would let foreigners hold leases of up to 99 years on property. They fear that Chinese investors will buy lots of land. The law's adoption has been delayed.

Taiwan's president attended the opening of a new building for the American Institute in Taiwan, America's unofficial embassy in the country. China, which bristles at anything that even hints at diplomatic recognition of Taiwan, had warned America not to send a senior official. America dispatched a lowly undersecretary of state.

A court in **Hong Kong** sentenced a prominent activist, Edward Leung, to six years in prison for his role in a riot in 2016 triggered by officials' efforts to remove street stalls selling traditional snacks. Mr

Leung had angered the Chinese government by supporting independence for Hong Kong.

Lorry drivers staged strikes in several **Chinese** cities. They were protesting against fuel costs and competition from app-based haulage services.

Reversal of fortune

With a tiny majority in Parliament and faced with a rebellion from a handful of Tory MPs opposed to **Brexit**, the British government promised MPs what Remainers hope will be a “meaningful” vote on whether to approve whatever deal emerges from talks with the EU. This week's machinations make it more likely that the United Kingdom will end up with a “soft” Brexit.

The governments of Macedonia and Greece agreed on a new name for the former, which is seated at the UN as the Former Yugoslav Republic of Macedonia. The country's new name, **Northern Macedonia**, is designed to appease Greek sensitivities about cultural appropriation.



The *Aquarius*, a rescue vessel carrying more than 600 **migrants** from north Africa, was refused access to Italian ports by Matteo Salvini, Italy's new nationalist interior minister. After two days of impasse, Spain, under its new Socialist government, stepped forward to offer the ship a berth in Valencia. Italy did accept migrants on an Italian-flagged ship.

Austria's chancellor, Sebastian Kurz, proposed the creation of what he called an “axis of willing” among Germany, Italy and Austria to curb

illegal migration. Critics wondered whether the word “axis” had quite the right historical ring to it.

Scales of justice

Jean-Pierre Bemba, a former Congolese warlord, had his conviction for **crimes against humanity** overturned on appeal. He still awaits sentence on a separate charge of bribing witnesses, but the International Criminal Court ordered his release. His supporters want him to return to the Democratic Republic of Congo and run for president.

An American soldier was killed and four wounded in **Somalia** after they were attacked by al-Shabab, a jihadist group. America is mulling whether to scale back its military operations in Africa.

A coalition led by **Saudi Arabia** and the **United Arab Emirates** attacked Hodeida, the main entry port for aid in **Yemen**, in a bid to wrest it from the Houthis, a group of Shia rebels who chased the government out of Sana'a, the capital, in 2015. The UN had warned that fighting over the port could disrupt the supply of food to Yemeni cities, putting millions at risk of hunger.

A fire destroyed part of a depot in **Iraq** where ballot papers were being stored after a disputed election in May. Iraq's parliament had ordered a recount of the ballots amid allegations of vote-rigging.

Use it or lose it

America's Supreme Court sided with Ohio, which had removed the name of a man who did not vote regularly from the electoral register. Federal law forbids the automatic removal of **lax voters** from the rolls, but states have a duty to keep their information up to date. The court found that a notice of intent to remove the man from the register did not violate the rules.

Mark Sanford, a Republican congressman from **South Carolina** who has often criticised Donald Trump, was

defeated in a primary election. Mr Sanford previously made headlines in 2009 when, as governor, he disappeared for a week. It turned out he was having an affair. The official explanation for his absence, that he was “hiking the Appalachians”, became a popular euphemism for infidelity.

The non-believer

The **G7 summit** in Canada was the most rancorous in the club's history. America clashed with its allies over climate change and trade. Donald Trump refused to sign the final communiqué, accusing Justin Trudeau, the Canadian prime minister, of making “false statements”. “There's a special place in hell” for those who act in bad faith, said Mr Trump's trade adviser, Peter Navarro.

America extradited Ricardo Martinelli, a former president of **Panama**, to his home country to face trial on charges of corruption and wiretapping. He is accused of using public money to spy on 150 rivals.

Pope Francis accepted the resignation of three **Chilean** bishops. They include Juan Barros, who was accused of covering up sexual abuse of children by a priest.



On the eve of the 2018 **World Cup**, the 2026 tournament was awarded jointly to the United States, Canada and Mexico. The members of FIFA, football's governing body, ignored recent tensions among the three countries in choosing their joint bid over Morocco's. Mr Trump will no longer be president by the time the tournament is played. It is also possible that the North American Free-Trade Agreement will have been dissolved by then. ▶▶

Business

A federal judge approved the proposed merger of **AT&T** and **Time Warner**, a big defeat for the Department of Justice, which had tried to block the deal on antitrust grounds. Both companies argued that combining their assets was necessary in a media environment that has been disrupted by Amazon, Netflix and others. The decision opened the door to more dealmaking in the industry. Soon after the ruling **Comcast** launched a \$65bn takeover bid for some of **21st Century Fox's** assets, topping a rival offer from **Disney**.

The Federal Reserve lifted its benchmark **interest rate** by a quarter of a percentage point, to a range of between 1.75% and 2%, the second rise this year. The last time the rate was 2% was mid-2008, before the worst of the financial crisis. The Fed hinted at two more rises this year, and dropped its prediction that monetary policy would remain stimulative for some time.

In **France** the High Council for Financial Stability for the first time raised the “countercyclical” capital buffer, obliging banks to fund themselves with additional equity amounting to 0.25% of risk-weighted assets. The aim is to force banks to store up capital when the economy is strong. The HCFC is worried about mounting household and corporate private-sector debt, which hit 130% of French GDP in late 2017.

Seeking a better relationship

Christine Lagarde, the managing director of the **IMF**, said that protecting **Argentina's** poor and most vulnerable was central to the plan thrashed out between the fund and the Argentine government following the sharp fall in the peso. The IMF is extending a \$50bn line of credit to Argentina in return for quicker reductions of the budget deficit and hard targets to tame inflation. The deal also includes measures to increase welfare spending if the economy worsens.

Voters in a referendum in Switzerland overwhelmingly rejected a proposal to remove the ability of commercial banks to create money (through lending). The Swiss National Bank described the result as a relief; the **Vollgeld** plan envisaged the public holding current accounts directly with the central bank.

A national-security threat?

The Trump administration reached an agreement with **ZTE**, a Chinese maker of telecoms equipment, that overturns a ban on ZTE acquiring American components. In return ZTE must pay a \$1bn fine for violating sanctions against Iran and North Korea, replace its senior management and allow America to monitor its activities. That was not enough for Congress, which moved to scotch the deal. ZTE's share price swooned on its first day of trading following a two-month suspension.

Adyen, a Dutch payments platform that counts Netflix and Uber among its customers, made its stockmarket debut in Amsterdam. Its share price doubled above the offer price, giving it a market value of €14bn (\$16.5bn). It was one of the biggest European technology IPOs in recent years.

Tesla is to reduce its global workforce by 9%, or around 3,500 employees, part of an effort to streamline management and generate sustainable profits. The job cuts won't affect production workers, who are racing to reach the all-important target of making 5,000 Model 3 cars a week by the end of June.

Toyota paid \$1bn for a stake in **Grab**, a ride-hailing startup based in Singapore. It is the latest big investment by a conventional carmaker in technologies and firms that are disrupting the industry. Grab operates in eight South-East Asian countries. In March it bought Uber's business in the region; under the deal, Uber took a 27.5% stake in Grab.

German authorities handed **Volkswagen** a €1bn (\$1.2bn) fine for cheating emissions tests, one of the biggest-ever penalties levied against a company in Germany.

Just a month after it passed the measure unanimously, **Seattle's** governing council rescinded a tax on the city's biggest companies amounting to \$275 per full-time employee. The tax was intended to raise money to ease Seattle's homelessness problem, but met

fierce resistance from **Amazon**, **Starbucks** and others with headquarters there. Amazon described the levy as “hostile”. Such “head taxes” are being considered in other cities, including San Francisco, where the growth of tech firms is blamed for pushing locals out of the housing market.

A spanner in the works



In a decision with ramifications for the country's **gig economy**, Britain's Supreme Court ruled that an independent contractor for Pimlico Plumbers could be classified as an employee, entitling him to paid holiday, sick pay and other benefits. The court found that, although the plumber's contract bore features of being self-employed, his work was controlled and restricted by the firm, akin to a normal job.

For other economic data and news see **Indicators section**



How democracy dies

Lessons from the rise of strongmen in weak states



IS DEMOCRACY in trouble? Nearly 30 years after Francis Fukuyama declared the end of history and the triumph of liberal democracy, this question is no longer outlandish. America, long a beacon of democracy, has a president who tramples on its norms. Xi Jinping is steering authoritarian China towards one-man rule. And across the emerging world, strongmen stride tall. Turkey's president, Recep Tayyip Erdogan, having locked up or purged more than 200,000 Turks for political reasons, will probably prevail in elections that start on June 24th and assume sultan-like powers. Nicaragua's regime is pulling out protesters' toenails. Vladimir Putin is about to reap a huge propaganda coup from the World Cup.

Indices of the health of democracy show alarming deterioration since the financial crisis of 2007-08. One published by The Economist Intelligence Unit, our sister firm, has 89 countries regressing in 2017, compared with only 27 improving. Some surveys find that less than a third of young Americans think it is "essential" to live in a democracy. Small wonder that this year has seen a boom in books with frightening titles such as "How Democracy Ends" and "The People vs. Democracy".

This pessimism should be put in context. It is a recent reversal after remarkable progress in the second half of the 20th century. In 1941 there were only a dozen democracies; by 2000 only eight countries had never held an election. A broad poll of 38 countries shows that typically four out of five people prefer to live in a democracy. And not all threats to pluralism are of the same order. In mature democracies such as America, strong checks and balances constrain even the most power-hungry president. In immature democracies, such institutions are weaker, so a strongman can undermine them quickly, often without much fuss. That is why the most worrying deterioration, going by both the number of countries and the speed of retreat, is in the fragile, young democracies of the emerging world. From Venezuela to Hungary, these reversals reveal striking similarities (see International section). That suggests reasons for optimism—as well as lessons for the West.

How to undermine a democracy

Put crudely, newish democracies are typically dismantled in four stages. First comes a genuine popular grievance with the status quo and, often, with the liberal elites who are in charge. Hungarians were buffeted by the financial crisis and then terrified by hordes of Syrian refugees passing through en route to Germany. Turkey's pious Muslim majority felt sidelined by secular elites. Second, would-be strongmen identify enemies for angry voters to blame. Mr Putin talks of a Western conspiracy to humiliate Russia. President Nicolás Maduro blames America for Venezuela's troubles; Hungary's prime minister, Viktor Orban, blames George Soros for his country's. Third, having won power by exploiting fear or discontent, strongmen chisel away at a free press, an impartial justice system and other institutions that form the "liberal" part of liberal democra-

cy—all in the name of thwarting the enemies of the people. They accuse honest judges of malfeasance and replace them with stooges, or unleash tax inspectors on independent television stations and force their owners to sell.

This is the stage of "illiberal democracy", where individual rights and the rule of law are undermined, but strongmen can still pretend to be democrats since they win free-ish elections. Eventually, in stage four, the erosion of liberal institutions leads to the death of democracy in all but name. Neutral election monitors are muzzled; opposition candidates locked up; districts gerrymandered; constitutions altered; and, in extreme cases, legislatures emasculated.

The battle is not always to the strongman

This process is neither inevitable nor incurable. India has had a vibrant democracy for 70 years; Botswana for more than 50. Deteriorations can be stopped and even reversed. In recent weeks Malaysians voted out Najib Razak and the UMNO party that had ruled since independence; protesters in Armenia broke a decade of one-party rule. Last December South Africans forced out President Jacob Zuma, a would-be strongman who let his cronies loot the state. Even Turkey is not doomed: opposition parties have a good chance of winning control of parliament this month.

It is hard to say which democracies are at risk. Economic stagnation and surges in immigration are often precursors of trouble. But they are neither necessary nor sufficient. Few would have predicted that democracy would totter in Poland, a booming economy with few immigrants that has benefited hugely from European Union membership. More important than the underlying conditions is the degree to which would-be autocrats learn from each other—how to spread fake news, squash pesky journalists and play the populist card. Their weaknesses are remarkably similar, too. From Malaysia to South Africa, strongmen have eventually been felled by popular revulsion at the scale of their corruption.

These similarities hold some lessons. The main one is that institutions matter. Western democracy-promotion has often focused on the quality of elections. In fact, independent judges and noisy journalists are democracy's first line of defence. Donors and NGOs should redouble their efforts to support the rule of law and a free press, though autocrats will inevitably accuse those whom they help of being foreign agents. The second is that the reversals have been driven by opportunistic strongmen rather than the voters' embrace of illiberal ideology. That ultimately makes these regimes brittle. When autocrats steal too brazenly, no censor can stop people from knowing—and sometimes booting them out. The last, more uncomfortable lesson is that the example set by mature democracies matters. America's powerful institutions will constrain President Donald Trump at home. But they do not stop his contempt for democratic norms—the serial lying, the cosy-ing with dictators—from giving cover to would-be autocrats.

Reports of the death of democracy are greatly exaggerated. But the least-bad system of government ever devised is in trouble. It needs defenders. ■

America and North Korea

Kim Jong Won

The master negotiator appears to have no clue how to haggle with North Korea



AS A television spectacle, it was irresistible. The star of “The Apprentice” striding commandingly along the red carpet, reaching out his hand, ready to strike the deal of a lifetime. And grasping it, Kim Jong Un, the leader of the world’s most repressive dictatorship, his Mao suit, hairstyle and grievances imported directly from the 1950s, who just nine months before had promised to “tame the mentally deranged US dotard with fire”. In the end, fire did not prove necessary: a suspension of weapons-testing and an invitation to a summit was all it took. President Donald Trump said it was an “honour” to meet Mr Kim, who duly promised “complete denuclearisation” in exchange for security guarantees. It was, Mr Trump said at a press conference, “a very great moment in the history of the world”.

To the extent history is playing any part in all this, it is in its tendency to repeat itself. North Korea has promised disarmament again and again over the past 30 years, only to renege each time after pocketing generous inducements. If the flimsy agreement Messrs Trump and Kim signed in Singapore is to turn out differently, as Mr Trump insists it will, America must be clear-eyed and exacting in the detailed nuclear regime that it negotiates with the North. Alas, so far Mr Trump seems more eager to play the talks for ratings—threatening not only a meaningful deal, but also America’s position in Asia.

Singapore canoodles

One unquestionably good thing did come out of this week’s summit. Talking is much better than the belligerent exchange that went before it (see Briefing). War appears to be off the table, and for that the world can be grateful.

The other good thing is that glimmer of hope. You can never completely dismiss the idea that Mr Kim does mean to change direction. Still in his 30s (like much about him and his country, his exact age is a mystery), he may be daunted by the bleak prospect of a lifetime of nuclear brinkmanship. For his regime to endure, he needs enough wealth to buy conventional weapons and pacify the urban middle class, which in recent years has begun to enjoy some meagre luxuries. He may also be uncomfortable about his country’s reliance on China for everything from oil and remittances to the plane that flew him to Singapore. If Mr Kim sees nuclear weapons partly as bargaining chips, his investment in warheads and the missiles needed to carry them as far as the United States makes this his moment of maximum leverage. Now would be the time to talk.

Mr Trump was right to test this possibility. The potential prize includes not just the step back from war talk, but the removal of a persistent threat to Asia and, lately, the United States. Also, given China’s disputes with America over trade and security, North Korea could become a template for how the two superpowers can work together, to everyone’s benefit.

Measured by such aspirations, however, Singapore was a disappointment. Mr Trump boasts of the tremendous achievement of simply being there; in reality the North wanted talks

all along. For Mr Kim, the offer of a meeting as equals with the sitting president of the United States—external validation of his godlike status at home—was an unexpected and long-desired windfall. He could have used the summit as a signal that he means to overturn the North’s record of deceit. But, despite supposedly intense pre-Singapore negotiations, this week’s agreement contains no binding North Korean commitments.

“Complete denuclearisation” sounds good, but the North did not set out a timetable. It may, as in the past, take the term to refer to the withdrawal of American troops from South Korea, or even to when America itself disarms, as it is in theory bound to do under the Nuclear Non-Proliferation Treaty (NPT)—which, incidentally, the North has abandoned. Nor did the agreement mention verification. Mr Trump’s team insists this will be intrusive, but Mr Kim’s “proof” of destroying test sites has so far involved letting a few journalists watch at a safe distance. Verification must involve inspectors with the right to visit any of North Korea’s hundreds of facilities, civilian and military, at short notice. Mr Kim’s willingness to accept such a regime is the real test of whether the agreement is serious.

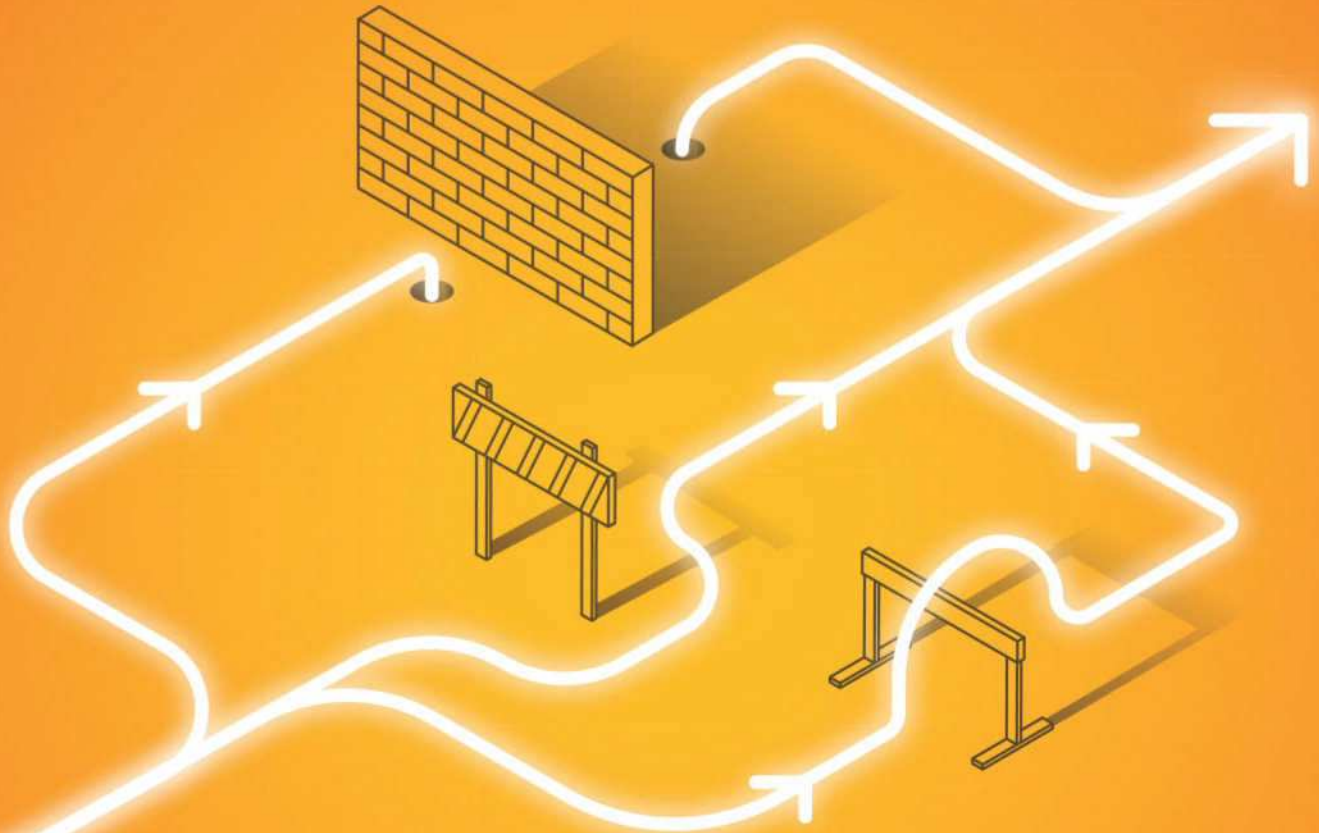
Worryingly, Mr Trump seems determined to be the deal’s salesman. At the press conference, as he gushed about Mr Kim’s qualities, he announced that America was unwisely cancelling military exercises with South Korea while talks with the North were under way. As the South’s partly conscript army needs frequent training to remain battle-ready, that was a big concession for which he appears to have received nothing. Mr Trump says that sanctions on the North will remain until the process of disarmament is irreversible. He also acknowledges that China is already enforcing the sanctions less diligently (it is also arguing for further loosening)—“but that’s OK”. Mr Kim must know that Mr Trump will struggle to get other countries to tighten the screws on the North again. Mr Trump has a lot riding on the North Korean deal, but just as he abandoned a good Iranian nuclear agreement, so must he be willing to abandon a bad North Korean one, or Mr Kim will string him along. That is the test of Mr Trump’s seriousness.

Put the Nobel on hold

America’s Asian allies are rightly worried that Mr Trump will sacrifice their security for the sake of a dead-end deal. He failed to warn South Korea and Japan that he was cancelling the military exercises (using a North Korean phrase, he called them “provocative” war games). He talked about America’s Asian commitments as an expensive burden in the same breath as saying that he wanted to pull his troops home. He raised the fairness of trade, as if security was contingent. Dealing with North Korea is a chance for Mr Trump to strengthen the NPT and *pax Americana*. He looks more likely to weaken both, risking regional arms races and even war.

Mr Kim has gone from pariah to statesman in six months. His regime’s abhorrent treatment of its own people is largely forgotten. His repeated violations of treaties and UN Security Council resolutions have been partly forgiven. Striking any sort of deal with such a figure is unpleasant. Striking a bad one would be a moral and diplomatic disaster. ■

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AT&T and Time Warner

Green light, amber warning

A colossal media deal is given the go-ahead. Consumers ought to worry



AT&T was centre-stage in another momentous antitrust decision, one that threatens a much worse outcome for consumers.

On June 12th Richard Leon, a federal judge, ruled that the firm, which has largely been put back together in recent decades, can acquire Time Warner, an entertainment giant. Assuming no appeal by the Department of Justice (DOJ), which brought the lawsuit against the merger, the deal will create a colossus able to sell HBO, CNN and other TV networks over its own wireless and satellite connections. A frenzy of dealmaking is expected, as other infrastructure firms join forces with those that create content. Comcast, the largest broadband provider in America, has entered a bidding war with Disney for much of 21st Century Fox. Verizon, AT&T's arch-rival in wireless, may move to buy CBS and perhaps Viacom.

The ruling was a humiliation for the DOJ. Some see this as deserved comeuppance for a politicised decision to oppose the merger. It is true that antitrust authorities very rarely oppose "vertical mergers", in which firms in different parts of the supply chain combine. And Donald Trump is famously unimpressed with CNN's coverage of him. If the DOJ's stance was indeed swayed by Mr Trump, that is obviously wrong—but not in itself a reason to wave the deal through.

In fact, the judge used different arguments. He accepted the case made by AT&T and Time Warner that the media landscape has changed. Conventional firms face fiercer competition from tech giants—the likes of Netflix are winning viewers

directly rather than via cable-TV packages, as Facebook and Google are taking ad revenues. Mr Leon was also unpersuaded by the DOJ's argument that AT&T would threaten to withhold its content from rival distributors in order to raise prices.

This newspaper believes that the deal should have been squashed for different reasons. Vertical mergers can be dangerous for consumers if one of the parties already wields too much power in its own industry. Ideally, infrastructure firms would face enough competition to keep prices low, and content firms would battle to sell services over that infrastructure. America is moving in the opposite direction. Two in five American households subscribe to an AT&T service. The deal gives it a powerful incentive to favour its own content over that of rivals. AT&T's unspoken long-term goal is probably to sell expensive bundles of infrastructure and content to near-captive customers. The repeal of rules governing net neutrality, which took effect on June 11th, compounds the problem by letting infrastructure firms favour their own content.

Pipe up

This week's defeat may well make the DOJ think twice about obstructing other tie-ups. After the judge's verdict, shares rose in would-be dealmakers—among them T-Mobile and Sprint, two telecoms firms whose plans to merge also ought to be stopped. Yet, if anything, America needs a more activist approach to antitrust. In 1970-99 regulators brought an average of 16 cases a year; in 2000-14 that number fell below three. America also needs more choice in wireless and broadband markets. Municipalities should be able to build wholesale fibre networks to give their communities more high-speed broadband options; the Trump administration should urge the industry to build a national wholesale 5G wireless network. Otherwise, AT&T's place in the annals of antitrust will stand for a decline in competition as well as an upsurge. ■

Chinese finance

Xi, make me chaste

Now that it has made progress in tackling its debts, China faces the real test



sanct, are seen as risks. What has gone wrong?

The answer is nothing at all. Defaults are progress for China, which needs to clear a backlog of accumulated debt. This year's casualties amount to a mere 0.1% of the bond market. But that is still an improvement on the recent past, when inves-

NEVER has China's bond market had such a stormy spring. It has already set a record for defaults in the second quarter. The cost of credit for firms has shot up. Even the state-owned companies that invest in infrastructure, previously sacro-

tors assumed that the government would rescue any big firm in trouble. The real worry is not that the defaults will go too far, but that officials will lose their nerve.

China needs to deleverage because, over the past decade, total debt has risen from 150% of GDP to nearly 300%. This is a cloud over the global economy: such a rapid increase often predicts financial trouble. Although it is far too early to relax, China has made headway in the past two years in stabilising its debt burden. Partly, that reflects a lucky rise in commodity prices, which has buoyed profits at struggling steel and coal firms. But the stockmarket crash of 2015 and the huge capital outflows in 2016 also persuaded President Xi Jinping that financial frailties were endangering national security and that ▶▶



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▶ the country needed a change in policy.

Some government actions have been dramatic, notably the arrests of tycoons who made lavish investments abroad. Others have been bureaucratic, such as a merger of bank and insurance watchdogs in order to improve oversight. The most important, though, has been the start of a clean-up of the financial system. Banks have written off some 5trn yuan (\$780bn) of bad loans, raised almost 1trn yuan in fresh capital and are on course to raise another 1trn yuan. That adds up to an infusion about three-quarters the size of America's bank rescue after the financial crisis. Regulators are also reining in China's once-booming world of shadow banking. Banks have been ordered to bring off-balance-sheet loans back onto their books (see Finance section). Asset growth in the banking sector fell by nearly half last year.

Safe, not stagnant

Two risks darken this picture. The first is that the government will backtrack. The first bond default in China did not come until 2014 and today's failures are provoking cries of pain. Banks want an easing of strict new asset-management rules. Fitch, a rating agency, estimates that, if corporate debt stabil-

ises, growth will slow to 4.4% by 2020 from nearly 7% last year. Milder slowdowns have scared the government off the path of prudence before. This time it must hold the line.

The second, less obvious, risk is that China will revert to a stodgily inefficient banking system. Entrepreneurs have flourished over the past decade, thanks in part to easier access to credit. Amid the clean-up, the concern is that banks will again favour state-backed borrowers. Defaults have so far been concentrated in the private sector.

If the government is to create a financial system that is safe without being sclerotic, it needs to change incentives. It should not bail-out state-owned firms (or, if that is too much, those in non-strategic sectors). It should let small, weak banks fail, because national lenders are less beholden to local interests. It should also distinguish between good and bad competition in finance. China is right to throttle undercapitalised shadow banks. But it also needs to allow for technology firms such as Tencent and Ant, Alibaba's financial affiliate, to compete against banks, so long as all comply with the same regulations. That goes for foreign lenders, too. The task for China is not just to solve the problem of past excesses, but to lay the foundations for future growth. ■

Russia

Free Oleg Sentsov

The outrageous penalty imposed on a peaceful film-maker should be reversed



AS YOU settle down to watch the World Cup in Russia, remember Oleg Sentsov, a Ukrainian film director serving a 20-year sentence in a prison camp in Siberia. He has committed no crime. Rather, he was jailed for protesting against Vladimir Pu-

tin's illegal annexation of Crimea and the war Russia's president unleashed in eastern Ukraine four years ago. On May 14th Mr Sentsov started a hunger strike demanding the release of all 64 Ukrainian political prisoners from Russian jails. The opening of the World Cup on June 14th was Mr Sentsov's 32nd day without food. He is rapidly acquiring the moral stature once accorded to people like Anatoly Marchenko, a Soviet dissident who was on hunger strike for 117 days and died soon after he ended it in December 1986.

World leaders supported Mr Sentsov, though they could clearly do more. Emmanuel Macron, the French president, raised the case with Mr Putin. PEN America, a writers' organisation, and dozens of artists in Russia and in the West have called for his release. One Western leader who has not done so is President Donald Trump. Instead, last week he called for Russia to return to the G7. It was expelled for the seizure of Crimea, which, in his words, "happened a while ago".

Mr Sentsov's plight is a reminder that the struggle goes on. He is an ethnically Russian-Ukrainian citizen who was born in Crimea and considered it to be part of the Ukrainian state that emerged from the Soviet collapse in 1991. (Nearly everyone apart from the Russian government shares this view.) In 2014 he joined the movement that toppled Viktor Yanukovich, a thuggish autocrat fond of gold chandeliers. Mr Sentsov was in

Crimea later that year when Russian soldiers in plain uniform staged a coup there. Mr Putin lied when he said that they were not Russian troops, just as he lied later that Russia was protecting ethnic Russians against Ukrainian "fascists".

Mr Sentsov organised rallies against the annexation. The Russian security services arrested him and took him to Russia, where he was charged with "terrorism". Mr Putin's enforcers claim that he plotted to blow up a statue of Lenin and set fire to a door of the office in Crimea of Russia's ruling party. He was innocent—the main witness said he had been forced to give false testimony, and withdrew his statement in court. Nor was there a terrorist act. Lenin's statue was not blown up, and no one was injured in the fire. The aim of Mr Sentsov's show trial was to reinforce Mr Putin's narrative of Crimea's "liberation" and to strike fear into those who dispute it.

Foul referee

Mr Putin's regime, rather like its Soviet predecessor, is built on falsehood and the threat of violence. His actions in Crimea led to a war in eastern Ukraine which has claimed 10,000 lives, including those of 298 passengers and crew who perished on a Malaysian Airlines plane that was brought down by a missile supplied by the Russians almost four years ago. Thousands of Crimean Tatars have been terrorised, jailed or driven out of their homeland. Mr Sentsov is peacefully and courageously denouncing all this—and seems ready to die for his cause. It goes without saying that he should be freed immediately and that the world should loudly demand as much. Mr Putin is unlikely to heed such calls. But he has reason to fear the undeniable fact of the death in custody of a man like Mr Sentsov. As he no doubt recalls, the Soviet Union did not collapse in a hail of bullets, but because people stopped believing its lies. ■

Britain and the EU

Softer is better

A hard Brexit seems ever less likely. Good



WHEN Britons voted to leave the European Union two years ago, they had no chance to say what sort of Brexit they wanted. But Theresa May, who became prime minister in the aftermath of the referendum, quickly decided that they wanted the most drastic break possible. Without consulting her cabinet, let alone Parliament, she announced “red lines” for her negotiation with Brussels that put Britain on course for the fullest of separations.

This “hard” Brexit—in which Britain would free itself from the clutches of European judges, trade policy and migration rules, at significant cost to its economy and security—has long looked inevitable. Parliament’s resistance to Mrs May’s extreme plan has been timid and the Labour opposition feeble. Yet this week the tide turned. Rebel Tory MPs look likely to wrest control of Brexit’s endgame from the government (see Britain section). Meanwhile, the penny dropped among Brexiters that the Irish border presents a near-insurmountable roadblock to a hard exit. With less than six months of negotiating time left, it is becoming clear that Brexit will be softer than Mrs May set out. That is good news for Europe and for Britain.

U-bend if you want to

This week’s showdown got the government to promise MPs a “meaningful” vote on the deal Mrs May negotiates with the EU near the end of this year. The assumption had been that a vote to reject Mrs May’s version of Brexit would lead to a drastic “no deal” outcome, in which Britain simply left without covering its financial obligations or establishing its future relationship with the EU. That need no longer happen, because Parliament will now be able to force the government to start again.

That still leaves plenty of room for a hard Brexit. Although the negotiations have laid bare the cost of such a policy, the government has stuck to its demands and red lines. Brexiters bluster that any problems can be overcome with a bit of positivity and patriotism, or argue that they are a reasonable price to pay for freedom from Brussels. They have persuaded the prime minister that the referendum obliges her to take Britain out of the EU’s single market and customs union at any cost.

But there is one area where Britain cannot opt for maximal separation, however great Mrs May’s appetite for self-harm. Brussels has demanded that in Northern Ireland, for the sake of peace, there must be no new checks or infrastructure at the border. Mrs May agreed to this in December, and has since been seeking a way to reconcile an independent trade policy with an invisible, open border. She has failed—unsurprisingly, since even the EU’s most frictionless frontiers, like those with Norway or Switzerland, involve some checks. So Britain will resort to a “backstop” plan, keeping Northern Ireland in the EU’s customs union until it finds a solution to the border problem, which it may never do. To avoid customs checks between Northern Ireland and the British mainland, which would incense the Northern Irish unionists who prop up Mrs

May’s government, the customs union will cover the whole United Kingdom. And it will have no firm time limit.

The softening may not end there. Britain has promised that its Northern Irish backstop will include “full alignment” with the relevant rules of the EU’s single market. Again, Mrs May might find that she has to apply this to the whole country, to avoid a unionist rebellion. Britain would thus find itself in a notionally temporary, but in fact indefinite, arrangement that included membership of the EU’s customs union and full alignment with much of the single market. Soft Brexit would have been achieved, via a backdoor in Belfast.

Soft, strong and very long

Though the logic of the negotiations now points to a soft exit, such an outcome is not yet inevitable. Britain’s soft landing outside the EU faces three main risks. The first is that the rest of the EU leaves Ireland in the lurch and drops its demand that the border remain invisible. But EU leaders’ language on the border has if anything been toughening.

The second risk is popular outrage when the EU refuses to give Britain privileged access to the single market unless it allows the free movement of people. If, as seems likely, the EU refuses to dilute this principle, Britain could apply brakes that some member states have already used: registering new migrants, limiting their access to benefits and even excluding them from public-sector jobs. That may be enough to appease some Brexit voters, given that net migration of EU citizens has already fallen more than half since the referendum. Others might be bought off if Mrs May fulfilled other Brexit promises, such as stumping up more money for the health service. And although a hard core would never forgive any softening of Brexit, many more will tune out next March, once Brexit is formally achieved and the blue passports have been issued.

The gravest risk for Mrs May is not the will of the people—polls suggest most Britons favour a soft Brexit. It is the Europhobic wing of her own Tory party. If the prime minister seems to be going soft, her MPs may trigger a leadership challenge. But she might well win such a contest, given the lack of obvious replacements. Even if she fell, her successor would run into the same problem in Northern Ireland. Some Tories complain that the Northern Irish tail is wagging the British dog; they might prefer to see a customs border in the Irish Sea than the wrecking of their hard-Brexit dream. Yet the government’s reliance on unionist votes makes this tail hard to ignore. Would a diehard Brexiteer prime minister risk yet another election, in a bid to win enough seats to ditch the unionists? It would be a reckless gamble that exhausted voters might punish.

The road to a soft Brexit is bumpy. But the remorseless logic of the Irish border is pushing Britain in that direction. And then what? Some Leavers see a soft Brexit as a transition to a complete break. Some Remainers see it as a platform from which to rejoin the EU. Others, from both camps, think that such a semi-detached state is the worst of all worlds. History suggests that Britain might be in for a long stay in transition. Norway, the model cited by many for a soft Brexit, entered a temporary economic arrangement with the EU in 1994. It is still in force. ■

UNLOCKING ACCESS TO OPPORTUNITY

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Research sponsored by **android**

Disabled people in Europe are less likely to be employed and more likely to live in poverty than their non-disabled peers. As digital technology has the potential to reduce barriers to employment for disabled people, there is great hope that the digitisation of Europe's economy will be empowering for its disabled community.

But progress has not been as fast as many had hoped, in part because many digital systems are still not fully accessible. According to Stig Langvad, member of the UN Committee on the Rights of Persons with Disabilities, progress on making websites accessible has not been replicated in other software systems.

This is something of a vicious circle; the exclusion of disabled people from jobs in the digital sector means their interests are under-represented in the design of digital systems. As a result, accessibility is often an afterthought.

Tuukka Ojala, a Finnish software developer who is

blind, believes that if the digital workforce itself was more diverse in ability, the wider disabled community of Europe would reap the benefits. "It would be very cool if the people who test software before it's published were as diverse in age, ability and so on as Europe is," he says. "The rest comes naturally."

Alejandro Moledo, new technology and innovations officer at the European Disability Forum, says the topic of accessibility needs to be given greater priority in IT education. "With increasing demand for professionals in the field, it should be included in computer engineering, for example," he says.

For Mr Langvad, the disabled community needs better representation within the bodies that set technical standards. "[Technology companies] find it easy to send people to sit on standards committees, but disability organisations

rarely have the funds for trained personnel. We have to find ways to build up that capability."

He also says that, to date, policy mandating accessibility has been lacking. Change is under way, however.

THE EUROPEAN COMMISSION'S PROPOSED EUROPEAN ACCESSIBILITY ACT SEEKS TO DEFINE AND ENFORCE ACCESSIBILITY REQUIREMENTS IN A NUMBER OF FIELDS, INCLUDING COMPUTING.

If adopted, the act would require any digital system to "provide for communication and orientation via more than one sensory channel". This would go a long way in making employment in digital-related fields more accessible, says Mr Moledo.

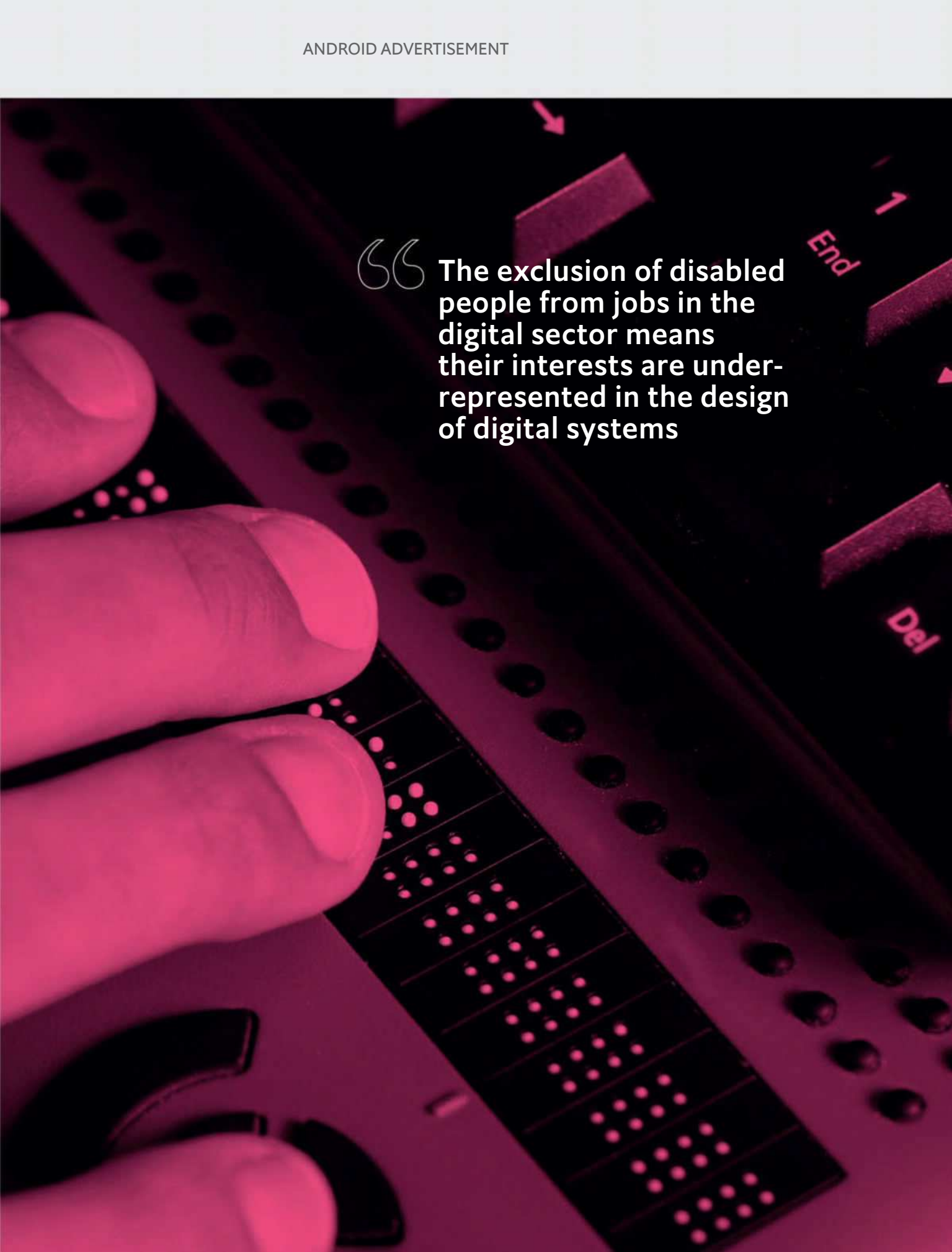
Employers, especially those

in the digital sector, have the largest role in making digital jobs more accessible to people with disabilities. German business software company SAP's diversity and inclusion strategy includes a focus on integrating "differently abled" people into its workforce. It also has an Accessibility Competence Centre and a commitment to making its software usable by all, "in particular the differently abled".

This demonstrates how a commitment to including disabled people in the workforce and the creation of accessible systems can be mutually reinforcing. And it reveals the motivation that should compel employers to remove barriers to workers with disabilities: products and platforms that are accessible to all.

FOR MORE ON EQUALITY OF OPPORTUNITY IN EUROPE'S DIGITAL ECONOMY, VISIT

opendigital.economist.com



“ The exclusion of disabled people from jobs in the digital sector means their interests are under-represented in the design of digital systems

A beacon of democracy

Hats off to Banyan for noting the democratic rise of Timor-Leste (May 26th). Since the restoration of its independence in 2002, Timor-Leste has faced numerous challenges in the development of its state institutions. Nevertheless, it has held a succession of free, fair and peaceful national elections marked by record levels of voter participation and several smooth transfers of power among competing political blocs. As a result, Timor-Leste stands alone among the countries of South-East Asia to be described by Freedom House as wholly free.

Timor-Leste's progress in the political domain provides reason to hope that it will make comparable strides with respect to other state institutions. That said, the country's judicial, prosecutorial, public defence and private counsel institutions require considerable support. Promoting the rule of law by guaranteeing an effective justice system and ensuring an independent judiciary should be a national priority.

PHILLIP RAPOZA

Former international judge on the Special Panels for Serious Crimes in Timor-Leste
New Bedford, Massachusetts

Local knowledge

I agree with Bagehot's view that Parliament has become unrepresentative of the people it purports to serve (May 12th). His suggestion of getting more non-college educated people into Parliament will certainly help at the margins, but something much more radical needs to be done.

The answer, for one of the most centralised countries in the rich world, is to decentralise power. Denmark, for instance, has fewer people than London, yet has three elected tiers of government: local, regional and national. Each has clearly defined responsibilities (schools in the commune, health in the region, defence nationally) and, crucially, the power to raise the money to finance these activities.

Income-tax rates can vary from commune to commune.

One of the Brexiteers' more convincing arguments for leaving the EU was that it had become involved in too many things that were better handled at the national level. Yet whenever this subsidiarity argument is applied to British national politics, it always seems to run into the sand. Until that changes, I suspect that the trend for more and more British MPs to be university educated will continue.

ROBERT SATCHWELL

Haarby, Denmark

A bipartisan approach

Lexington's column on the "primeval" tribalism of American politics drew on two ways we might bring about a lasting peace between the parties: either ending our two-party system, or ushering in an historic political realignment (May 26th). But another factor that could bring the parties together is political overreach. This might happen when the leaders of one party believe they are invincible and their cause is universal, which doesn't play well in America.

For example, suppose the Democrats seized control of all levels of government and immediately began jailing Republicans for treason. Or they took away broadcasting licences for Fox News and every station running conservative talk radio. Despite the partisan divide, most Democrats would band together with independents and Republicans to reject such overtly undemocratic decisions. There would be a widespread understanding that in the span of two years, they (the Democrats) would be on the chopping block when Republicans inevitably regained control.

B.J. RUDELL

Associate director
Centre for Political Leadership,
Innovation and Service
Duke University
Durham, North Carolina

I noticed the research that found 77% of respondents considered "their rivals to be less evolved humans than

members of their own side". Given that only 43% of Republicans believe in evolution (according to a Pew poll), if members of that party are willing to embrace Darwinian science in order to deride Democrats then the partisan hatred runs much deeper than I thought possible.

WILLIAM COPP

Montreal

Bank-account numbers

Your special report on financial inclusion (May 5th) gave a clear picture of the progress made in providing financial services to the unbanked. Savings, postal and retail banks who are members of our association are on their way to adding 400m new accounts by 2020, from a 2014 baseline. People living in remote areas, just like those in the cities, crave basic banking services, namely transaction accounts. The 1.7bn people who remain unbanked will be the hardest to reach. Innovation and digitisation will help address this.

But enhancing savings opportunities is a big challenge. Storing money, either through traditional banks or by channelling village savings groups into banks, is the next step after using a basic transaction account. Research shows that poorer communities, like richer ones, prefer to save than borrow. That is rational.

If Africa and other regions are to make greater strides they need better financial frameworks and rules. Consumer protection should come first. Rules already on the books need a careful rethink, too. West Africa, for example, sorely needs easier agent banking rules to unleash financial services. Another area is Application Programming Interfaces (APIs) and open banking, where common standards in emerging markets would help protect those who are vulnerable and less digitally savvy.

IAN RADCLIFFE

Director
World Savings and Retail
Banking Institute
Brussels

East German influence

Charlemagne's piece on the legacy of 1968 in Germany mentioned the effect that the fatal shooting of Benno Ohnesorg, a student, had on radicalising the universities (June 2nd). The bitter irony is that the acquittal of Karl-Heinz Kurras, the police officer who shot Ohnesorg in 1967, owed much to the suppression of evidence by his police colleagues. Many years later Kurras admitted that he was a member of East Germany's governing party and had worked as an informant for the East's secret police, the STASI.

One wonders whether Kurras was acting on instructions from the STASI when he killed Ohnesorg. The East German leadership must have been delighted to see the strains in West German society that his murder generated; the appearance of a cover-up stoked the fires.

PATRICK EYERS

Chichester, West Sussex

Ooh! Aah! Cantonese!



I wish to express my admiration for whoever penned the caption (above) for the picture accompanying the article on football in China ("Long-term goal", May 19th). I've come to expect clever wordplay from your staff, but this one was superb.

STEPHAN TEODOROVICH

West Los Angeles, California ■

Letters are welcome and should be addressed to the Editor at The Economist, The Adelphi Building, 1-11 John Adam Street, London WC2N 6HT
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DIRECTOR

Directorate-General for Budget, Brussels
COM/2018/10380

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Enough to make a Rodman cry

BEIJING AND SINGAPORE

Kim Jong Un did better than Donald Trump at their strange meeting

“**T**HINK of it”, the president enjoined reporters, “from a real-estate perspective.” When presented with images of North Korean artillery firing fusillade after fusillade into the sea, he said at his somewhat surreal post-summit press conference, he had seen a place that would “make a great condo. You...could have the best hotels in the world right there.” Trump Towers, Wonsan—a North Korean city that

passes as a resort—suddenly seemed a tantalising possibility, perhaps with the North Korean Open being played on an adjacent links. As his supporters have noted, President Donald Trump brings a unique viewpoint to foreign policy.

It was Mr Trump’s background as a reality TV performer, though, rather than his property-development chops, that set the tone for his summit meeting with Kim Jong

Un, the leader of North Korea, in Singapore on June 12th. With 2,500 reporters attending, the summit was quite the TV spectacular. It even had a tearful CNN appearance by one of Mr Trump’s “Apprentice” participants, Dennis Rodman, a former basketball player who counts himself a friend to both leaders. There was a bizarre “trailer” showing the sunlit uplands of North Korea’s peaceful future as a coming attraction. At one point Mr Kim said to Mr Trump that it would seem to many like something out of “a fantasy”.

Not unaccustomed to living in a fantasy, Mr Kim took to this limelight in a very effective way. He made use of his time on the stage with both domestic North Korean and international audiences very much in mind. Mr Kim runs a mafia state with the most brutal secret policemen and the ugliest human-rights record on Earth. An estimated 120,000 North Koreans, in some cases whole families, rot in labour camps. Countless children are malnourished and mentally stunted. Since he came to power in 2011, Mr Kim has cracked down savagely on those trying to escape to China. He has executed an uncle and assassinated a half-brother (in whose favoured Singapore hotel, the St Regis, Mr Kim stayed the night before the summit).

When “poison pen” is not a metaphor

Mr Kim ought to be at The Hague. Yet in Singapore, the dictator, who also has ten UN Security Council resolutions arrayed against him, was the toast of the town as he waved at the crowds down by the Marina Bay casino and posed for a selfie with the Singaporean foreign minister. By coming across as warm, jovial and eminently reasonable, the capo has morphed into something respectable, even statesmanlike. There is talk of him starring at the UN General Assembly in New York in the autumn and Mr Trump says he will be welcome in the White House.

Chunks of all this, carefully edited, were beamed back to North Korea as evidence of the leader’s global stature; the first picture state media had ever shown of Mr Trump was of him shaking hands with Mr Kim, his partner in peace. Only occasionally was it possible to glimpse Mr Kim’s mafia-state paranoia in Singapore, as when a gloved aide inspected and wiped the pen with which he was to sign the joint document with Mr Trump.

The document itself was striking—and, ▶▶



▶ considering the flurry of working-level talks led by experienced nuclear negotiators in the run-up to the summit, disappointing—in its lack both of detail and of North Korean concessions. The two sides committed themselves “to build a lasting and stable peace regime on the Korean Peninsula”—not, as South Korea would have liked, to a peace treaty. Mr Trump declared that he would provide “security guarantees” to North Korea, but did not say what they would be. In return Mr Kim gave his “firm and unwavering commitment” to complete denuclearisation of the Korean peninsula, but with no timetable, arrangements for verification or definitions of either “denuclearisation”—a term that in North Korea is typically taken to include the removal of all American forces from South Korea—or “complete”—which, when it comes to North Korean ideas about denuclearisation, can mean global.

As Victor Cha, who helped to run Asia policy for George W. Bush, noted, the agreement is less specific than previous North Korean pledges to curb its weapons programme, such as the one he worked on in 2005. Yoichi Funabashi, a former editor of the *Asahi Shimbun* in Japan, and a leading voice on Korea policy, was more directly critical: “If Hillary Clinton were president of the United States and had come up with yesterday’s agreement, Donald Trump would have rightly attacked her for a ‘fake’ denuclearisation...The word ‘denuclearisation’, [as used in the agreed text] is so elusive...it does not mean anything.”

A more charitable reading would see the agreement as a broad outline for further lower-level meetings to flesh out “at the earliest possible date”; Mr Trump has charged his secretary of state, Mike Pompeo, with the task. Alternatively, it could be seen as the minimal possible substance required for the surrounding spectacle and its self-serving claims of a historic peace deal to be sustained by both parties. It may in time deliver tangible results. But there is no evidence that Mr Kim sees denuclearisation as meaning that he should dismantle the nuclear arsenal he, his father and his grandfather put so much effort into creating and the industrial complex which supports it. In practice he seems to be offering no testing for the time being and some access to sites the programme might be abandoning anyway. As Mr Trump has said that he wants the nuclear weapons gone, and that the Singapore agreement will make that happen, he will either have to show progress towards that end, blithely lie about the end having already been achieved despite evidence to the contrary, or change his mind and get tough—which would presumably mean bellicose—again.

For the moment, though, tough is a thing of the past. At the post-summit press conference Mr Trump astonished many viewers by saying that the military exer-

cises America regularly runs with South Korea were “very provocative”—a term favoured by China and North Korea—and “inappropriate” while negotiations were in progress: “We will be stopping the war games, which will save us a tremendous amount of money.”

That was a big unilateral concession. It alarmed South Korea and Japan, neither of which was warned of the move in advance; even some Republican politicians, including Ed Royce, chair of the House Foreign Relations Committee, betrayed a certain unease. The American army command in the South declared that it would continue as before until otherwise instructed. The exercises have real practical value in training South Korea’s partly conscript army. They are also a potent symbol of America’s commitment to the security



A star is born

of its allies. “Without those comments, he could have sold the summit as a political success,” says Janka Oertel, an expert in East Asian security at the German Marshall Fund. “But alienating his allies in that way could do serious harm. It is also a massive gift to China.”

With enemies like this

Indeed, China lost no time in pointing out that it was the first to propose a “freeze for freeze” deal—no military exercises, no nuclear tests. Previous American administrations refused this gambit because it equated legal and legitimate operations by allies with an illicit weapons programme condemned by the UN. They were also well aware that Beijing was self-interestedly seeking to see a big chunk of America’s presence in Asia negotiated away. Now an American president who sees alliances as a costly burden, rather than as a source of strength, has given it what it wanted, at least for a while. The outcome of the sum-

mit, said Geng Shuang, a spokesman for the Chinese foreign ministry, “is what China has been looking forward to and striving for all along.”

China’s satisfaction means that, as well as becoming a statesman and seeing fewer military exercises on his doorstep, Mr Kim may also find the sanctions against his regime eased. Mr Trump, in his press conference, promised that the UN-mandated sanctions regime against North Korea would remain in place until it took material steps towards dismantling its nukes. Mr Geng, though, argued that UN rules allow sanctions to be loosened to “support” denuclearisation. And reports from the Chinese-North Korean border suggest that, whatever the official sanction regime, trade is already reviving—something Mr Trump acknowledged when he thanked “a very special person, President Xi of China, who has really closed up that border, maybe a little bit less so over the last couple of months, but that’s OK.” Absent massive provocation it is hard to imagine how America could reimpose a “maximum pressure” sanctions regime even if it wanted to—which Mr Trump does not.

South Korea, for its part, may devise workarounds that allow a degree of economic co-operation before any sanctions are lifted. Earlier this month the two countries reopened the liaison office in the Kaesong industrial complex, the site of their deepest economic co-operation. Straight after the summit, the South approved student exchanges between Seoul National University and Kim Il Sung University, the North’s flagship institution.

As that move shows, the South Korean response has been positive. The office of Moon Jae-in, the president, hailed the summit as a “historic event that has helped break down the last remaining cold war legacy on Earth” and provided copious pictures of Mr Moon beaming down at television footage that showed Mr Kim and Mr Trump shaking hands. The fact that the summit took place at all is a win for Mr Moon, who has made the peace process on the Korean peninsula a central issue of his presidency. That does not mean that the cancellation of the military exercises was met with equanimity. A later statement from the president’s office said that Mr Trump’s press-conference remarks required a “clearer understanding”. When Mr Pompeo met with South Korean and Japanese officials in Seoul on June 14th to share details of the summit and discuss the next steps, he had some explaining to do.

The conservative opposition is more strident on the subject: Hong Jun-pyo, the chairman of Liberty Korea, the main opposition party, said that “South Korea’s security is now just hanging off a cliff.” But the president and the peace process are both popular. Having lived within range of the North’s artillery for decades, South Kore- ▶

ans are less concerned by the presence or absence of nuclear weapons than by the threat of an actual war, which seemed more possible late last year than it had for some time. Mr Moon's Minjoo Party had huge success in local elections on June 13th; Mr Hong's days may be numbered.

Mr Kim will welcome sanctions relief and money from South Korea. He tolerates significantly more commerce than his predecessors did. Today's sanctions, applied at full force, threaten the modest boom he has presided over since taking power, and thus risk angering the elites who have benefited from it. The promise of more development now that the push for nuclear weapons has paid off is an attractive narrative for the North Korean public. On the day of the summit *Rodong Sinmun*, North Korea's official party newspaper, splashed on a night-time jaunt Mr Kim took around Singapore, admiring the glittering skyline and saying he had learnt much about economic development in the city state.

The long con

This does not mean that Mr Kim is interested in the sort of full-on market economy which serious foreign investment would require. Nor are North Korea's proto-capitalist elites. A proper opening of the country would surely lead to their being out-competed by South Korean or Chinese companies. But a glitzier tyranny has its appeals, especially if a little economic growth improves morale.

For this to work, Mr Kim needs time, and that is what he can be expected to play for in the coming negotiations. Mr Pompeo has talked of "major disarmament" within two-and-a-half years. A former CIA director, he has no illusions about North Korean tactics. But there would be limits to how quickly things could go even if North Korea acted in good faith. Siegfried Hecker, who used to run America's bomb-design lab at Los Alamos, and colleagues at Stanford University estimated last month that, even if the North were serious about it, the process could take more than a decade.

With missiles and a stockpile of bombs, as well as a uranium-enrichment programme, to deal with, the effort would have to be far more painstaking than the process Barack Obama's secretary of state, John Kerry, put in place for the Iran deal. It would require a stringent, and thus hard-to-negotiate, verification regime to be in operation from the beginning; ad hoc inspections of particular sites are not remotely enough. It would need the help of the International Atomic Energy Agency and also, possibly, the European powers that Mr Trump alienated by tearing up that hard-won Iran deal.

Time plays to Mr Kim's advantage. He intends to remain in power for decades. Mr Trump might be voted out in 2020. Mr Trump may return to Washington, D.C., and

reconsider his approach to Mr Kim; some in the administration seem to be distancing themselves from his announcement about "war games". But Mr Kim is well-placed to string America along and play for time, offering concessions slowly, insincerely, or both.

That said, he has lost one of his old cards. He cannot play the world statesman and still rely on being able to wrong-foot adversaries with all-out weirdness; normalisation has some costs. But America has lost a card, too. If it finds it wants to reinforce sanctions, it will be hard to get Chinese support back. "If North Korea does not make another nuclear test or launch missiles again, I don't think China will impose new sanctions," says Li Nan, a scholar at the Chinese Academy of Social Sciences, a think-tank.

Back in Washington, the summit scrambled the usual dividing lines between military hawks and the foreign-policy establishment. Striving to offer credit where some is due, veteran diplomats praised Mr Trump for abandoning his "fire and fury" threats. One was Mr Cha, who might well have been Mr Trump's ambassador to South Korea had he not made clear his horror at talk of pre-emptive military strikes on North Korea. "If the bar for success in this summit is war or peace," he said, "it's a pretty low bar. We got peace. So in that sense, we're certainly in a better place than we were six months ago when there was a lot of talk about preventive military attacks and armed conflict."

Meanwhile, some of the hardest-line, brook-no-compromise members of the Republican Party discovered a new fondness for foreign-policy realism—at least when it is practised by a president their voters back home adore. In 2015 Tom Cotton, a senator from Arkansas, organised a letter from 47 senators to the leaders of Iran saying that if the Iran deal was not backed by Congress it could be overturned once a new president took office. On June 12th a newly pragmatic Mr Cotton explained to Hugh Hewitt, a radio host, that ostracism remains his favoured approach to "two-bit rogue regimes [that] don't have nuclear weapons, yet". But now that North Korea can deliver nuclear warheads all the way to America,

sitting down with its dictator is "not a pretty sight" but is a "necessary" part of Mr Trump's job, the senator averred.

If Mr Trump stands firm on the cancellation of the joint exercises, though, opposition to a move that so clearly signals an American disentanglement from security in the region—justified by Mr Trump, as is so often the case, on the basis of excessive costs which allies ripping off America were unwilling to shoulder—will mount in Washington, and in Japan, too. The Japanese government's immediate response to the Singapore summit was a certain relief; it had not been the disaster it might have been. The Japanese view is that it is too early to assess how the process of denuclearisation was advanced by the summit. And it takes comfort from the fact that, when it comes to Mr Trump's scorn for American alliances in Asia, it is in a different position from South Korea. Japan is home to the American navy's Seventh Fleet, to air-force units and to US Marines—all expeditionary forces based in Asia not just to defend Japan and Taiwan but also to project power and to act as a deterrent. Those are missions likely to be needed for years to come.

Mr Funabashi is much less sanguine: "So far as thinking in Japan goes, the biggest casualty of this summit is likely to be the credibility of the US as an ally..Trump now poses the biggest challenge to [prime minister Shinzo] Abe's political survival."

On this broader point, though, it is too soon for Japan to despair—or China to rejoice. Chinese military planners have long dreamed of pushing American forces as far from their shores as possible, ideally back to the "third island chain" (strategist speak for Hawaii). Now they face an American president who talks happily about pulling his troops out of at least part of Asia unbidden. But China has learned to watch what American presidents do, not what they say, says Mr Li. After all, Mr Trump campaigned on a promise to withdraw troops from bases all around the world. But after Pentagon bureaucrats and generals worked on him, "they are still there."

They may be in place for some time to come. So may Mr Kim. As for Trump Towers, Wonsan, the world will have to wait and see. ■



Bye bye bombers?



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Central Europe

In bad Oder

BERLIN

Germany's troubled relations with the Visegrad states show the limits to its power

GERMANY has long considered itself a bridge between east and west Europe. Karel Schwarzenberg, a Czech former foreign minister, recalls Helmut Kohl telling him in the 1990s that, having tethered itself to the West during the cold war, his country now had to tether itself to its east, lest it "slide about like loose ballast on a ship". Kohl's point was that a Germany alienated from its eastern neighbours, particularly the "Visegrad" (v4) states of Poland, the Czech Republic, Slovakia and Hungary, would destabilise the European vessel.

But its relations with the v4 have recently hit a low. The picture is not uniform. From Berlin, the Czech Republic and Slovakia look friendlier than Hungary or, particularly, Poland. But there is a sense that the region is drifting away. "People here are seeing that they have taken the Visegrad for granted for too long," says Milan Nic of the German Council on Foreign Relations.

Germany's size is part of the problem. The v4 felt (literally) marginalised by Angela Merkel's decision to keep her country's borders open to refugees at the peak of the crisis in 2015. Without consultation, it seemed to them, the chancellor had turned them into transit corridors for undesirable migrants drawn by the promise of a cushy life in Germany. Their irritation turned to anger when she later urged every EU state to admit a quota of refugees.

Its economic might, too, is daunting.

Germany's trade and investment flows with the v4 are greater than with China. That inspires both gratitude and resentment. Recently, the Czech and Slovak prime ministers berated German firms for paying local staff less than those in their German plants. A widely shared analysis by Thomas Piketty, a French economist, shows outflows of profits from such foreign investments in the v4 outweighing EU transfers to the region.

Residual memories of the second world war make it "very easy for authoritarian [v4] governments to exploit anti-Germanism", notes Thorsten Benner of the Global Public Policy Institute. That is clearest in

Poland, whose populist Law and Justice (pis) leadership has reopened the issue of war reparations, passed a "Holocaust law" banning references to Polish complicity in Nazi atrocities and issued an advertising campaign promoting the term "German death camps" (referring to Nazi death camps in Poland). Viktor Orbán, Hungary's nationalist prime minister (pictured, with Mrs Merkel, has endorsed the construction of a "memorial to the victims of the German invasion" in central Budapest. Berlin does not always help its own cause. On May 4th construction began on Nordstream 2, a gas pipeline between Russia and Germany which bypasses Poland and inflames historical fears of being caught between the two powers on either side.

Yet the tensions along its eastern border also demonstrate the limits to German power. For all its economic heft, Berlin has not been able to get the v4 states to take in a few hundred refugees. These days, Mrs Merkel talks more about controlling Europe's outer borders than about managing the burden of refugees who cross them—the v4's order of priorities.

Meanwhile, Germany's leaders feel unable to do much about the march of authoritarianism within the EU, which is most acute in Poland and Hungary. "Wagging our finger at Warsaw will only make things worse," sighs an official in Berlin, talking of Polish attacks on the independent press and judiciary. Similar considerations explain Mrs Merkel's marked reluctance to condemn Mr Orbán's assaults on NGOs and his flirtation with anti-Semitism. Her Christian Democrats are a bulwark against calls to expel his Fidesz party from the European People's Party, the umbrella group of the continent's centre-right.

One explanation for this German caution is the growing presence in the v4 of ri ▶▶



val influences. China in particular has ploughed in investment (funding a new railway from Budapest to Belgrade, for example). In January, amid suggestions that the EU could cut financial transfers to Hungary and Poland, Mr Orban told business leaders in Berlin: “We need financing for new roads and pipelines. If the EU can’t provide it, we’ll get it from China.” Two months later the Chinese foreign minister called the v4 “the most dynamic force in the EU”. His government is interested in funding Poland’s “Intermarium”, a scheme to integrate central Europe along a new north-south axis linking the Baltic and Adriatic seas. Some German policymakers consider America in the same category. On June 4th Donald Trump’s new ambassador to Berlin raised hackles when he said he

wanted to “empower other conservatives throughout Europe”—apparently a reference to v4 governments.

Germany’s leaders are divided on what to do. Some, especially in business and in the Christian Social Union (CSU), Mrs Merkel’s conservative Bavarian sister party, are for cosying up to the v4. The CSU even invited Mr Orban to its party conference in January. Others, like Joschka Fischer, Germany’s former foreign minister, think the country should deepen integration with France and relegate the v4 to an outer ring of partners. Germany’s government is closer to the first pole, delegating the policing of democratic norms to the EU while rewarding the Czechs and Slovaks, tolerating Mr Orban and resetting relations with Poland. Mrs Merkel visited Warsaw immedi-

ately after Paris on being re-elected chancellor, to stress that new co-operation with France should not marginalise the v4.

In their gloomier moments, Germans fear things could get much worse. The *Frankfurter Allgemeine Zeitung* recently speculated about “Polexit”, or Poland quitting the EU. A Bundeswehr planning scenario leaked in November imagined the EU’s eastern states splitting off and joining an autocratic, Eurasian block by 2040. None of this is likely. But the fears alone point to the endurance of Kohl’s conviction that a stable Europe requires Germany to be surrounded by close allies. Economic walls have fallen, but new ones have arisen—walls separating different value systems that seem impossible for the continent’s “semi-hegemon” to remove. ■

Macedonia’s meaning

In the name of peace

Why a longed-for Balkan breakthrough looks precarious

ALEXANDER THE GREAT conquered the ancient world in far less time than it took the two countries that claim his mantle to agree on a name for one of them. But better late than never. On June 12th Greece and its northern neighbour announced a breakthrough. After nearly 30 years of tussling, they decided that the Republic of Macedonia should henceforth style itself “North Macedonia”, a formula implying that neither state has a monopoly on the historical legacy of the region. As a sign of goodwill, Macedonia had already removed a statue that looked rather like Alexander from its airport.

Ever since communist Yugoslavia broke up in 1991, Greece had lobbied to stop the new country from using a name to which it claims cultural title (it has a province called Macedonia, for instance). America praised Alexis Tsipras and Zoran Zaev, prime ministers of Greece and Macedonia, for showing “vision, courage and persistence” in their efforts.

On the face of things, the deal will enable Macedonia swiftly to join the European Union and NATO, where its progress has been blocked by Greece. That will relieve Western governments, which in 2001 only just stemmed Macedonia’s slide into a civil war between its ethnic majority, whose language is close to Bulgarian, and a large ethnic-Albanian minority. To many observers of the region, keeping the country stable and avoiding any revival of its internal tensions matter much more than its name.

Yet among both electorates the deal may struggle to win acceptance. It was denounced by Independent Greeks (ANEL), the nationalist party whose nine

parliamentary votes prop up Mr Tsipras’s leftists; and by Kyriakos Mitsotakis, leader of New Democracy, Greece’s main opposition. Mr Mitsotakis, whose father’s term as prime minister foundered after he talked reason on Macedonia, seems keen to avoid a similar fate. He rejects the new formula on the grounds that it still lets the neighbours assert a Macedonian language and ethnicity.

For protesters in Greece, any sharing of the M-word is treachery. In Macedonia, meanwhile, the new name must be put to a referendum. Constitutional changes also need a two-thirds majority in parliament, which Mr Zaev does not have. The country’s president, Gjorge Ivanov, reacted icily when told of the deal. A stormy election campaign may result. As Alexander once put it: “How great are the dangers I face to win a good name.”



Alexander solved knotty problems faster

The World Cup

Beautiful game, ugly reality

MOSCOW

Russia’s president hopes that fans will look beyond politics

VLADIMIR PUTIN rarely speaks English in public, but he made an exception in 2010, when Russia won the right to host the World Cup in 2018. “From bottom of my heart, thank you,” he told the FIFA organising committee. For Mr Putin the tournament, like the Sochi Winter Olympics in 2014, offered a chance to showcase Russia’s revival under his leadership. “We want to show to the world the new Russia, open and hospitable in every sense,” said the sports minister at the time, Vitaly Mutko.

Since then Russia’s actions on the world stage have been anything but friendly. Its annexation of Crimea in 2014, the war in eastern Ukraine and military intervention in Syria have cast a pall over relations with the West. Mr Mutko himself landed at the centre of the Sochi Olympics doping scandal. (Mr Putin rewarded him with a promotion to deputy prime minister.) The poisoning of a former spy, Sergei Skripal, in Salisbury earlier this year led to calls from the British government for officials to boycott the World Cup. Last month, Dutch-led investigators implicated Russia in the downing of Malaysia Airlines Flight 17 over eastern Ukraine. As a group of victims’ relatives wrote ahead of the tournament, “We are painfully aware of the dark irony that the Russian leaders who will profess to welcome the world with open arms, are those who are chiefly to blame for shattering our world.”

Yet as the cup kicks off, the world seems willing to look past politics. Although the Russian team—the lowest-ranked of all the competitors—will be lucky to make it be- ▶▶

beyond the group stage, Mr Putin stands to reap a PR victory. The tournament will bear little resemblance to the 1980 Olympics, when America led a 65-nation boycott in response to the Soviet Union's invasion of Afghanistan; only Iceland among the participants has joined Britain in refusing to send high-level representatives. More than 1m foreigners are expected to visit Russia over the next month, taking advantage of simplified visa procedures. The biggest buyers of tickets are from America.

Russia has spared little expense to present a friendly face, putting some \$1bn towards infrastructure and a host of shiny new stadiums. (Corruption and overruns have been widespread, though not nearly at the level of the \$50bn Sochi Olympics.) Wide pedestrian walkways and lush greenery greet visitors to Moscow, the product of years of renovation. The centre boasts nearly universal wifi coverage and a plethora of craft-beer bars. "I already love it," declared Jonathan Mascorro of Texas, as he pondered options for *bahn mi* and *pho* at a Vietnamese restaurant in Moscow's Gorky Park this week. Smaller regional host cities will have sparser amenities, but have also been spiffed up. Hordes of English-speaking volunteers have been recruited; taxi drivers have been encouraged to brush up on their language skills, too. (As one Moscow cabbie quips: "I'm already tired of saying khello.") Even typically surly train conductors are being taught to smile at customers.

To preserve the festive atmosphere, the Russian authorities will have to contend with several difficulties. One is the threat of clashes. Violence between Russian and English hooligans in Marseille marred the European Championship in 2016. Russian police have cracked down since, rounding up rowdy fans and warning local hooligans that there will be no tolerance for disturbances. Another peril comes from terrorism. With 11 host cities, and 2,500km



Putin puts the boot in

separating the farthest-flung, Russia's World Cup offers an attractive target for lone-wolf attacks. The Islamic State (IS) group made explicit threats ahead of the tournament, posting propaganda images with popular footballers in alarming orange jumpsuits.

The Kremlin will also have to keep attention away from its own repression at home. As the fans arrive, cinemas have been showing "Leto", a new film directed by Kirill Serebrennikov, who has been under house arrest on trumped-up corruption charges for nearly a year. Russia's leading opposition politician, Alexei Navalny, jailed last month over anti-Putin protests, looked set to be released on the opening day. Oleg Sentsov, a Ukrainian film director jailed on fabricated terrorism charges, has been on hunger strike since May 14th, demanding the release of other Ukrainian political prisoners (see leader). Once the fans depart later this summer, they will remain. The beautiful game can offer only a temporary respite from ugly realities. ■

Poland

Where's Jaroslaw?

WARSAW

The country's real leader has disappeared from view

POLAND has both a president and a prime minister, but Jaroslaw Kaczynski, chairman of the ruling Law and Justice (Pis) party, is its real leader. Mr Kaczynski, who turns 69 next week, is an ordinary MP with no cabinet post. Yet since Pis came to power in 2015, he has been behind the overhaul of the country's institutions, most recently the judiciary, which the European Commission says threatens the rule of law. Along with Viktor Orban, Hungary's prime minister, he has stoked nationalist fears at home and defied Brussels by refusing to take in refugees from the Middle East.

But recently, Mr Kaczynski has hardly been seen, spending several weeks in a military hospital in Warsaw; he emerged only briefly before slipping out of sight once more. His absence has raised questions about Pis's future—and Poland's.

Known to his followers as *prezes* (chairman), Mr Kaczynski has dominated his party for over a decade. In 2006-07, during Pis's first stint in power, he served as prime minister, while his twin brother, Lech, who died in a plane crash in Russia in 2010, was president. This time, he has stayed out of the limelight, installing less divisive figures in office.

Mr Kaczynski's disappearance has prompted rumours about his health. Officially, he is having trouble with his knee. The hospital says he has osteoarthritis—a condition that does not usually require so long a stay.

Mr Kaczynski has no clear successor. Mateusz Morawiecki, a former banker whom Mr Kaczynski promoted to prime minister in December, lacks a strong political base. In a recent poll, just 14% of respondents tipped him as Mr Kaczynski's successor; 43% answered "don't know".

For now, Pis remains on top. The party still leads in polls, though its advantage over the centrist opposition has narrowed a bit. On June 8th Mr Kaczynski emerged from hospital after over a month, thanking journalists waiting outside his home for "their interest in a humble member of parliament". But with further treatment due, speculation about his condition continues. Anyone hoping to replace Mr Kaczynski will have to be "very patient", said the interior minister, Joachim Brudziński, one of his confidants, last month. Yet as Poland heads into election season, the chairman's health will weigh heavy on Pis. Europe, too, will be watching. ■

Women in cabinets

Feminists were delighted by Justin Trudeau's response when he was asked, shortly after becoming Canada's prime minister, why half the members of his cabinet were female. "Because it's 2015," he said. Three years on, not many countries have followed his lead. In France last year, Emmanuel Macron named a cabinet in which half of the 22 cabinet posts went to women. Most other governments, however, remain largely male. Spain's new leader, Pedro Sánchez, has unveiled a strikingly female cabinet, with 11 women out of 18 ministers, the highest share in the EU. But Europe still has a way to go: Hungary's cabinet has a grand total of one woman.



Source: European Institute for Gender Equality

* Countries with female heads of government

Turkey

Pillow talk

KONYA

Surrender your dollars, urges President Erdogan

WHEN Turkey's President Recep Tayyip Erdogan urged his supporters in December 2016 to defend their currency, the lira, by selling their dollars, euros and gold, scores of them answered the call. In Konya, a city in Turkey's conservative heartland and a reservoir of votes for Mr Erdogan and his Justice and Development (AK) party, some locals outdid themselves. A district mayor gave a week off to municipal workers who sold more than \$500, a carpet dealer handed out free rugs to customers who exchanged more than \$2,000, and a surgeon offered free horse rides to anyone who showed up with a receipt from a currency-exchange office. Similar campaigns sprouted up elsewhere. Within a week, people across the country had converted more than \$440m to liras.

They may now regret it. In dollar terms, those who followed Mr Erdogan's advice 18 months ago have lost a quarter of their cash. But the collapse of the lira, which has lost a third of its value against the dollar since the start of emergency rule in July 2016, pushing inflation into double digits, has spared few people in Turkey. Ordinary folk have seen their spending power collapse. Turkish companies groan under the weight of foreign debt amounting to some \$300bn, more than a third of GDP. According to Bloomberg, some of the country's biggest corporate borrowers are trying to restructure loans totalling almost \$20bn. Citing a decline in investor confidence, Moody's, a ratings agency, recently downgraded the ratings of 17 Turkish banks.

Mr Erdogan bears much of the blame. Over the past few years he has favoured cheap credit and high growth over inflation. In May, after he announced he would exercise more control over the central bank in the years to come and proclaimed, bi-

zarrily, that high interest rates cause inflation, the lira went into free fall. It recovered only after he allowed the bank to make two big rate increases, of 300 and 125 basis points, in two weeks.

The problem with Turkey's economy goes well beyond bank rates. "One fundamental question is the loss of confidence in the functioning of the economic system and monetary policy," says Seyfettin Gurcel, the head of Betam, a think-tank. The other is what may be in store for Turkey's stability and its reeling democracy after snap presidential and parliamentary elections on June 24th. Outside investors have already been spooked by constitutional changes that will give the president huge new powers after the vote, abolishing the post of prime minister, politicising the judiciary and curbing parliamentary oversight. Rumours that Mr Erdogan might call another election if voters entrust him with the presidency but hand control of the parliament to the opposition have rattled nerves further. Pollsters expect Mr Erdogan to keep his job, but predict a much tighter race in the parliamentary contest.

As always, ministers have promised reforms, a return to central-bank independence and fiscal discipline as soon as the elections are over. But with the exception of the recent rate increases, the signals from Ankara have hardly been reassuring. In the past two months Mr Erdogan's government has gone on a spending spree to woo voters, offering cash bonuses of over \$400 per year to each of the country's 12m pensioners, tax breaks for new property-buyers and an amnesty for money, gold and other assets brought in from abroad. The president is once again blaming foreign countries for the decline of the lira and exhorting Turks to get rid of their hard

currency. "My brothers who have dollars or euros under your pillows, go and change your money to lira," he said at a recent rally. "We will spoil this plot together."

On paper, the economy has been booming. In the first quarter, according to data released this week, GDP grew by 7.4% year on year, the same pace as in the whole of 2017. But the government-induced credit binge that has yielded such juicy numbers over the past couple of years is giving way to a hangover. The current-account deficit has widened to \$5.4bn in April (over 6% of GDP when annualised), up from \$3.7bn a year earlier, increasing Turkey's reliance on volatile portfolio inflows. Foreign direct investment has steadily decreased since 2015. With credit running dry and companies sitting on a mountain of debt, a sharp slowdown is inevitable, says Zumrut Imamoglu, chief economist at TUSIAD, a business lobby.

But are they bothered?

In Konya, home to the mausoleum of the 13th-century Persian mystic and poet Jalaluddin Rumi, the signs of a downturn and a currency crisis are increasingly clear to the poet's followers, known as the whirling dervishes, and to generations of hard-working, devout businessmen. A construction boom that began years ago has stopped because of lack of demand, says Saban Topal, a local developer. Prices of cement, iron and other building materials, all of them linked to energy imports denominated in dollars, have rocketed. Last year, Mr Topal paid a contractor 135,000 liras to install a piping system in one of his buildings. This year, he says, the same contractor demanded 240,000 liras for the same job. Local farmers wring their hands about similar increases in the price of fertiliser and petrol.

The conventional view is that the economy, which has more than doubled in size since the ruling party came to power in 2002, has been the key to Mr Erdogan's and AK's fortunes. That may no longer be true. Most Turks say the economy is their biggest concern in the elections, but there is little to suggest that AK voters in Konya or elsewhere will vote for the opposition. There is evidence instead that government propaganda, funnelled through media beholden to Mr Erdogan and his cronies, has had its desired effect. According to one study, a mere 4% of AK voters blame the lira's decline on government policies; 65% believe it is "an operation against Turkey by foreign powers". At the equestrian club outside town where customers once received free horse rides for selling their dollars, Fahrettin, a university librarian, complains about the increasing prices of foreign science textbooks. "This is a plot," he says, referring to the weakening lira. "They are trying to topple Erdogan, and to provoke a crisis in Turkey. But they will not succeed." ■

The miracle unravels

Turkey

Turkish lira per \$
Inverted scaleConsumer prices
% increase on a year earlierGDP
% change on a year earlier

Source: Thomson Reuters

Charlemagne | It's rough out there

To uphold its cherished rules, Europe must learn when to bend them



YOU can't fault them for trying. Discussing trade at last week's disastrous G7 summit in Quebec, Europe's leaders met Donald Trump's volley of insults and half-truths with a fusillade of facts. Emmanuel Macron explained how market access works. Angela Merkel brought up America's procurement rules. Thrown off-guard, Mr Trump responded by suggesting that the G7 should transform itself into a tariff- and subsidy-free zone (see Finance section). The fact that this would involve submitting to the rules and institutions he has built his political identity opposing was not lost on the president's European friends. A better illustration of the transatlantic gulf would be hard to find.

The past few months have been especially rough for Europe's relations with America, as Mr Trump first withdrew from the nuclear deal with Iran and then slapped tariffs on aluminium and steel imports. But the confrontation in Canada had a scales-from-the-eyes feeling to it. The United States is "saying goodbye" to the West, lamented Germany's ambassador. One European official says his colleagues returned from the summit looking as if they had stuck their hands in a toaster.

What to do? Several responses suggest themselves. Capitulation is one. When Mr Trump's metals tariffs loomed, some tremulous Germans wanted the European Union to seek a deal with America that would cut duties on all industrial goods. But after the encounter in Canada Mrs Merkel seems to have toughened up, and the EU will now indeed apply countervailing tariffs on some American products: "We won't let ourselves be ripped off again and again," she said after the summit. Yet nastier battles are on the horizon. Obsessed by the luxury German vehicles he sees on the streets of Manhattan, Mr Trump has instructed his Commerce Department to investigate whether car imports are a threat to national security. That is preposterous. Yet the tariffs that might follow could force many European automotive firms to abandon the American market, given their tiny margins. "There is not a single German chancellor who could sit still if this happens," says Hosuk Lee-Makiyama, a Brussels-based trade expert. Other transatlantic rows, on taxation, industrial policy and energy, are brewing. Europe's industrialists are ever more fretful.

A second strategy is improving resilience. Mr Trump likes to link the miserly defence spending of most European countries,

especially Germany, to what he considers their rapacious trade policies. (Officials in Berlin are braced for a catastrophic NATO summit in Brussels next month.) This is why Mr Macron's calls for "European sovereignty" are starting to find a German audience. For now such fine words are rarely translated into deeds; few Germans accept that their huge trade surplus leaves them politically exposed, for example, and the defence debate remains difficult. But, says Luuk van Middelaar, a Dutch commentator, "it's dawning on them that something needs to change."

A third strand is containment. The EU is striking deals, and co-ordinating responses to American protectionism, with allies like Japan and Canada. It is battling to keep the Iran deal alive with guarantees to firms investing there. Europeans' dependence on the dollar as the world's reserve currency limits their options. But the containment strategy is growing in importance.

What is Europe fighting for? Donald Tusk, president of the European Council, made it clear in Canada: "The rules-based international order is being challenged, quite surprisingly...by its main architect and guarantor, the US." But it is getting harder to stand up for rules. The West lost its bet that prosperity would turn China towards democratic capitalism; neighbours like Russia and Turkey are flexing their muscles; and the transatlantic ally has lost any interest it once had in submitting to external constraint. Europeans are left to hope that their economic and regulatory muscle is enough to shore up rules and institutions, even as much of the rest of the world reverts to the law of strength.

Closing markets for trade is like drinking for sobriety

This should mean playing two games, not one, says Mr van Middelaar. For decades Europe could support rules and order at home while outsourcing security to America. Many Europeans secretly yearn to return to that happy arrangement once (they assume) Mr Trump leaves office in 2021; or sooner, if he is hamstrung by a hostile Congress after the November mid-terms. But Europe needs a strategy that does not rely on the whim of American voters. As power shifts eastward it is anyway becoming harder to think of ways in which America needs Europe. Mr Trump is a symptom of these changes; he is not driving them.

This calls for a bit of creativity, a virtue not found in abundance in Europe. On trade there is a risk of succumbing to Mr Trump's logic of escalation, for the president thinks tariff wars are easy to win. Brussels's trade wallahs, burned by previous talks with American officials they say were conducted in bad faith, are now keen to rule out any bilateral deals with Mr Trump's administration. One alternative, suggests Mr Lee-Makiyama, is to push for plurilateral talks, conducted via the WTO and including Japan and Korea, on the reduction or elimination of car tariffs.

A spot of flexibility could help in other areas, too. In the Brexit talks the EU's insistence on treating all "third countries" as identical could jeopardise security co-operation with Britain, one of only two serious military powers in the EU, after it leaves. It would be perverse for Brussels to limit the scale of Europe's defence ambitions just as the neighbourhood is getting rougher. Mr Macron understands this. Mrs Merkel may be getting there.

It is easy to see why rules matter to the EU. They allow for extraordinarily deep relations among governments and undergird prosperity and peace in the world beyond. But just as skyscrapers are built to sway with the wind, Europe must find ways to adjust to a world where the weather is growing stormier. If Mr Trump helps teach that lesson, so much the better. ■

Intuitive technology

Founders of technology for people with disabilities on why accessibility needs to be a core aspect of design, not an add-on.

Many technologies that today are used by almost everyone around the world were conceived as innovations developed for people with disabilities.

Olivier Jeannel, founder and CEO of Paris-based RogerVoice, whose app enables deaf people to make phone calls by subtitling conversations in real time, likes to list them: the remote control, developed for bedridden hospital patients; the typewriter, which was invented to help blind people write letters; and the telephone, which Alexander Graham Bell developed to help him communicate with his deaf mother and wife.

"The chances are," says Mr Jeannel, "that the tools that we innovate to improve conditions for people with disabilities will sooner or later have implications for society as a whole."

Mr Jeannel, who is himself deaf, launched his company in 2014. Having no technology background, he pooled the skills of what he likes to call a "motley crew of believers, freelancers, developers and designers" to make his idea a reality.

"Android's open operating system allowed for more possibilities," he says, "and many people were able to contribute to the project."

In addition, he says, it gave him access to a very big market. RogerVoice now has about 33,000 users in more than 50 countries.

For many people with disabilities, the invention of smartphones was a game changer. "These days they can buy any smartphone off the shelf and just start using it," says Hans Jørgen Wiberg, founder of Copenhagen-based Be My Eyes, a start-up that uses smartphone cameras to connect blind people with sighted volunteers.

Mr Wiberg is pleased with the impact that apps such as RogerVoice and Be My Eyes have had, but he wants to see mainstream technology companies taking a greater interest in the needs of people with disabilities.

"It's very often a small thing that needs to be done to make something accessible," he says.

For his co-founder and CEO, Christian Erfurt, who is sighted

Android provides extensive resources and tutorials for coders and designers on how to make apps more accessible.*



Hans Jørgen Wiberg, co-founder of Be My Eyes

*<https://developer.android.com/guide/topics/ui/accessibility/>



Olivier Jeannel, founder and CEO of RogerVoice

(Mr Wiberg is blind), taking on that challenge is at the heart of good design.

"I think the beauty of designing something for people with disabilities is that it has to be intuitive, it has to be functional. It has to be a simple, perfect design."

Manel Alcaide, co-founder and CEO of Visualfy, based in Valencia, Spain, emphasises the importance of employing people with disabilities from the start.

"I cannot imagine creating technology for deaf people without deaf people," he says.

Visualfy has developed an app and a suite of devices that help people with hearing loss to function better at home and in public spaces. Its technology converts sound cues, such as alarm clocks or someone knocking at

the door, into visual ones.

Mr Alcaide is looking forward to a future in which technology for people with disabilities merges with mainstream technology. (Visualfy's technology can, for example, recognise the sound of a breaking window and send a notification that someone may have entered your home.)

"Five percent of the world population has some sort of disability," he says. "If we don't empower them with the technology to contribute to a common future, it will be a waste of talent and resources."

Besides, he adds, "we will all face special needs at some point in our lives. We will have to bear with the disabilities associated with age. But if technology exists that can help us, there's no reason why they should limit our quality of life."



Android is a naturally efficient way to reach a large demographic.

**Olivier Jeannel,
founder and CEO of RogerVoice**



Manel Alcaide, co-founder and CEO of Visualfy



The politics of Brexit

Problems postponed

Theresa May concedes just enough to avoid parliamentary defeats. But she is being driven towards a softer version of Brexit

IF POLITICS is the art of survival, Theresa May is proving adept at it. A week ago she adroitly averted resignations by Brexit ministers. This week the prime minister persuaded MPs to reject all amendments made by the Lords to the EU withdrawal bill. Yet her habit of putting off tough decisions and offering concessions only at the last minute has risks. It is also steering her away from a hard Brexit.

The week's most dramatic scenes were in the Commons. Mrs May faced down an amendment designed to make Britain join a customs union with the EU, by deferring the issue until the trade and customs bills return next month. But until late on June 12th she was heading for defeat on an amendment by a Tory MP, Dominic Grieve, to give Parliament the right to decide what happens if the Commons rejects the eventual Brexit deal. Mr Grieve's aim is to stop the government presenting MPs with Hobson's choice: take the deal, or get Brexit with no deal at all.

David Davis, the Brexit secretary, huffed about an unconstitutional bid to usurp the government's treaty-making role. Yet the day began badly for the government, with the unexpected resignation of a junior justice minister, Philip Lee, who said he wanted to fight Brexit from the backbenches. And party whips soon realised they had to give ground to avoid defeat. The proceedings took on a surreal air as the solicitor-general, Robert Buckland, repeatedly inter-

rupted Mr Grieve's speech to offer concessions. In the end Mrs May promised Tory rebels she would accept the thrust of the Grieve amendment when the bill returns to the Lords. Brexiteers' subsequent efforts to dilute this offer are unlikely to succeed.

Even so, some critics said the rebels had been sold a pup because they were too scared to challenge Mrs May's leadership. They certainly do not want to oust her. Indeed, part of the prime minister's appeal to her backbenchers rests on her weakness. In effect, she is warning that, if she softens her Brexit policy too much, she might be replaced by a hard Brexiteer such as Boris Johnson, the foreign secretary.

Yet both Parliament and Mrs May are stronger than they seem. The concession to Mr Grieve matters because it makes a no-deal Brexit, already tricky for lack of preparation, all but impossible, and a soft Brexit far more likely. Cross-party co-operation in a hung Parliament has become a key factor. Anna Soubry, a Tory rebel, and Chuka Umunna, a Labour pro-European, have teamed up. Mr Grieve is close to Labour's shadow Brexit secretary, Sir Keir Starmer, who worked with him as director of public prosecutions when Mr Grieve served as attorney-general.

Playing down the no-deal threat is also driving Mrs May, as a matter of logic, in the direction of a softer Brexit. So is a growing chorus from businesses worried about leaving the customs union and the EU's

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single market. This week the president of the CBI business lobby, Paul Drechsler, warned that sections of manufacturing might become "extinct". As if on cue, Britain's biggest carmaker, JLR, announced that it was moving all production of its Land Rover Discovery model from Birmingham to Slovakia.

Above all looms Northern Ireland. Even as Westminster was agonising over Mr Grieve's amendment, Brussels was debating something else altogether: the "backstop" solution to avoid a hard border in Ireland. Although Mrs May insists that this fallback option will not be needed, she has put forward a plan for a backstop under which all of Britain, not just Northern Ireland, would be in a customs union with the EU. And she has faced down Mr Davis's demand that it be made temporary by saying only that it is "expected" not to last beyond December 2021. That is far from being a time limit.

Her delayed white paper on Brexit, now due in early July, will tout a technological solution to avoid a hard border, known as "maximum facilitation". Yet because the EU doubts this will ever work, it is now treating the backstop as the most likely outcome. It wants to add regulatory alignment on top, to avoid border checks, and it is unhappy with Mrs May's suggestion to apply the backstop to the whole country, because this could give Britain full access to the single market without all its obligations. But Brussels welcomes Mrs May's acceptance that, at least for some years, Britain should stay closely tied to the EU. That Brexiteers are up in arms about this (see Bagehot) is just another bonus for Brussels. ►►

Correction: In last week's story on Brexit and security, we wrongly attributed an estimate of the cost of an alternative to the Galileo satellite system of £3bn-5bn to Bledwyn Bowen, an academic at Leicester University. In fact the estimate was made by officials.

▶ One sad feature is the ineffectiveness of the Labour opposition. Jeremy Corbyn, the party leader, has got better at taunting Mrs May for her indecision and cabinet splits. Labour now backs a customs union. But despite a big rebellion by Labour MPs backing the European Economic Area (or Norwegian) option to keep Britain in the single market, Labour is officially against, because two-thirds of its seats voted for Brexit and it would entail accepting free movement of EU citizens.

Yet both points have answers. Polls suggest that a large majority of Labour voters backed Remain in 2016, and a similar majority now want to stay in the single market. As for free movement, Stephen Kinnock, a backbench supporter of the Norwegian option, says constraints on it would be far easier to negotiate under the emergency provisions of the EEA treaty than under Labour's preferred bespoke model of full access to the single market. As the Brexit deadline nears, Labour could yet shift its position on this further.

This would parallel Mrs May's own movement. So far her survival skills have served her well. But having seen off anti-Brexit rebels this week, her next challenge may come from the Brexiteers. The EU is showing worryingly little negotiating flexibility in return for her concessions. And the clock is ticking towards Brexit day next March. The prime minister cannot defer the difficult decisions much longer. ■

The Daily Mail

Paul Dacre is away

Middle England's "conductor" passes on the baton

PAUL DACRE, who thinks of himself as a conductor, emerges from his office at 6pm each weekday to tune up his orchestra: the writers and editors of Britain's second-best-selling newspaper, the *Daily Mail*. He paces around the newsroom, ripping up pages, rewriting headlines and dressing down hacks. It is, Mr Dacre has said, an exercise in "remorseless energy". The next morning that energy tumbles onto the doormats of suburban England. Judges quibbling over Brexit? "Enemies of the people"! Food wholesalers hiring staff from Hungary? "Is there no one left in Britain who can make a sandwich?"

Since Mr Dacre got the job in 1992, the *Sun* and *Daily Telegraph* have each appointed six editors. Five prime ministers have occupied Downing Street. Mr Dacre has gone unchallenged. Even when he was on holiday, says an ex-lieutenant, "the paper would come out in his image". Yet the orchestra will soon have a new conductor. On June 6th Mr Dacre announced that he would move to a backroom role. Geordie

Greig, who edits the *Mail on Sunday*, will take over in November.

How much power will he have? Measuring newspapers' influence is tricky. One study found that by backing Labour in 1997, the *Sun* might have accounted for 8-20% of Tony Blair's winning margin. But most research suggests the media have limited sway over public opinion. Despite its relentless criticism of Jeremy Corbyn, 17% of the *Mail's* readers voted for his party at the last election. There were more Labour-voting *Mail* readers (about 250,000) than the entire circulation of the left-wing *Guardian*. Fleet Street's loudest voices could not prevent Theresa May losing her majority.

The *Mail's* power derives instead from politicians' belief that it is powerful. They credit Mr Dacre with insight into the whims of suburban "middle England". Politicians treat newspapers as proxies for public opinion, says Rasmus Nielsen of Oxford University, since polls struggle to gauge the strength of feeling on any topic. They also recognise that other outlets often follow up the *Mail's* stories, granting it influence beyond its own readership.

Mostly, politicians fear that the *Mail* could give them a bloody nose. The late Tessa Jowell, once a minister, said that the paper gave her a "clinical beating" on plans to let pubs open through the night. Mr Blair thought falling out with its editor meant "a huge and sustained attack". "When you're coming up with policy, you'll be thinking: 'What will the *Mail* think of this?'" says a government press officer.

Its influence does not appear to be tied to its circulation, which rose early in Mr Dacre's tenure but has fallen by 41% since 2002. This is partly because the *Mail* has kept more readers than other papers (the *Telegraph* has shed 50% and the *Sun* 59% of their readers over the same period) and because neither the web nor TV has supplanted its agenda-setting role. Mr Dacre does not have a computer in his office and shuns Twitter: instincts dictate his coverage.

Politicians hope Mr Greig might go easier on them. Mr Dacre spends 14 hours a day at work, scribbling tirades against the "liberal elite". His successor once edited *Tatler*, a society magazine, and used to discuss poetry over breakfast with Lucian Freud. Rivals expect him to lighten the paper's tone to appeal to younger readers. A study by researchers at Oxford University found that under-35s were far less likely than older people to trust the *Mail*.

Some are excited that Mr Greig is a Remainer. He is unlikely to change the paper's stance on Brexit, which Mr Dacre insists would be "commercial suicide". Yet he could provide less resistance to a watered-down exit deal than his predecessor might have. "It will probably be more nuanced," says Nicholas Coleridge, who was once his boss at *Tatler*. The orchestra will play on, but perhaps a little more quietly. ■



Philatelists fight back

Brexit-supporting MPs and newspapers have long criticised the Royal Mail's decision not to release a set of stamps to mark Britain's departure from the EU. On June 12th it unveiled a set to commemorate the 50th anniversary of "Dad's Army", a TV comedy about a bungling band of Home Guard volunteers. Looking at the catchphrases featured on the stamps, some have wondered if the set is, in fact, a subtle tribute to Brexit.

Bagehot | Back in your box

Brexiters fear being stitched up by the establishment



THE Brexiters are one of the most successful pressure groups in British history—arguably the second-most successful after the Anti-Corn Law Leaguers who inspired the creation of *The Economist* in 1843. They persuaded David Cameron to hold a referendum on Britain’s membership of the European Union. They won it against the massed ranks of the British and global establishment. And they persuaded Theresa May to pursue the hardest possible Brexit, despite a narrow victory. Not bad for a group of “swivel-eyed loons”, as Mr Cameron’s clique called them.

But are the loons snatching defeat from the jaws of victory? A growing number of people on both sides of the Brexit argument calculate that they are. Dominic Cummings, the former campaign director of Vote Leave, thinks that Brexit is being “irretrievably botched”. Ambrose Evans-Pritchard, a pro-Leave journalist, says that “the quixotic bid for British independence has failed”. On the Remain side, Jonathan Powell pronounces hard Brexit “dead”, killed by the conundrum of the Irish border.

The first Brexiteer to recognise that their treasured project was turning into a “train wreck” was Mr Cummings, a man who combines tactical genius with a rare ability to see the big picture. Mr Cummings argues that Mrs May made a fundamental strategic mistake in triggering Article 50 (which starts the clock for taking Britain out of the EU within two years) before she had prepared a coherent plan for leaving. Akin to “putting a gun in your mouth and pulling the trigger”, this shifted the balance of power irretrievably towards Brussels.

Other Brexiteers are now catching on. On June 6th Boris Johnson, the foreign secretary, delivered an agonised speech to a group of Conservative donors which was recorded and leaked. Mr Johnson argued that Britain runs the risk of ending up in “a sort of anteroom of the EU” and blamed this unhappy prospect on a combination of insufficient will on the part of the prime minister and strong resistance on the part of the establishment. He claimed that Britain needed a strong leader like Donald Trump—“he’d go in bloody hard”. He called the Treasury the “heart of Remain”. He lamented that Britain was so terrified of short-term disruptions that it would sacrifice long-term gains.

Nor was this just Boris being Boris. In the same week David Davis, the secretary of state for exiting the EU, threatened to re-

sign over the question of putting a time-limit on a “backstop” plan to remain in the EU’s customs union, and accused Mrs May, in private, of practising a “blancmange” style of leadership. Guido Fawkes, a pro-Brexit website, raises the possibility that Leave supporters have been “played”. The Brexiteers are busily creating a stab-in-the-back theory that they can use to explain their defeat and rally support in the future. Mrs May is a Remain voter who has sold out the Brexiteers at every possible opportunity, the argument goes. The establishment has done everything it could to frustrate the will of the people, often working in secret with the Brussels bureaucrats, with businesspeople stirring up fear of economic calamity and Olly Robbins, Mrs May’s chief adviser on Brexit, massaging her into a more Euro-friendly position.

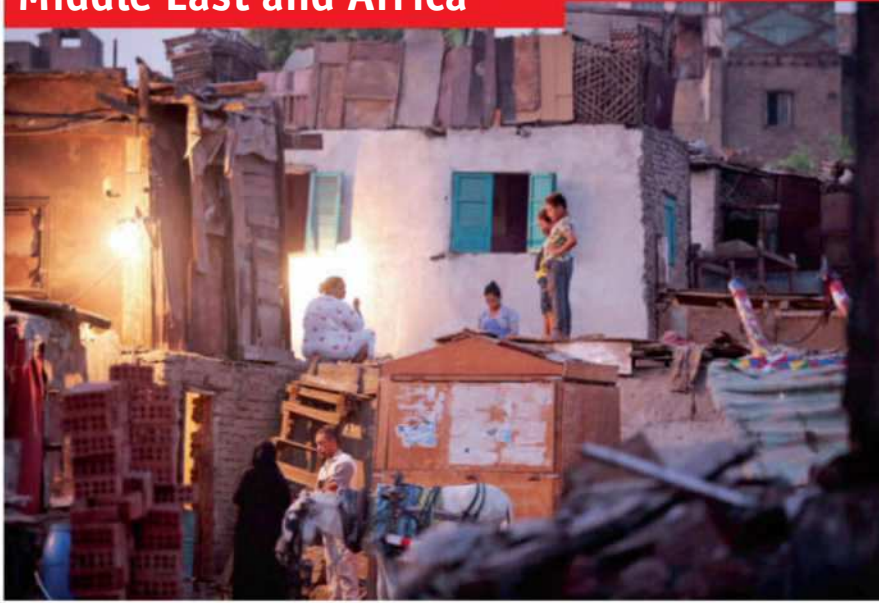
The feeling of betrayal is already making for some ugly politics. On June 12th, almost two years to the day after Jo Cox, a Labour MP, was murdered by a deranged neo-Nazi for her “treason”, the *Daily Express* splashed the headline “Ignore the will of the people at your peril” on its front page. Anna Soubry shocked the House of Commons by revealing that at least one fellow MP was going to vote against their conscience after receiving threats, and that one had gone to a public engagement with “six armed undercover police officers”. Things are likely to get uglier if the EU insists that the free movement of people is the price of a softer Brexit, with the UK Independence Party roaring back to life and Brexiteer MPs campaigning against Britain’s “vassal status”.

Almost every passing headline deepens the Brexiteers’ gloom—and whets their appetite for more tales of betrayal. Mr Trump has made it clear that Britain won’t be exempt from his America-first trade policy. Arron Banks, a businessman who gave £12m (\$16m) to one of the Leave campaigns, has been accused of having nefarious links to Russian officials (though a Commons select committee failed to land any blows on him and he left early for lunch). Paul Dacre, a fierce Brexiteer, will retire on November 14th as editor of the *Daily Mail*, to be replaced by an old-Etonian Remainer. Peter Kellner, a pollster, points out that 13 out of 14 recent polls suggest that the majority of people think that voting to leave was a mistake. The most striking number was that 28% of Labour Leavers no longer back Leave. This raises doubts about the Conservative strategy of advancing into the Labour Party’s industrial heartland on the strength of Brexit.

A counter-insurgency is born

It would be a mistake to underestimate a group of people who turned a crackpot fantasy into an era-defining vote. The Brexiteers command at least 60 solid votes in Parliament and have repeatedly shown that they are willing to burn down the village in order to save it from the Eurocrats. Mrs May’s strategy of kicking the can down the road gives them further opportunities to exert their influence in the future.

But the Brexiteers don’t have an obvious champion who could replace Mrs May. Mr Johnson is too buffoonish, Michael Gove is too cerebral and Jacob Rees-Mogg is too absurd. The Fixed-term Parliaments Act gives the government enormous power to survive rebellions. Many Brexiteers are worried that Tory fratricide could deliver Britain to Jeremy Corbyn, ensuring that, rather than becoming more like Singapore, as they want, it would look more like Venezuela. Above all, this week of high parliamentary drama revealed that the Tory Remainers are at last willing to fight for their cause with the same ruthlessness and style with which the Leavers have fought for theirs. ■



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Housing in the Middle East

Villas and slums

AMMAN AND CAIRO

Expensive homes are easy to find in the Arab world. Flats for the poor, not so much

THE billboards almost seem to taunt motorists crawling through traffic below. They hawk luxurious town houses and villas with sumptuous pools in compounds that sound like Californian suburbs: Palm Hills, Eastown, Allegria. “Welcome to the greener side of life,” oozes one sign. But this is not California. It is Cairo, Egypt’s chaotic and crowded capital. The road is lined with endless rows of ramshackle redbrick buildings. Most are unfinished, their innards exposed, steel bars poking from the rooftops. The greener side of life is many kilometres away.

The drive along Cairo’s ring road is one sign of a paradoxical problem. Egypt has both a building boom and a housing shortage. At the high end, business is roaring. Developers are building tens of thousands of homes in upscale compounds, drawing young families with the promise of an escape from the city. But for most Egyptians these homes are out of reach. Villas can start at 10m Egyptian pounds (\$560,000)—about 200 years’ pay at average wages.

Poor Egyptians, and even the shrinking middle class, have few options. Egypt has a shortage of 3m homes. Its existing stock is overcrowded. The average Egyptian family has 3.3 children. More than 2m families, 9% of the total, live in one- or two-room homes. Almost 1m Cairenes live in slums the government considers unsafe, without basic amenities like sewerage and water. Thousands of people live in cemeteries.

The problem is not limited to Egypt. In

Jordan 26% of houses have at least two people per room, and 5% have at least four. Even in the oil-rich Gulf states, young people struggle to find affordable housing. The crisis has deep social consequences. Young people cancel engagements and postpone marriage because they cannot afford to make a home together. Crime is a growing problem in Cairo’s teeming slums.

Market manipulators

For decades Arabs have migrated from rural areas to cities in search of work. Cairo’s population has nearly doubled since 1996, to 23m. Amman, the capital of Jordan, has grown even faster, partly owing to an influx of Iraqi and Syrian refugees. Add to that Arab baby-boomers (mostly born in the 1990s and 2000s), who will soon look to buy homes and start families. Egypt alone has 50m people under the age of 20. It will need to build up to 600,000 new homes each year just to keep pace.

The market ought to provide them, but governments distort it. Corruption and mismanagement of land is a problem. Builders must cope with burdensome regulations and antiquated zoning laws. One study in Jordan found that they pay a third of a project’s value in taxes and fees. Rent controls also make it unprofitable to build in many places. Some Cairenes pay less for monthly rent than for a hookah at their neighbourhood café.

Large parts of Amman are zoned for high-end units, even though the market

wants cheaper ones. The government has also set the minimum size for new apartments at 110 square metres (1,184 square feet), bigger than most people want or can afford. As a result, property transactions in Jordan were down by about 14% last year, even though developers have built 1bn dinars (\$1.4bn) worth of unsold apartments since 2015, says Zuhair al-Omari, the head of the developers’ association.

Elsewhere, though, predictions of a luxury-housing glut have not yet come to fruition. The difficulty and expense of building mean that the only profitable portion of the Egyptian housing market is at the top (hence all those billboards). Demand has, so far, kept pace with supply. Richer Egyptians see property as the only reliable repository of value.

The Egyptian government has tried to fill the gap at the bottom of the market. In 2014 it unveiled a \$40bn scheme with Arabtec, an Emirati contractor, to build 1m low-income units. But the project stalled the following year for lack of funds. Frustrated Egyptians have taken matters into their own hands. The towers lining Cairo’s ring road are known as *ashwaiat*, the plural of “random”. They were built illegally, without permits or safety inspections. Families invested their life’s savings to secure a plot of land and start construction, then added a floor or two whenever they had the cash. But most cannot afford to finish. Of Egypt’s 43m homes, 9m are vacant, and half of those are incomplete.

Many of these problems converge in Boulaq, a district of 40,000 people in central Cairo. Residents have lived there for generations, often in dismal single-room flats with shared bathrooms and kitchens. But the prices are unbeatable. With rent controls, some pay as little as ten pounds per month. Now the government wants them out. They live on some of Cairo’s most valuable land, just back from the Nile ►►

▶ and behind a row of five-star hotels. Authorities plan to bulldoze the neighbourhood and spend \$227m building a new, modern community. Sketches from the project's British architect show rooftop gardens and wide pedestrian boulevards.

Though the warped market makes it hard to tell, the economic case for this seems dubious. Few wealthy Egyptians want to live downtown, and there are signs that the luxury market may soon slow. Many developers now offer financing with no down-payment, instead of the customary 15%. For existing residents, the project means uprooting their lives. Some have accepted a lump sum for their homes, at well below market value. Others were moved to Al-Asmarat, a new public-housing complex 15km south-east of Boulaq. They received two-bedroom flats and a year of free rent. After that they will pay a 30-year mortgage at 300 pounds per month. But the neighbourhood has almost no entertainment or retail, except for a few army-run shops. The commute to downtown Cairo can take an hour or more. It might be affordable, but it is not a place many Egyptians want to call home. ■

Iraq's election

From ballot box to tinder box

Burnt votes and an election recount threaten to plunge Iraq into crisis

WHAT would politicians the world over like to do when they lose an election? Annul the results and burn the ballots, of course. In Iraq such dreams come true. On June 6th outgoing MPs voted to hold a recount of Iraq's election and sack the head of the electoral commission. They were furious that a populist Shia cleric, Muqtada al-Sadr, won the poll, held in May. Then, on June 10th, a warehouse in Baghdad containing a million ballots went up in flames. Firefighters claim to have saved most of them, but the equipment for counting the votes was destroyed.

Weary of the democratic process, Mr Sadr and his rivals are again readying their militias. An arms cache that exploded under a mosque in Mr Sadr's Baghdad stronghold killed about 20 residents and brought his militia, Saraya Salam, onto the streets. "Certain parties are trying to drag Iraq into civil war," he warned.

The fiercest rancour is between the Shia factions vying for the post of prime minister. Mr Sadr's electoral bloc, Sairoun, seeks to wrest power from Dawa, a Shia Islamist party that has led the government since 2005. Dawa held the most seats in the outgoing parliament, but the electoral bloc of



Voters' wishes to ashes

its leader, Nuri al-Maliki, a former prime minister, tied for fourth in the poll. Mr Maliki and his allies cried foul and said a new electronic-voting system made the poll easier to rig.

Mr Sadr blames Mr Maliki and his comrades for corruption and a costly sectarian war, which drained Iraq of oil wealth that might otherwise have been used for developing shantytowns where millions of Mr Sadr's followers live. In 2016 the cleric's supporters stormed Baghdad's Green Zone, where the government has its offices. But if protests over the election lead to clashes, Saraya Salam would be a poor match for the better-armed militias backed by Iran. Their political arm, Fatah, came second in May. "Fighting among Shia groups would lead to the collapse of the political process," says Muhanad Seloom of Britain's Exeter University.

Iraqis hope their judges will stave off a constitutional crisis. On June 13th the top court upheld parliament's order for a full recount. It is still considering calls to re-run the election or extend the term of the current prime minister, Haider al-Abadi, another Dawa stalwart. If it cannot decide by June 30th, the current parliament's term will end and Iraq will have no parliament for the first time since 2005.

Western countries, prioritising stability, endorsed past Iraqi elections, in spite of accusations of fraud. But they are now less vocal, reflecting their declining troop presence, influence and, possibly, interest in Iraq. "We fear speaking out might only further destabilise the country," says a Western diplomat in Baghdad. Some countries hoped that Mr Abadi, a known quantity, would hang on to the premiership. Behind the scenes and with remarkable unanimity diplomats from Iran, the West and Gulf countries have urged Iraq's politicians to unite before the country implodes.

They have had some success. On June 12th Mr Sadr announced a new alliance

with Hadi al-Amari, the leader of Fatah, at a meeting in the Shia holy city of Najaf. For now, at least, both are downplaying their differences. Mr Sadr has denounced Shia chauvinism, urged reconciliation with Sunnis and reached out to the region's Sunni champion, Saudi Arabia, and its crown prince, Muhammad bin Salman. Mr Amari, by contrast, has spent much of his career in Shia Iran and says he answers to its leader, Ayatollah Ali Khamenei.

If the initial election results are upheld, Mr Sadr's coalition would have 141 of the 165 seats needed to form a government. But a manual recount could take until September and a re-run might not be held until local elections in December. Meanwhile the need for a functioning government is growing. Iraqis are facing the worst electricity blackouts in years. Turkey's new Ilisu dam threatens to cut off the Tigris river and cause water shortages in Iraq.

Confidence in the political system was already falling before the latest crisis. Only 44% of Iraqis voted, and only 35% of MPs elected in 2014 kept their seats. Damn democracy, say many Iraqis; if only we had a strongman again. ■

The war in Yemen

Port in a storm

The battle for Yemen's main lifeline

THE war in Yemen has entered what may be a decisive phase. Early on June 13th convoys of Yemeni fighters, backed by Saudi Arabia and the United Arab Emirates (UAE), advanced north along the coast towards Hodeida. The city is held by the Houthis, Shia rebels who seized the capital, Sana'a, in 2015. Emirati jets and warships supported the attackers. One aid-worker counted more than 30 air strikes in the first half-hour of fighting.

Hodeida is Yemen's main port. It handles the humanitarian aid on which four out of five Yemenis depend. Prolonged fighting could leave millions at risk of starvation. The Saudi-led coalition promises to keep the port operational, but it could be damaged either in combat or by sabotage (the Houthis reportedly placed landmines around the city). Saudi Arabia says the rebels use it to smuggle Iranian-made missiles, which they have fired at the kingdom.

The days before the offensive saw frantic efforts to avert it. Martin Griffiths, the UN envoy to Yemen, offered to put the UN in charge of the port. But the Houthis quit talks ahead of the coalition's June 12th deadline to withdraw from the city.

The coalition hopes to capitalise on ▶▶

Corrupting the beautiful game

Own goals

ACCRA

Ghanaian football faces a bribery scandal and jaded fans

“FOR shopping,” says a man, laying \$65,000 on a table. “Thank you,” says Kwesi Nyantakyi, the president of the Ghana Football Association, scooping it into a plastic bag. The bribe was a set-up, secretly filmed for a documentary by Anas Aremeyaw Anas, an undercover journalist. So was a sponsorship deal which Mr Nyantakyi appears to negotiate, taking a cut through his own private company. The film-makers offered money to more than 100 mostly west African football officials, including a Kenyan referee due to officiate at this month’s World Cup. Only three declined.

The revelations have thrown Ghanaian football into turmoil. Mr Nyantakyi, who denies wrongdoing, has resigned. Domestic matches have been suspended indefinitely. On June 7th the government said it would dissolve the football association. It has been badly and crookedly managed for decades, which is why Ghana, a football-mad country, has a league that no one wants to watch.

In the 1970s fans would hang from floodlights, recalls Sam Suppey, then a goalkeeper for Accra Hearts of Oak, one of Ghana’s biggest clubs. Now many teams play in near-empty grounds. In January an official in Kumasi suggested

that the city’s stadium could make more money from funerals than football.

Erratic scheduling is a problem. The current season started late because one team was fighting its relegation in court. The exodus of stars is another. “A player shows up for just a season,” says Nana Darkwa Gyasi, a pundit. The best leave for Europe, but many go to rival African leagues, where big clubs such as TP Mazembe in Congo pay higher wages.

Ghanaians crowd into halls to watch European matches on television. As a child, Sylvester Ali would run from school to watch his local team. These days he follows Arsenal instead. “I’d prefer to sit here, have a bottle of Coke, and watch good-quality football on a clear screen,” he says, sitting in a bar in Accra. He hasn’t been to a stadium for about 20 years.

Still, there is a kickabout on every corner. Mark Noonan, the American chief executive of Hearts, says football in Ghana is like cocoa or gold: “It’s one of their national treasures.” For the faithful few, passion is undimmed. Fans serenaded their team bus through the streets after a recent win against Asante Kotoko, their great rivals. “Never say die”, runs their motto, “until the bones are rotten.”

Impregnated and expelled

The war on conception

MWANZA

Tanzania tosses pregnant girls out of school, for life

MARY (not her real name) was 16 when she became pregnant. The father sold chips by the road near her home in northern Tanzania. She felt special when he gave her money. But when her belly swelled, he ran off. At school she was caned in front of teachers, pupils and her own shamed parents. Then she was expelled. “I would not have had sex”, she says, “if I knew you could get pregnant after doing it once.”

A quarter of Tanzanian girls aged 15-19 are pregnant or have given birth. The government’s response is to kick them out of school for good. Official statistics record that between 2003 and 2011, more than 55,000 girls dropped out because of pregnancy. This is surely a vast underestimate; cases are often recorded as simple truancy. The main way back into education is through vocational training or at a fee-paying school, which most cannot afford. This policy is reinforced by compulsory pregnancy tests. Teachers pull girls out of class to give a urine sample or, more often, to be squeezed and prodded in the abdomen.

None of this is explicitly required by law. Vague rules say a student may be expelled for an “offence against morality”. In recent years the tone had been changing. Last year the education ministry presented draft guidelines for pregnant girls to re-enter school. The ruling-party manifesto said that those in primary school should continue their studies.

But then John Magufuli, the president, made his views known. “After getting pregnant, you are done,” he thundered last

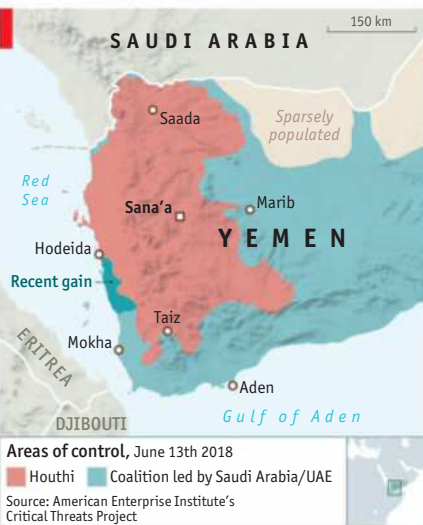
▶ Houthi disarray. In December the rebels broke with their ally, Ali Abdullah Saleh, a former dictator, whom they killed. Mr Saleh’s nephew, Tareq, now leads one of the factions fighting alongside the coalition. Also on the coalition’s side are southern fighters, many of whom want independence from the north, and local Sunnis,

known as the “coastal resistance”.

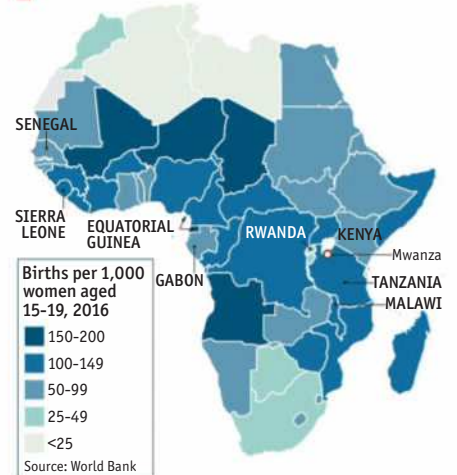
The Saudis and Emiratis calculate that if they control Yemen’s lifeline, they can force the Houthis into a negotiated settlement. Capturing it would be a financial blow. The rebels pocket millions of dollars from taxes on cargoes. But they would probably compensate by raising taxes on goods that enter their territory, which the war-weary population can ill afford.

The Houthis do not have a record of compromise—not in this war, nor in the decade-long insurgency against Mr Saleh that preceded it. They may try to draw the coalition into urban combat. (Hodeida is home to 600,000 people, though many have already left.) They threatened to fire more missiles at Riyadh and Abu Dhabi.

Hodeida is the last big Houthi-controlled city on the coastal plain, where the population is wary of the rebels. Next the coalition will have to move into the mountainous highlands, where the Houthis enjoy more support. It would rather cut a deal. “We are trying to drive them back to the negotiating table,” says an Emirati official. As *The Economist* went to press UN officials held out hope that a disaster could be averted. But the window is closing. ■



Teens and mothers



▶ year. Halima Mdee, a lawmaker who criticised Mr Magufuli's stance, was arrested and charged with insulting the president.

In the past, says one teacher, sympathetic schools could quietly readmit girls after they had given birth. But none dares do so now. An official in one district called for the arrest of pregnant schoolgirls, to "serve as a lesson to the rest". Five were apprehended by police.

Punishment does not seem to reduce teenage pregnancy. The rate is higher than in neighbouring Kenya, which allows mothers to return to class. It is highest of all in poor, rural areas, where contraception is scarce and sex may pay for better grades or a motorbike ride to school. A government survey found that 11% of 15- to 19-year-old girls had experienced sexual violence. One activist, too nervous to be named, recalls how she was expelled after being raped at 14. Girls get the blame for pregnancy, she says, rather than men and boys.

Although Tanzania's approach is unusual, it is not unique. Sierra Leone and Equatorial Guinea also expel pregnant girls, notes a report published by Human Rights Watch, a pressure group. Laws elsewhere in Africa vary widely. In Malawi pregnant girls are suspended for 12 months, but then allowed to return in the following academic year, subject to some tedious paperwork. In Senegal they are readmitted with a certificate saying they are healthy. A handful of places, including Rwanda and Gabon, encourage mothers to continue their studies. In 24 countries there is no clear policy, leaving girls' fates to the whims of local officials.

For many girls, getting pregnant is the end of their dreams. Some risk backstreet abortions. Others get married. Many end up as maids; a few, as prostitutes. Mary now scrubs pots and pans for a living. "I would go back to school," she says, wistfully, "if I got the chance." ■

merely expressions of the "free speech" of enthusiastic supporters, he insists with an admirably straight face. But he does not rule out the possibility. "You cannot deny he has a certain experience in running the country," Mr Nkanga says.

The path towards a third term involves fiddling with the constitutional court, which ruled in 2016 that Mr Kabila could stay in office while waiting for elections to be organised. Over the past few months, several judges have retired (how willingly is unclear) giving Mr Kabila the chance to appoint new ones. Many Congolese politicians fret that the court could soon rule that, since the constitution was amended in 2011, the court should be restarted. That could potentially give Mr Kabila another term. A similar gambit was used by the president of neighbouring Burundi, Pierre Nkurunziza, in 2015.

Mr Kabila may, however, face an unexpected opponent. On June 8th the International Criminal Court (ICC) acquitted Jean-Pierre Bemba, a warlord who has spent the past ten years in prison in The Hague. Mr Bemba (pictured) had been convicted of crimes against humanity in 2016, but on appeal the court overturned the verdict on the basis that he could not be held wholly responsible for the rapes and massacres his troops committed. In 2006 he came second to Mr Kabila in Congo's first election in almost half a century. His return could be seismic. Kris Berwouts, the author of "Congo's Violent Peace", says that Mr Bemba has "the aura of an anti-Kabila icon". More than most, he can get his supporters to protest on the streets.

If Mr Kabila runs, can he win? The president is fiercely unpopular. In most of Congo it is near impossible to find anyone who will say a good word about him. Polling by the Congo Research Group at New York University shows that only 17% of the population would vote for the ruling party (which is not yet entirely united behind its leader). But the election could be rigged or bought. The leading opposition candidate, Moïse Katumbi, a wealthy former governor and one-time ally of Mr Kabila, held a huge rally in Kinshasa on June 9th. Mr Katumbi, in exile since 2016, appeared by video link. Whether he teams up with Mr Bemba is far from clear. By excluding candidates and dividing the opposition, Mr Kabila could sneak through under the first-past-the-post system without having to steal too many votes.

If he did so, most Western diplomats would accept his victory. They value stability above all. Most Congolese, however, would not be thrilled by the prospect of more of the same. Some 13m people require urgent humanitarian assistance, according to the UN. In a country of lush, fertile forests, over 2m children are close to starving. A third term for a useless president would not help it change course. ■

Congo's coming election

The indispensable Mr Kabila

KINSHASA

Congo's president wants an unconstitutional, unpopular third term. An old rival, freshly acquitted of war crimes, may complicate matters

LAST month residents of Binza Delvaux, a neighbourhood of Kinshasa, the lively capital of the Democratic Republic of Congo, awoke to discover a huge poster in the local market. It showed Congo's president, Joseph Kabila, with the caption "Our Candidate". Around the same time, crude advertisements started appearing on television stations praising the "indispensable" Mr Kabila. In cities across the country, T-shirts bearing the president's face have been handed out at free concerts put on by his party, the People's Party for Reconstruction and Democracy (PPRD).

Congo, a dysfunctional, vast country of perhaps 80m people, is catching election fever. This is odd. According to Congo's constitution Mr Kabila, who has been president since the murder of his father in 2001, is barred from running for a third term and ought to have stepped down in 2016. Instead, he chose simply to stay in office. After two years of "glissement" (sliding) he seems to have decided to hold elections—and run in them—whatever the constitution says. A vote is scheduled for December 23rd. It is unlikely to be free, fair or even peaceful, but it may at least take place. "Everything is going well," says Corneille Nangaa, the head of the electoral commission, who has been buzzing around European capitals and Washington, DC to persuade doubters.

The reason Mr Kabila has relented and



A veteran of two types of campaign

now wants to hold elections is that he may have found a way to make himself a candidate. To be sure, he has not yet explicitly said he will run. Patrick Nkanga, the nattily dressed spokesman of the PPRD, says that the posters and advertisements trumpeting Mr Kabila do not necessarily mean that the president will stand again. They are



Voting (1)

Multiple choice

PORTLAND, MAINE

Ranked-choice voting, used statewide for the first time ever in Maine, could provide a solution to America's dysfunctionally partisan politics

“A LIBERAL,” said Robert Frost, an American poet, “is a man too broad-minded to take his own side in a quarrel.” An ad released less than a week before election day by Mark Eves and Betsy Sweet (pictured above), opponents in Maine's Democratic gubernatorial primary, seemed a paragon of Frostian liberalism. Ms Sweet, who resembles a slightly less caffeinated Elizabeth Warren, urged her supporters to vote for Mr Eves; while Mr Eves asked his supporters to back Ms Sweet. On election day the two gripped and grinned together outside an elementary school in Portland's lovely West End.

In fact, their alliance was not wet leftism; it was a strategic gambit. On June 12th Maine conducted the first-ever statewide election using ranked-choice voting (RCV), in which voters rank the entire field rather than just voting for a single candidate. Trailing in the polls, Ms Sweet and Mr Eves figured they could boost their chances by campaigning for second-place votes.

RCV has long been a darling of political scientists. But Maine's experiment should interest anyone frustrated by America's crippling partisan politics. RCV may be unable to force liberals and conservatives to like each other, but it could at least blunt the electoral effects of hyperpartisanship.

RCV is not new. Australia has used it for a century, Malta and Ireland for slightly less. Some Oscar winners are chosen by RCV, as are prizewinners at the World Science Fiction Convention. Several Ameri-

can cities—including Minneapolis, San Francisco, Portland (Maine) and Santa Fe—have recently adopted it, too. In an RCV election, voters rank the field by preference, from first to last (though they can always choose to vote for just one candidate). If one candidate gathers a majority of first-place votes when all votes are in, he wins. If not, the candidate with the smallest number of first-choice votes is eliminated, and his secondary, tertiary and so forth votes are redistributed. That process continues until one candidate eventually has a majority.

How long that takes varies. San Francisco's mayoral race took place on June 5th but the winner was not confirmed until June 13th. By contrast, three years ago Ethan Strimling won a majority of votes outright in Portland, Maine's mayoral race. As *The Economist* went to press, Sean Moody appeared to have won the Republican governor's race outright, while Janet Mills held a steady lead on the Democratic side.

RCV boosters say it changes campaigns and elections in three laudable ways. First, it encourages voter turnout. A study of 79 elections in 26 American cities found that RCV was associated with a 10% increase in turnout compared with non-RCV primary and run-off elections, and San Francisco's race had the highest primary turnout in years. Voters turned off by the front-runners have less incentive to stay home. They can give their first-choice vote to their favourite candidate, even if he might be a

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quixotic choice, while allocating their other choices strategically.

Second, it shifts incentives away from negative campaigning—because candidates are trying not just to turn out their base, but also to win as many second- and third-choice votes as possible—and towards alliance-building, as Mr Eves and Ms Sweet demonstrate. Finally, boosters argue that introducing RCV limits the efficacy, and therefore the amount, of money spent by single-issue campaign groups, because they often finance negative ads.

In theory, RCV elections will more often be won by candidates broadly acceptable to most voters. Kyle Bailey and Cara McCormick, who have led Maine's RCV campaign, said they have staged dozens of mock RCV beer elections in microbreweries (which abound in Maine: winter here is long, cold and dark) to show voters how the process works. Mr Bailey said the loudest backers would often argue for oyster stout, or some other niche beer style, but the most votes would inevitably accrue to a “middle-of-the-road IPA”—which perhaps had fewer or less ardent fans, but which everyone could drink.

Opponents argue that RCV is too complicated—and indeed, in Maine, people's enthusiasm for RCV sometimes outstrips their ability to explain it. (Though on election day Maine's secretary of state, whose office released a detailed video explaining RCV, said he had received no complaints about ballot complexity.) RCV support in the state has split along party lines: Republicans largely opposed it, while the RCV campaign's watch party offered six types of Kombucha (fermented tea) on tap.

Paul LePage, the abrasive and bombastic outgoing governor, won two elections without a majority, thanks to liberals splitting their vote. Perhaps Maine Republicans doubt their ability to appeal to a majority of voters, and instead must discourage ►►

▶ turnout while pandering to their own base? The state party filed an unsuccessful lawsuit in May, tortuously arguing that RCV impinged on their rights of association under the First Amendment.

After Maine's voters approved RCV by referendum in 2016, Republicans in the legislature narrowly passed a bill blocking its implementation. But backers gathered enough signatures—in a frenzied, dead-of-winter campaign across the state—to pass a “people’s veto” that retained RCV in this election, and asked Maine's voters on this year's ballot whether they wanted to use it again. Guardedly optimistic as results filtered in on election night, Ms McCormick vowed that, if Maine voters approved it (and it looks as if they did), she and her colleagues would take their campaign to more states. Get ready to rank, America. ■

Voting (2)

Husted and busted

A divided Supreme Court strikes a blow for lower election turnouts

THE Supreme Court is not comprised of “nine junior varsity politicians”, Justice Stephen Breyer insists. For Chief Justice John Roberts, America's top jurists are umpires with no skin in the game. With a 5-4 ruling on June 11th in *Husted v Philip Randolph Institute*, a significant voting-rights case, these paeans to dispassionate non-partisanship ring a bit hollow. All five justices appointed by Republican presidents voted to uphold an Ohio law disproportionately erasing Democrats from the voter rolls; all four Democratic appointees voted to strike it down.

Politics loom large in the background, but the main opinions in *Husted* turned on a thorny question of statutory interpretation. When Congress passed the Help America Vote Act (HAVA) in 2002, a follow-up to the National Voter Registration Act (NVRA), what did it mean when it told states not to remove people from registered voter lists “solely by reason of the person's failure to vote”?

Larry Harmon, an Ohioan who was turned away when he showed up to vote against pot legalisation in 2015, argued that his state violates federal law. After voting in 2004 and 2008, Mr Harmon skipped the next three elections and says he doesn't remember receiving a postcard from the state asking him to verify his address in 2011. This pattern of non-voting, with the unreturned missive in the middle, resulted in Ohio disenfranchising Mr Harmon.

Writing for the majority, Justice Samuel Alito said there is nothing untoward about

Ohio's law. The state gave Mr Harmon a chance to say he hadn't moved, so sitting out a few elections wasn't “the sole criterion” on which he was nixed from the rolls. The state removes voters, Justice Alito observed, “only if they have failed to vote and have failed to respond to a notice.”

The real reason Mr Harmon and thousands of other Ohioans were dropped from the rolls, Justice Breyer wrote in dissent, was their decision to sit out a few elections. “If the registrant had voted at any point”, he “would not have been removed.” Voter-registration laws allow states to “confirm” a voter has moved by requiring the receipt of a return postcard, Justice Breyer noted, but Ohio illicitly uses non-voting as the first sign somebody may have moved. “As a matter of English usage”, he wrote, “you cannot confirm that an event happened without already having some reason to believe at least that it might have happened.”

Infrequent voting should not elicit a hunch that someone has moved, Justice Breyer argued; nor does the failure to send back the postcard prove anything. In 2012 more than 1m notices posted to Ohioans—people who had not voted in the previous federal election—were never returned. According to the logic of *Husted*, about 13% of Ohio's eligible voters could therefore be struck off. The “streets of Ohio's cities are not filled with moving vans”, Justice Breyer quipped; and there is no reason to think so many of its residents of the Buckeye State clear out when only about 4% of Americans move county each year.

Only Justice Sonia Sotomayor addressed the political stakes. Low voter turnout and rates of postcard return could be caused by “language-access problems, mail-delivery issues, inflexible work schedules and transportation issues”, she wrote, and these factors “make it more dif-



Postcard from DC

ficult for many minority, low-income, disabled, homeless and veteran voters”—mainly Democrats—“to cast a ballot or return a notice.” There is a racial component, too. Since 2012, 4% of voters in a white suburb were removed under this programme, compared with 10% of voters in predominantly black Cincinnati neighbourhoods.

With *Husted* on the books, Ohio is unlikely to remain the only state with such a scheme. Since 2010, Republicans have pursued an electoral upper-hand through gerrymandering (the subject of a trio of Supreme Court rulings coming this month) and voter-ID laws. With new licence to edit voting rolls, other states are sure to mimic Ohio. When the ruling arrived, Jon Husted, Ohio's secretary of state, invited copycats. His state's law, he said, offers “a model for other states to use”. ■

Whaling in Alaska

Summer ice

UTQIAGVIK, ALASKA

A dispatch from the melting north

IT IS whaling season in Utqiagvik, the newly official—as well as ancient indigenous—name for Barrow, Alaska's, and therefore America's, most northerly settlement. This village of about 4,500 residents, the majority of whom are Inupiaq, sits at the edge of the Arctic Ocean. Whaling season is a time of year when the community comes together around thousand-year-old cultural traditions.

The community's name means “the place where we hunt snowy owls”. But out on the jumbled sea ice that stretches from town to the horizon, local residents are focused on bowhead whales. Culturally and nutritionally, bowheads are the most important subsistence food species for native residents in this isolated settlement, accessible only by air or by sea during the short summer months when the water is open. Food that is not harvested locally is flown in. A gallon of milk at the AC, the largest grocery store in town, costs \$10.

A short walk away from the AC, Isabel Kanayurak, a local elder, sits at a desk on the second floor of the blue-painted Barrow Volunteer Search and Rescue building. This is the community's shore-based hub for whaling. Ms Kanayurak's father was a whaling captain. Now her son is. She has been involved with whaling all her life. A wide window in front of the desk gave her a long view north across the sea ice. Volunteers like Ms Kanayurak monitor the VHF radio 24 hours a day during whaling season. Over channel 72, these volunteers communicate with whaling camps far out ▶▶



A whale of a time

► on the ice. They share landing reports, give safety warnings and co-ordinate supply deliveries. Villagers across town tune in as well. Everyone is waiting for the joyous yells that signal a successful hunt.

Bowhead are beamy black whales, the size of a school bus and a half at most, with a characteristic downturned jaw. These animals live exclusively in the cold waters of the far north, filtering minute krill out of the water for food and using their massive skulls to blast through sea ice up to two feet thick in order to create breathing holes.

In the season so far, the crews have landed eight whales and struck and lost ten. International Whaling Commission regulations grant the community a combined quota of 25. “It’s going pretty good,” Ms Kanayurak said of the season. “But you have to watch how the weather is and how the ice is going,” she said.

As they have done for thousands of years, hunters paddle *umiaks*, whale boats made from the skin of bearded seals stretched over wooden frames. Wearing white parkas and remaining quiet in the boats, hunters hope to blend in with the ice. Once a crew has struck a whale, other crews pitch in to help land the animal, using motorised aluminium skiffs and block and tackle.

Whale meat is eaten boiled, fermented, fried and frozen. Ms Kanayurak has no preference. “Everybody likes the spring ones,” she says of the whales. After a long winter when the sun doesn’t rise above the horizon for more than two months, villagers cherish fresh meat.

For time immemorial, successful crews have earned respect from their community. And as has been done for centuries, hunters share out whale meat, with careful attention to elders, like Ms Kanayurak, who cannot harvest their own. In the summer, villagers celebrate a successful hunt with a communal feast.

Recent surveys show that bowhead

populations are doing well, probably because warming temperatures in the Arctic are increasing the availability of food. But with continued rapid changes to the climate and oceans, the future for these whales—and the Inupiaq traditions surrounding them—is uncertain.

A pair of bowhead rib bones form an arch at the edge of the beach three blocks away from the Search and Rescue building. By 9pm, as the sun is finally dropping towards the horizon, the arch casts a long shadow across the snow. Far out on the ice and in the indigo waters of the Arctic Ocean, the whaling crews of Utqiagvik are still working. ■

Sexually transmitted diseases

Rash behaviour

WASHINGTON, DC

The number of people with STDs soars

NEARLY 20 years ago, the Centres for Disease Control and Prevention (CDC) released an ambitious proposal to “eliminate syphilis from the United States”. The plan seems to have worked rather poorly. Soon after the proposal’s issue, infection rates began to head in the wrong direction and then worsened. From 2000 until 2016, the most recent year for which data are available, the rates of syphilis quadrupled. Congenital syphilis, a nearly eradicated condition in which the infection is passed from mother to fetus, has also sharply increased—by nearly 28% from a low base in one year. That is distressing not only because the disease is easily detected and treated by a course of antibiotics, but also because afflicted mothers have a 40% chance of a stillbirth.

The problem is not only limited to syphilis. Other sexually transmitted diseases (STDs) are roaring back. Rates of gonorrhoea have, after a brief period of decline, surged 46% since 2010. Chlamydia, an extremely common STD which can result in female infertility, has nearly doubled since 2000. Nearly every sort of American has been affected. Even though people under 30 account for a large share of new infections, STDs have also risen among the elderly. Among adults aged 55 or over, chlamydia has more than doubled since 2010, while gonorrhoea has more than tripled. The public-health departments of New York City and Los Angeles County have sounded alarms, as have rural states like Mississippi, where STD rates are among the highest in the country.

The way STDs are spread—through unprotected sex with the infected—is no real mystery, even to those adolescents brought up in the most wholesome settings. So what accounts for the rise in transmission? A few theories exist. The first lays the blame on dwindling public dollars for STD prevention and monitoring programmes. Since 2003, the CDC’s STD prevention budget, which funds state health departments and clinics, has declined by 40% in real terms. The funding slide continued through presidencies of both parties, although the Trump administration pitched a 17% cut to the programme last year (and a 19% reduction to the CDC’s HIV prevention programme to boot). Clinics offering confidential services are especially important for young people, who often do not seek testing through their general practitioners “both because of stigma, and because doctors do not really like to talk about sex”, says David Harvey, the executive director of the National Coalition of STD Directors, an advocacy group.

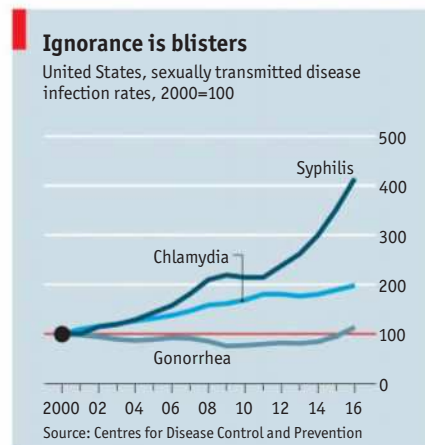
Another explanation is that sex is now seen as less risky. The most widely feared venereal disease, HIV, is much less scary than it once was. Gay and bisexual men, who are still at extremely high risk of HIV infection in America, are now encouraged to take prophylactic pills once a day that can reduce the chance of infection by 99%. For those who contract HIV, antiretroviral medicines offer the chance of a near-normal life. But the pills do not shield gay men from other STDs. They have accounted for a mightily disproportionate share of the newly infected.

A similar dynamic may be at play for heterosexual couples, where the principal fear is often unintended pregnancy. Birth-control pills and intrauterine devices can reduce the worries of an unannounced arrival, but they can also encourage couples to ditch the rubbers. For those who have not been properly tested, this could spread more infections.

America is not the only place where STDs are surging. In 2017 England saw a ►►

▶ 20% increase in syphilis and a 22% increase in gonorrhoea. It was also the site of the first antibiotic-resistant strain of gonorrhoea. In Western Europe rates of STDs have seen similarly large increases (more than 50% in some countries) from 2010 to 2014. This suggests that changing sexual mores, rather than a particularly virulent strain of American exceptionalism, might be to blame.

American lawmakers have unbridled enthusiasm for abstinence-only sex education, spending an average of \$60m a year on it. Experimental evaluations show the programmes to be claptrap, with no effect on delaying sexual activity. Ruling out abstinence, the most effective way to prevent STD transmission among sexually active young people is with condoms. Yet their use among young people has steadily declined in recent years, according to CDC surveys. William Yarber, a senior scientist at the Kinsey Institute at Indiana University, thinks this has much to do with unhelpful stigma surrounding condoms. They are seen as unsexy, and insisting on their use



can apparently be taken as an offensive judgment of a partner's "cleanliness". Forgoing them can be risky, though. Mutual assurances, unless backed up by recent testing, can be misleading. "Both men and women tend to not accurately report their sexual history," says Mr Yarber. "Especially if the moment is there." ■

Preventing suicide

The sorrows of Werther

CHICAGO

How to stop so many people from killing themselves

SUICIDE is often born of despair, but suicide prevention is far from hopeless. What is required is a better understanding of the suicidal brain, says Dan Reidenberg of SAVE, a non-profit organisation. Research suggests that people cannot remain acutely suicidal for much more than an hour, and that half of those who do commit suicide take the final decision less than ten minutes before killing themselves. Yet what goes on in the brain in those minutes remains a mystery. It is one that is worth trying to solve, since a new report from the

Centres for Disease Control and Prevention (CDC) shows a sharp spike in suicide across the country (see map).

In practical terms, measures that increase the distance between a suicidal thought and access to lethal means can make a big difference. After the Australian government reduced the country's stock of guns by around one-fifth through a gun buy-back programme in 1997, the rate of suicide by gunshot dropped by almost 80%. America is unlikely to follow Australia in the near future, but even a requirement to store guns safely at all times could help; half of all American suicides are by gunshot. Pharmacists still sell painkillers loosely in pots, enabling people to pour the whole lot down their throats in one movement. They could follow Britain, which in 1998 switched to blister packs that require users to punch pills out one by one. Deaths from overdoses of paracetamol (the active ingredient in Tylenol) dropped by 44% in 11 years.

In theory, all suicides are preventable until the last minute of life. Robert Gebbia, head of the American Foundation for Suicide Prevention, would like the federal government to provide \$150m for research into prevention. He would also subsidise the 160 local call centres that serve the national

suicide-prevention lifeline, and tend to operate on a shoestring. (On June 30th Crisis Connection, Minnesota's hotline, which handles 50,000 calls a year, will be forced to shut down for lack of funds.)

One idea is a bill currently being considered by Congress, which would change the 11-digit number of the suicide lifeline to a more easily memorised three-digit number, like 911, the nationwide number for emergencies. Studies suggest that celebrity suicides can have a "Werther effect" (named after Goethe's novel): a spike in copycat suicides. In the days after the deaths of Kate Spade, a handbag designer, and Anthony Bourdain, a foodie, writer and presenter (see Obituary), calls to the lifeline increased by 63%, further evidence both for the Werther effect and for the importance of hotlines. According to the CDC, suicide rates increased for all age groups younger than 75, with the group aged 45 to 64 reporting the largest overall increase (from 13 per 100,000 people to 19 per 100,000) and the greatest number of suicides (232,108). Native Americans and elderly white men seem to be particularly vulnerable.

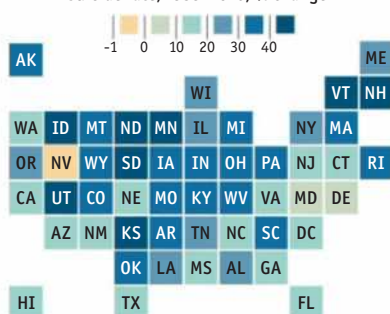
Many still see suicide as a choice rather than a public-health problem, which is why initiatives to prevent suicide are much newer (a national strategy was first devised in 2001) than those aiming at the prevention of cancer or heart disease. They are also far less generously funded compared with other leading causes of death. The suicide-prevention grants named after Garrett Lee Smith, the son of a senator who killed himself, have been funded at the same rate of \$35.4m since 2013. The national suicide-prevention hotline, which has helped more than 6m people since it started in 2005, has also been funded with the same \$7m a year for the past five years.

The most effective help, though, remains the support of friends, family and neighbours, especially if they can learn to detect warning signs such as withdrawal, talk about wanting to die or the sudden misuse of booze or pills. "The solution lies in social, economic, spiritual and other connections," says Jerry Reed of the National Action Alliance for Suicide Prevention, echoing Émile Durkheim, the sociologist who wrote the first study that treated suicide as a health problem, rather than a religious or moral one.

Melancholy suicide is a state of great sadness "causing the patient no longer to realise sanely the bonds which connect him with people and things around him", wrote Durkheim in *Le Suicide* at the end of the 19th century. At the time, doctors prescribed buckets of cold water thrown over the head to combat suicidal thoughts. The Western world has made progress in treating mental illness since, but a few buckets of icy water over the heads of America's lawmakers might do some good. ■

From despair to where

Suicide rate, 1999-2016, % change



Source: Centres for Disease Control and Prevention

Lexington | The rising cost of America First

Donald Trump wants his own foreign policy, but will not want to pay for it



WITH the ink still drying on the Singapore declaration, President Donald Trump was asked why the North Koreans were any likelier to honour its terms than all the previous nuclear agreements they have flouted. The difference, he said, was himself. “I don’t think they’ve ever had the confidence, frankly, in a president that they have right now.” It was a reminder that the only unifying principle in Mr Trump’s maverick foreign policy is his relentless eye for personal advantage.

That is apparent in his North Korea policy more broadly. To use a real-estate analogy: when he was first briefed on the state of North Korea diplomacy by his predecessor, Mr Trump perhaps saw it less as an existential threat than a fixer upper—an opportunity for an easy win. Negotiations had long been frozen over America’s demand that Kim Jong Un’s regime should give up its nuclear arms and the regime’s refusal to do so. Yet there were two ways an America president could shake things up: by promising Kim Jong Un more normal relations, or threatening him with war. Most North Korea-watchers considered the first unconscionable and the second unrealistic. Mr Trump, unburdened by such niceties, tried them both, sometimes in the same breath.

Whatever the merits of the ensuing detente, the tactic has paid off handsomely for the president. It has enabled him to create a semblance of historic progress, which has driven his supporters wild with glee and bookmakers to slash their odds against him bagging the Nobel peace prize. And in case the deal comes to nothing, he says he has a contingency plan. He will simply “find some kind of an excuse” to absolve himself of blame. This was so predictable it is amazing Mr Trump retains such power to shock. Almost all his disruptive foreign-policy moves, the rows with allies, withdrawals from international agreements, tariffs and threats of worse on every front, can be viewed primarily as tactical ploys intended to push his self-image as a decisive leader, honour ill-considered campaign pledges or stoke the partisan, nationalist and xenophobic sentiment from which he draws strength. Yet this strategy is liable to produce diminishing returns.

For additional context, consider that Mr Trump’s haymakers at the world order and diplomatic convention have so far been easy to throw. Obliterating Barack Obama’s legacy, by withdrawing from the Trans-Pacific Partnership, the Paris climate accord

and Iran deal, was a cinch. Each step was applauded by partisan Republicans, and the costs America will incur as a result are mostly remote and hard to quantify. Haranguing America’s allies for better trade and security terms, the main vehicle for Mr Trump’s claim to be pushing America First, has been no harder. Western leaders are reluctant to argue back, because of America’s heft and occasionally—as in his scorn for their paltry defence spending—because Mr Trump has a point. The stifling etiquette of diplomatic relations has magnified the dramatic effect of his grandstanding. Mr Trump was horribly rude to Justin Trudeau after the G7 gathering last week. Yet the common diplomatic view that the sky fell in because he refused to sign the shindig’s communiqué seems faintly ludicrous. By such means Mr Trump has been able to smash the maximum amount of crockery, for maximum political effect, at a modest or intangible cost. But he will now have fewer opportunities for low-cost bullying or audacious dealmaking available to him.

He has no more big Obama foreign achievements to unwind. The next wave of international entities in his sights—NAFTA, NATO and the United Nations—would be far more damaging to leave, politically and otherwise. Mr Trump’s decision to withdraw from the Iran nuclear deal and levy metals tariffs on Canada and the Europeans has already raised the cost of mistreating allies. It has forced them to take retaliatory action and probably made them less willing to provide support for future Trump dealmaking, especially with Iran, which his advisers would like to turn to next. That is in part because they know the president’s disregard for the Palestinians has made the “ultimate deal”—a settlement of their argument with Israel—extremely unlikely. On trade, Mr Trump faces even more steeply rising costs. He has so far convinced his supporters that protectionism can be profitable as well as emotionally satisfying. Yet the negative consequences of the tariffs on foreign cars and trade war with China he has threatened might make them think again. Mr Trump’s opportunities for easy America First wins, in short, appear to have been exhausted.

Crude yet calculating

There are three ways this could go. First, he could restrain himself—a prediction often made, and never borne out. Indeed there are fresh reasons to think Mr Trump is not about to become more conventional. All presidents become more active abroad as their troubles mount at home; and he, beset by legal peril, could use a foreign distraction more than most. Alternatively, he could double down and attack the international system more fiercely. That would be consistent with his record—except in one respect. Mr Trump has proved the prognosticators wrong because he understands his interests better than they do. His divisive behaviour is more popular than they imagined. By extension, it is not uncalculated: Mr Trump wants to promote himself, not mayhem. So if the rising costs of his confrontational foreign policy erode his support, he would probably moderate the policy.

That raises a third possibility. The president may maintain his antagonistic style, but follow through on fewer threats and promises. He may still threaten war, in trade and militarily, but he will not start one, because wars are expensive and end up unpopular. He will still float audacious deals, but he will settle for smaller-bore pacts—recognition of an Israeli land-claim, perhaps, or a stillborn deal with the Taliban—that he can spin as something bigger. On balance, this seems likeliest. It is how he conducted his business. It also best describes the stunt he pulled in Singapore. ■



Canada

Breaking a few eggs

OTTAWA

The economy is already feeling the effects of Donald Trump's trade war

ALL dishes on the lunch menu at La Cantine du Centre-Ville, a pop-up restaurant near Parliament Hill in Ottawa, are made from ingredients that annoy Donald Trump. The Mini-Quiche aux Trois Fromages uses Canadian eggs, milk, cheese and chicken "bacon"; the Galette de Saucisse de Dinde is made with turkey. The Cantine pops up every year to publicise Canadian dairy, poultry and eggs, which are protected by import quotas and tariffs. This year's version, on June 12th, was festive, with banners flapping under a blue sky and diners enjoying free food. But the people wearing "Ask me, I'm a farmer" t-shirts are worried.

They fear that they will be the next casualties in the trade war that Mr Trump is waging against the United States' allies. With good reason. The 25% tariff the United States slapped on steel this month, and the 10% levy on aluminium, apply to imports from Canada as well as from Mexico and Europe. Canada, like the others, will retaliate by raising tariffs on goods, like toilet paper and lawnmowers, made in regions that matter politically to Mr Trump. The renegotiation that Mr Trump demanded of the North American Free-Trade Agreement (NAFTA), which includes the United States, Mexico and Canada, drags on. The economy is already suffering. To avoid further damage, Canada may have to stop coddling farmers.

Few economies are more vulnerable to

Mr Trump's onslaught than Canada's. Two-thirds of its trade is with its southern neighbour. The steel and aluminium tariffs affect industries that employ 30,000 Canadians. The C.D. Howe Institute, a think-tank, predicts that the barriers will cost 6,000 jobs and reduce Canada's GDP by 0.11%. If Mr Trump carries out his threat to impose a 25% tariff on cars the damage will be far greater. Canada's vehicle industry employs about 130,000 people and ships 85% of its wares to the United States.

In the face of such threats the value of Canada's dollar has fallen from 80 cents in mid-April to 77 cents. Economists had expected business investment to take over as the main source of growth from spending by consumers, who have record levels of debt. But investors, unsure they will be able to continue exporting freely to the United States, are holding back. The central bank cited this as one reason it did not raise interest rates on May 30th.

At first, Canada's prime minister, Justin Trudeau, had hoped to win leniency by charming the volatile American president. That tactic failed in spectacular fashion after the G7 summit on June 8th and 9th hosted by Mr Trudeau in La Malbaie, Quebec. When Mr Trudeau defended Canada's riposte to the steel and aluminium tariffs in a press conference at the end of the summit, Mr Trump tweeted that he was "very dishonest & weak" and accused him of making "false statements".

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Bello is away

Canada gamely argues that the United States would also be hurt in a trade war. Canada is the biggest destination for exports from 36 of the 50 American states. Bilateral trade in goods and services is immense: \$674bn in 2017. It is also, despite what Mr Trump says, balanced. In 2017 the United States had a small surplus with Canada, of \$8.4bn. Yet Mr Trudeau's bargaining position is weak. "We absolutely need them, but they could live without us," says Philip Cross, an economist.

Mr Trudeau must pick his battles. In the NAFTA negotiations Canada and Mexico are resisting an American demand for a "sunset clause", which would require re-approval of the accord every five years and thus discourage long-term investment. Mr Trudeau cancelled a meeting with Mr Trump last month because the Americans made acceptance of a sunset clause a precondition. Mr Trudeau is also defending NAFTA's dispute-settlement rules while trying to roll back the steel and aluminium tariffs and forestall new ones on vehicles.

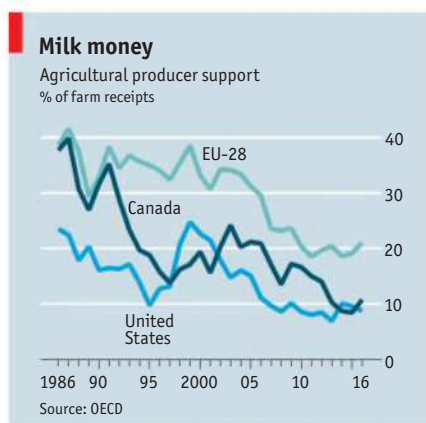
Playing chicken

But to stop investment and jobs from moving south, "Canada is going to have to make some concessions," says Laura Dawson, head of the Canada Institute at the Woodrow Wilson Centre in Washington, DC. Among them might be raising the threshold at which Canada taxes purchases of American goods from C\$20 to around C\$1,000, the American level. Canada might consent to more onerous conditions for a vehicle to be imported duty-free within NAFTA, including on wages and the amount of North American content.

To appease Mr Trump, Mr Trudeau may have to pamper farmers less, which is a good idea anyway but politically perilous. Canada's system of supply management, which sets limits on the production of ▶▶

dairy, poultry and eggs, has long irritated the United States (and should anger Canadians, who pay more for food than they need to). Canada subjects imports of those products beyond a ceiling to punishing tariffs (298% in the case of butter). Mr Trump has been angry about this since he met dairy farmers from Wisconsin in April 2017. When he repudiated by tweet the agreement with other G7 countries he blamed in part Canada's "massive tariffs" on American farmers. Pierre Lampron, head of the Dairy Farmers of Canada, says Mr Trump is trying to wipe out Canadian farmers.

Canada points out that American farm subsidies almost match its own (see chart). So far, such arguments have not moved Mr Trump. Mr Trudeau has already indicated that Canada has "flexibility" on dairy, the biggest of the protected sectors. In negotiations with other trade partners, it has offered a bit more access to those sectors and compensated farmers. Canadian negotiators have reportedly offered similar concessions to the United States, which said they were insufficient. Marcel Laviolette, an egg producer from a village near Ottawa, expects Canada to concede more. Although most of the discussion has been about dairy, he fears that poultry and egg



producers will also lose protection. "If that train goes by, it's going to hit us all," he says.

Mr Trump's aggression has inspired rare unity in Canada. The House of Commons unanimously passed a motion backing Mr Trudeau's decision to retaliate against steel and aluminium tariffs. Doug Ford, a populist newly elected to be Ontario's premier, said he stands shoulder-to-shoulder with him in defending jobs in the province. If Mr Trudeau picks a fight with farmers to save the economy, however, this moment of unity will soon pass. ■

Football

Once and future amigos

Squabbling neighbours win the right to host the football World Cup

WALL building, tariff wars and Twitter-borne insults set the tone for the United States' relations with Mexico and Canada these days. But, like a bickering family in a photo studio, the three countries managed enough of a show of affection to be granted the right to co-host one of the world's biggest sporting events. On June 13th FIFA, football's global governing body, voted to award the 2026 World Cup to the three erstwhile amigos. Their bid, dubbed "United", beat a rival one from Morocco. "The beautiful game transcends borders and cultures," said an elated Carlos Cordeiro, president of the United States Soccer Federation.

Under FIFA's newly transparent voting system, the football associations of more than 200 countries, rather than a committee of FIFA fat cats, had a vote. They backed the North American bid over the Moroccan one by a margin of two to one. United's infrastructure is mostly built. It promised FIFA \$11bn in profit, twice that offered by its rival.

United's main handicap was the United States' divisive president, Donald Trump. United officials quietly pointed out that he will leave office by 2025 at the latest. Its closing presentation featured a

speech by a teenage Liberian refugee, now playing football in Canada. "The people of North America have always welcomed me. If given the opportunity, I know they'll welcome you," he said.

Mr Trump lobbied hard for the cup, with promises and threats. He sent FIFA three letters pledging that the United States would let in fans from anywhere, in effect offering to suspend the travel ban he imposed on seven Muslim-majority countries. To that he added a hint of menace. "It would be a shame if countries that we always support were to lobby against the US bid," he tweeted in April. FIFA responded by reminding all parties of its code of conduct.

Mr Trump's base generally prefer home-grown sports to football. Ann Coulter, a right-wing commentator, once said that "soccer is like the metric system, which liberals also adore because it's European." The United States and Canada both failed to qualify for this year's World Cup, which is due to start in Russia on June 14th. But both nationalists and globalists will surely be cheering in 2026. The United States' 250th birthday will fall during the World Cup. Perhaps the final will be played on the Fourth of July.

Health

Disease déjà vu

Polio has come back to Venezuela. It is not the only country at risk

IN 1961 Venezuela became the first country in Latin America virtually to eliminate malaria, using a combination of DDT, an insecticide, and drugs. The oil-rich country has now made health history again, this time in a bad way. On June 7th Venezuela's health department reported to the Pan-American Health Organisation (PAHO) the first case of polio in South America since 1991. This is a big worry, not only for Venezuela but for its neighbours. The re-emergence of polio strongly suggests that Venezuela's vaccination programme has failed. With thousands of Venezuelans a day fleeing the country's political and economic crisis, there is a risk that polio and other highly infectious diseases will spread to more countries in the region.

It is not clear what the source is of the infection reported to PAHO, which occurred in a child nearly three years old from the Warao indigenous community in the rural state of Delta Amacuro. The child might have been infected by someone who had been to a country where polio is still endemic (Afghanistan or Pakistan). Or it could be a rare "iatrogenic" case, caused by a mutation of the polio vaccine itself and passed on through faeces-contaminated water, food or touch. Either way, the occurrence demonstrates the dangers of leaving holes in vaccination campaigns.

Some 2.1m-2.6m babies in Venezuela have never been vaccinated, according to the Venezuelan Society of Public Health (SVSP), an independent group of health specialists. Venezuela waited more than a month to inform PAHO of the case in Delta Amacuro rather than 24 hours, the deadline set by internationally agreed guidelines. That gave the disease time to spread. The SVSP has said it is aware of four possible cases and there may be many more. Measles, which was stamped out in the Americas in 2016, also made a comeback in Venezuela. Some 2,000 people have fallen sick there, according to PAHO.

These failures are part of a broader collapse of Venezuela's health system, caused by the socialist regime's ruinous policies, which have led to shortages, economic depression and hyperinflation. In 2017, the last time the health ministry published data on disease levels, it reported that in the previous year maternal mortality rose by 66%, infant mortality jumped by 30% and the number of malaria cases increased by 76%. The economy has since worsened. So, no doubt, has Venezuelans' health. ►►

▶ When they flee, they can bring infections with them. An estimated 1.5m have left in the past four years, many of them settling in neighbouring Colombia and Brazil. They are less likely to use health services in their new countries, creating disease blind spots that make it harder to contain outbreaks. Venezuela's measles outbreak has now spread to Brazil, Colombia and Ecuador, which have an estimated 1,033 cases between them. All of the 798 cases under investigation in Brazil are in the two states that border Venezuela; in one of them 69% of the people with measles were Venezuelans.

Transmission would be harder if the region's health services were stronger. This week Paraguay set an example by becoming the first country in the Americas to eliminate malaria since Cuba in 1973. But there are reasons to worry about other countries, even Brazil, which has long been a regional role model, especially in the area of vaccination. The government of President Michel Temer has frozen most federal spending in real terms until 2036 to reduce a massive budget deficit. This comes on top of cuts by previous administrations that reduced spending on health as a share of the budget from 10% to 7%. "Hospitals don't have money to run anymore," says Jorge Kalil, a professor of clinical immunology at the University of São Paulo and a former director of the Butantan Institute, which produces vaccines.

Public-health campaigns have not been spared, says Ligia Bahia, a professor at the Federal University of Rio de Janeiro (UFRJ) who also works with Fundação Oswaldo Cruz (Fiocruz), Brazil's other vaccine producer. Fiocruz backed research that led to the discovery of Chagas disease, an insect-borne illness, the eradication of smallpox from the Americas and the containment of the outbreak of the Zika virus in 2015-16.

This year Brazil had its worst outbreak of yellow fever since the 1940s; 237 people have died. The virus appeared in areas where it had never been, which made it hard to deliver vaccines. Scientists say they could have anticipated the outbreak if they had had more resources. The monkeys that harbour yellow fever "were dying like flies in the forest reservations before the outbreak", says Pedro Lagerblad de Oliveira, the lead researcher of the Institute of Medical Biochemistry at UFRJ. Even after the outbreak, "there was not a single public call" offering grants for research in yellow fever, he says.

Scientists suspect the virus may be able to jump from mosquitos prevalent in forested areas to a type that is common in cities. That could spread the disease to more people. Without government-backed research on that risk, "we simply don't know", says Dr Lagerblad. Latin America cannot afford to skimp on disease prevention, as Venezuela has discovered. ■

Chile

Making money from mist

COQUIMBO

The fog-catchers of Coquimbo

IN THE school playground in Los Tomes a lone child, José Ossandón, plays with his *emboque*, a ball-and-cup game. The eight-year-old is the school's only pupil. His teacher, Nilda Jimena Gallardo, herself a former pupil, says that enrolment has dropped from 65 when she started teaching 43 years ago. Drought has driven families away, she says. "Only the old remain."

Los Tomes is an agricultural co-operative, one of 178 in Chile's Coquimbo region. Nineteen *comuneros* try to grow wheat and raise sheep and goats on 2,800 hectares (7,000 acres) of semi-arid scrubland. A decade-long drought has made that harder. Hilltop springs where the animals once drank have dried up. As herds shrank and yields fell, farmers' children moved away to take jobs in cities or at copper mines.

Hope for Los Tomes comes in the form of three 60-square-metre (646-square-foot) nets stretched between poles on a ridge above the community. These *atrapanieblas* capture droplets from the fog that rolls in from the sea 4km (2.5 miles) away. They trickle down to a pipe, which channels the water to two troughs at the foot of the ridge, from which livestock drink. The banner-like nets can harvest 650 litres (140 gallons) of water a day. "We're content: it's produced the results we wanted," says José Ossandón, the child's father and the president of the co-operative.

Chile has been investigating fog capture since the 1950s. The dense fog that arises from the Humboldt current, called the *camanchaca*, can be harvested with the help



Also available as a beer ■

of a coastal mountain range and strong winds. Earlier attempts to turn the mist into usable water failed. In 1990 fog nets at Chungungo, a fishing village north of Los Tomes, captured 8,000 litres a day. Villagers argued about how to share responsibility for maintaining the *atrapanieblas*.

Climate change, which is expected to decrease rainfall in the region, has spurred a new quest for unconventional sources of water. The project at Los Tomes is part of an attempt to revive fog capture by encouraging better governance. A government development fund has put up cash. A team from the Catholic University of the North (UCN) sought out agricultural co-operatives whose members have shown that they can work together. "The question is not whether the fog collectors work but who's going to provide and maintain them," says Daniela Henríquez, a sociologist who leads the UCN team.

At Majada Blanca, a goat-herding community north of Los Tomes, three 150-square-metre fog catchers feed a plantation of young olive trees, a splash of green in the brown scrub. When the trees mature they will produce 750 litres of organic olive oil a year, which the *comuneros* will be able to sell for about \$12,000. They reckon the water source will be a big selling point. "We'll be pioneers in the production of quality olive oil made with fog water," says one of them, Ricardo Álvarez. A privately owned brewery in Peña Blanca was quick to spot fog water's marketing appeal. It is the main ingredient of its artisanal beer, called *Atrapaniebla*.

It makes a profit, but most fog-harvesting projects require subsidies in their early stages. The development fund paid 5.6m pesos apiece to put up the structures at Majada Blanca; when the nets wear out, the villagers will have to replace them at a cost of 100,000 pesos each. Coquimbo has more than 40,000 hectares of land with the right conditions for putting up fog-catchers. If it were fully exploited, the region could harvest 1,400 litres a second, enough to supply all its drinking water.

That might lure back educated young people from the cities. A chance to develop tourism near the Fray Jorge national park, a remnant of temperate rainforest which has survived thanks to its own natural fog-collection mechanism, brought Salvador Velásquez to his birthplace of Peral Ojo de Agua. Enrolment in the school has dropped from around 20 when he was a pupil to five. The village has teamed up with an agricultural co-operative to put up man-made fog collectors, which water a semi-arid conservation area. It offers tours, cabins and a campsite. Stands selling handicrafts line the road. "Roots, the land and the desire to start this brought me back," says Mr Velásquez. If parched Coquimbo is to catch more people, it will need more fog-catchers. ■



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Development in India

Infant nutrition v debt relief

DELHI

Several states are experimenting with a new way of setting priorities

IN A country as big and poor as India, the scale of human need can seem daunting. Yet the immensity of the mountain is not the sole problem. Just as tricky is finding the best angle of approach. Alas, the vote-hungry politicians, stodgy bureaucrats, dreamy professors and opportunistic middlemen who often end up steering policy do not always succeed in making the most of scarce resources.

Take the town of Panipat in Haryana, a state that abuts the national capital, Delhi. Last year auditors from the central government found that it had dedicated 60% of its budget from *Beti Bachao*, a national scheme meant to correct gender imbalances by fostering and educating girls, to erecting a “themed gate” at the entrance to the town that proclaims Panipat’s bold commitment to this worthy goal. Such wasteful boasting is not unique. Since today’s national government took office in 2014 it has, by official count, spent some \$643m (twice what the previous one did) on publicising its own programmes and achievements in tv spots, billboards and full-page newspaper ads that typically feature the smiling image of the prime minister, Narendra Modi.

In other respects, however, Mr Modi’s government has worked hard to put public money to better use. A decade ago a government survey calculated that only 16% of funding for a national food-distribution programme actually reached the intended beneficiaries. Police found that between

2005 and 2007 in Sitapur, a district in the state of Uttar Pradesh, 100% of the money was stolen. Leakage from such programmes is now reckoned to have fallen to around 30%, and in some states to less than 10%. Mr Modi’s strong personal backing for social programmes has ensured impressive progress for many, such as a national campaign to eradicate “open defecation”.

But what if, instead of promoting favoured schemes, Indian governments instead challenged experts to propose the cleverest interventions they could think of? What if they then got economists to calculate, as objectively and scientifically as possible, their likely cost-benefit ratios?

TB or not TB

India, Rajasthan, estimated benefits of different projects*, rupees

Project	Per rupee spent
Engaging private-sector care for TB	179.4
E-markets for farmers	65.0
Training mothers in nutrition and hygiene	43.0
Digitisation of land records	26.0
Prevention of cardiovascular disease	23.0
Extra food for poor mothers and children	7.0
Expanding the rural ambulance network	3.3
Supporting startup incubators	1.8
Cervical cancer screening and treatment	1.4
Farm-loan waivers	0.8

Source: Copenhagen Consensus

*Over varied time periods

And what if they then compared these numbers and adopted policies based on which projects promised the biggest bang for the buck?

This, in essence, is the approach that the governments of two of India’s 36 states and territories are now considering. The model being used in Andhra Pradesh and Rajasthan, with funding from the Tata Trusts, a charity, was developed by a Danish economist, Bjorn Lomborg, and tested in countries such as Haiti and Bangladesh. Over the past year Mr Lomborg’s team has consulted hundreds of experts and interested groups, picked some 79 policies for consideration and commissioned dozens of economists to analyse them. If the pilot schemes work well, Tata Trusts would like to extend the process across the country.

A game of tag

In some respects the results from Rajasthan are predictable. Yes, it does pay in the long run to improve infrastructure, though the predicted payback of 1.2 rupees for every rupee spent on urban sewage treatment does not look especially compelling. No, the hugely expensive loan waivers that several Indian states have recently offered angry farmers are not a good idea, yielding benefits of less than one rupee for every rupee spent (see chart).

Some potential returns are astonishing, however. According to a paper that was presented by Nimalan Arinaminpathy, an epidemiologist at Imperial College, London, clever interventions to combat tuberculosis (TB), a disease that kills 30,000 people a year in Rajasthan alone, could bring a return of up to 179 rupees for every rupee of government spending. This is not because India makes no efforts to deal with TB. The trouble is that the government’s hitherto highly successful anti-tuberculosis campaign, the world’s largest such effort, is struggling to reach the country’s

▶ poorest and most vulnerable.

The rate of new infections could be cut drastically by enlisting private village doctors and chemists, using better diagnostics and seeking out cases in places where they are likely to occur rather than waiting for them to be reported. The biggest savings would come from a steep drop in future costs for treating patients with multi-drug-resistant forms of the disease, a group that makes up only 4% of TB patients but accounts for 40% of the government's bill. Mr

Arinaminpathy's numbers are not fantasy; they are backed by robust statistics and match similar findings in Bangladesh. India's government has, in fact, already begun to push its TB programme in the direction he has suggested.

Other proposals with big payoffs include computer-assisted learning, cheap treatment of non-communicable diseases and educating mothers on hygiene and nutrition. One paper suggests this last policy could be six times more beneficial than

simply providing poor mothers and children with extra food. Noting that nearly three-quarters of all civil cases in Rajasthan's courts have to do with land disputes, another paper calculated that over a 50-year period, the return from fully digitising land records could be 26 to one—and this in a state often praised for its efforts to improve the property register.

In Jaipur, the capital of Rajasthan, economists and officials at an event explaining Mr Lomborg's findings were not universally enthusiastic. "There is nothing new here, except that we have tagged everything with a number, even though we may be comparing apples and oranges," sniffed an elderly economist, who nonetheless thought the exercise useful. One cynical academic averred that politicians will always opt for showy handouts rather than unsexy long-term solutions, however inefficient that may be. A state official, perhaps mindful of approaching elections, blithely declared that all this fancy research simply proved that the state's government was already doing everything right.

Mr Lomborg himself appeared unfazed by the sniping and politicking. "We're not trying to change the world," he said. "It's enough just to nudge the conversation towards the rational end of the spectrum." ■

Cricket in Afghanistan

Khyber pastime

Afghans love cricket. Even the Taliban must play along

WHEN they win, the skies ring with joyful gunfire. Afghanistan's cricket team is wildly popular. They are mobbed in the street and featured in endless ads. After one victory, staff at a European embassy in Kabul mistook the celebrations for an attack on their compound.

On June 14th Afghanistan became the 12th country to play test cricket, taking on India in Bangalore. Test matches, the game's oldest format, last for up to five days and can be played only by an elite club of nations selected by the International Cricket Council. Afghanistan's ascent from cricketing obscurity to "test status" is a rare source of national pride in a country torn apart by conflict. Its progress is all the more remarkable given that its team cannot play at home. Other sides refuse to visit Afghanistan for fear of being blown up. So Afghans have to play their "home" matches in India.

Until recently, cricket was virtually unknown in Afghanistan. Many Af-

ghans, including most of the current team, discovered it while living as refugees in Pakistan in the 1980s and 1990s, and brought their passion back home when they returned. The national team first gained recognition in 2008, rising from lowly Division 5 to the cusp of qualification for the World Cup in 2011. More success followed, including qualification for subsequent World Cups and victories over test-playing opponents.

It is hard to earn a living as a cricketer in Afghanistan, so most local stars play in richer foreign leagues. Rashid Khan, a 19-year-old bowler, received \$1.4m to play in this year's edition of the Indian Premier League (IPL), where he dazzled television viewers across the world. Mr Khan's IPL salary is 2,500 times Afghanistan's GDP per person, so his example inspires many. Dozens of new cricket academies have opened around the country to cater to the growing demand.

You might expect the Taliban to disapprove of cricket, as they do of most kinds of fun, from kite-flying to music to hobnobbing with the opposite sex. Yet, although the bearded zealots are wary of football, they have a soft spot for the sound of willow on leather, even founding a national team in 2000. It seems they were reassured by the game's modest attire of long trousers and long sleeves.

As cricket's popularity has surged, the Taliban have found it politically expedient to ride on the team's coat-tails. They have, for example, avoided killing people at cricket matches, allowing the game to be played in relative peace. They have even been known to contact Afghan cricket officials to wish the national team well before big games.

Of course, this indulgence does not extend to women's cricket, which they deem an abomination. A short-lived national women's team was disbanded in 2014, amid Taliban threats. Some prejudices cannot simply be batted away.



Willow, leather and grit

Pakistan's economy

In need of re-stitching

To stave off a currency crisis, will Pakistan turn to the IMF, China or both?

IN 1918 a British army officer brought his frayed football to be repaired at a factory in Sialkot, a city in what is now Pakistan. Although more accustomed to making tennis racquets and cricket bats, a local artisan was nonetheless able to restitch the ball and, even better, replicate it, according to the Sialkot Chamber of Commerce and Industry. Over the next 100 years, the city has prospered as a manufacturing hub, making surgical, leather and sporting goods. It exported over 920 tonnes of sports balls in the first three months of 2018, according to Sialkot Dry Port Trust. It is even the source of the (stitch-less) Adidas footballs that will be trapped, dribbled and passed in the World Cup beginning this week.

Despite this sporting contribution, however, Pakistan's exports as a whole have lagged behind the country's aspirations. Its import bill, including onerous payments for oil, has expanded uncomfortably, raising its current-account deficit to 5.3% of GDP this fiscal year (which ends this month), according to Standard Chartered, a bank. That, in turn, has put heavy ▶▶



► pressure on the rupee. It stumbled by about 5% during trading on June 11th, the third big drop since December.

This was described as a deliberate “devaluation” by almost everyone but the central bank, which maintains that the currency is left largely to market forces, even as it has squandered its foreign-exchange reserves (down from \$19bn in 2016 to \$1bn this month) in an effort to prop it up. This fear of falling probably reflected political pressure from the outgoing government, which saw a strong rupee as a sign of economic prowess. It completed its term at the end of May and will contest a general election on July 25th. In the meantime, the country is in the hands of a technocratic “caretaker government”. It is a good moment, then, to let the currency slip.

It may slip further. The oil price remains painfully high and the central bank’s firepower is even more limited than the headline data suggest: if its hard-currency liabilities are deducted from its hard-currency assets, its “net” foreign-exchange reserves are now negative, points out Bilal Khan of Standard Chartered (see chart).

When Pakistan has previously found itself in this predicament, it has turned to the IMF for help. The country’s policymakers are adamant they will not do so again. Many Pakistanis are expecting help from an alternative source instead: China. They believe their eastern ally is bound to step in, if only because it is partly responsible for their plight. According to this view, the deteriorating balance of payments reflects heavy spending on imported materials for the China-Pakistan Economic Corridor (CPEC), a string of ambitious transport and energy projects that form part of China’s wider Belt and Road Initiative.

This argument probably overstates both China’s culpability and its generosity. China is not chiefly responsible for the decline in Pakistan’s dollar reserves, because the higher import spending entailed by the CPEC has been accompanied by greater lending from Beijing. To put it crudely, China has invited Pakistan to spend Chinese

loans on Chinese goods. Eventually, those loans will need to be repaid, of course, which could pose problems if the CPEC investments earn disappointing returns. But eventually is not now.

The problems of the present originate elsewhere. As well as higher energy costs, they reflect loose fiscal policy and rapidly growing domestic credit. Fixing these will require some combination of lower government spending, higher interest rates and a cheaper currency. Although China will not want to see Pakistan go bust, it will not want to dictate its macroeconomic policies either. That is the IMF’s job. China, then, is more likely to supplement an IMF programme than supplant one.

Politicians will lament Pakistan’s loss of economic independence, but similar objections have not prevailed in the past. Between 2001 and 2013 Pakistan turned to the IMF three times. In fact, there were as many IMF bail-outs of the country over that period as there were World Cups. Apparently, it’s time for another one. ■

South Korean politics

Rising Moon

The ruling party wins a landslide victory in local elections

MOONJAE-IN, South Korea’s president, took advantage of his country’s early-voting system to cast an advance ballot in provincial and municipal elections. When the day of the vote came, on June 13th, he went for a hike. He ambled up Bugaksan mountain in shorts, hiking shoes and a short-sleeved check shirt, his dog Maru padding along obediently by his side.

Mr Moon’s relaxed air was entirely justified. A few hours later exit polls indicated that his left-leaning Minjoo Party had triumphed in elections that were widely seen as a verdict on his first year in office (he became president after a snap election in May 2017). The party won all but three of the country’s 17 races for mayor or governor—an unprecedented landslide. It also snagged 11 out of 12 seats in the National Assembly that had been up for grabs in by-elections, strengthening Mr Moon’s minority government, although it is still well short of a majority. At 60%, turnout was higher than at any time since the first properly democratic local elections were held in 1995, when 68% of the electorate went to the polls. According to one survey, Mr Moon’s approval rating, which had already been hovering in the mid-70s, hit 80% on the day of the vote.

The result is especially striking because it suggests that Mr Moon is so popular that

he can override the ingrained regional divide in South Korean politics. Busan and Ulsan, cities in the conservative south-east, elected mayors from Minjoo for the first time. The unrelenting parliamentary obstruction of Liberty Korea, the main opposition party, may have alienated some of its supporters. It has spent the past year torpedoing Mr Moon’s plans, most notably (and ironically) derailing legislation to curb the powers of the president. It also denounced Mr Moon’s policy of detente with North Korea, accusing him of being a communist sell-out. Hong Jun-pyo, the party’s chairman, stormed out of its post-election gathering on June 13th and later hinted at his resignation with a post on his Facebook page that read, “The buck stops here.”

It was especially unfortunate for the opposition that the vote came the day after Donald Trump, America’s president, met Kim Jong Un, North Korea’s dictator, for a summit in Singapore (see Briefing). Mr Moon played no small part in bringing the two sides together, and has himself met Mr Kim twice. These diplomatic overtures, in turn, have succeeded in dispelling the confrontational atmosphere on the peninsula, to the relief of many South Koreans.

Television networks covering the elections did their best to compete with the drama of the Trump-Kim summit. One station used a Harry Potter theme to illustrate the contest, depicting the candidates as wizards complete with cloaks and wands. Another portrayed them as Jedi and kitted them out with lightsabers to fight it out.

Minjoo’s resounding electoral success strengthens Mr Moon’s progressive mandate. In the National Assembly, left-wing parties and independents now hold more than half of the seats, which may allow him to push laws through. South Koreans are broadly supportive of his efforts to tame conglomerates, root out corruption and create a more equitable society by improving health care, pensions and labour conditions. But the mood could easily sour if talks with the North go wrong. ■



Moon is the star

Banyan | Squeeze of access

As China tries to tighten the vice, Taiwan seeks to expand its horizons



GIVEN all the hoopla of President Donald Trump's summit with Kim Jong Un, North Korea's dictator, the opening on the same day of a new American not-quite-an-embassy in Taipei was never going to hog the headlines. Yet to judge by how much Chinese officials have harangued American diplomats and congressmen about who was going to attend the ceremony in Taiwan's capital, China appears to care every bit as much and perhaps more about America's actions in Taiwan than about geopolitical rivalry on the Korean peninsula.

Since 1979, when America broke diplomatic relations with Taiwan in order to open them with China, its "one-China policy" has been the bedrock of dealings with China. This means never referring to Taiwan as a country and always "acknowledging" that both China and Taiwan hold to the idea that there is but one China, even if the two sides disagree over the definition. The fudge has allowed America to enjoy close unofficial relations with Taiwan. China rarely appeared bothered by America's unofficial representation in Taipei, known as the American Institute in Taiwan (AIT). For a long time it was housed in a dingy former military building in an unprepossessing part of the city.

The new building unveiled on June 12th, in contrast, is a design icon in the fancy district of Neihu. It cost \$250m. It looks, smells and feels just like a formal embassy. Most of its nearly 500 staff are American diplomats, albeit on temporary leave from the State Department. It issues visas. The Trump administration has considered sending marines to guard it.

To China, which wants everyone to act as if Taiwan belongs to it, the new building is provocative. So, too, is a piece of legislation, the Taiwan Travel Act, passed unanimously by Congress and signed in March by Mr Trump, which encourages exchanges between American and Taiwanese officials. China has stressed that a high-level official at the opening would jeopardise talks on trade as well as co-operation over North Korea. China's nightmare was the attendance of Mr Trump's national security adviser, John Bolton. He has called for America to "revisit" its one-China policy.

In the event, the administration kept the opening low-key, if only so as not to distract attention from the Singapore summit. The most senior American official present was Marie Royce, a

mere assistant secretary of state (and also the spouse of a pro-Taiwan congressman). During the proceedings, America's de facto ambassador, Kin Moy, bowed three times before a table laden with fruit and flowers and then lit incense. "I offer you this [building], a tangible symbol that the United States is here to stay," Mr Moy told President Tsai Ing-wen and assembled guests. The AIT chairman, James Moriarty, described democratic Taiwan as a "model for the Indo-Pacific region" and promised continued American support for "Taiwan's ability to defend itself". Mr Trump has approved \$1.4bn in arms sales.

China no doubt sees the building's 99-year lease as yet another provocation. Xi Jinping, who recently awarded himself an unlimited lease on China's presidency, insists that Taiwan's return to the motherland cannot wait for ever. But whether China will pick a fight over Taiwan now is another matter. It is not clear that Mr Trump cares for the island, except as a pawn in trade negotiations with China. He is said to have criticised State Department speeches in support of Taiwan as complicating his dealings with Mr Xi. And he did not send Mr Bolton. Bonnie Glaser of the Centre for Strategic and International Studies, an American think-tank, reckons that China is getting less anxious.

Pressure only grows on Ms Tsai, however. China has put Taiwan in the doghouse since she came to office two years ago. Though she has gone out of her way not to antagonise, she will not acknowledge that Taiwan is part of China. And she has failed to condemn her prime minister, William Lai Ching-te, who has professed to be a "Taiwan independence worker".

Official relations across the Taiwan Strait are frozen. China denies Taiwan a seat at international forums such as the World Health Organisation. It bullies international airlines and hotel groups into referring to the country as a mere region of China. In April it put on the biggest naval exercises ever carried out in the South China Sea, followed by live-fire drills in the Taiwan Strait. Chinese bombers circle the island. Meanwhile, diplomatic allies peel off. In May the Dominican Republic and Burkina Faso switched sides, leaving just 18 countries that recognise Taiwan.

Tsai's matters

And yet. The more China closes Taiwan's diplomatic space, the more Ms Tsai's creative use of unofficial diplomacy grows. Her "New Southbound Policy" attempts to forge deeper ties with South-East Asian neighbours and beyond, including those caught up in disputes with China over territorial claims in the South China Sea. (Taiwan also claims much of the sea, but is far less pushy about it.)

The scope of the policy is broad, ranging from promoting tourism to easing the plight of migrant workers to investing in manufacturing (Taiwan ranks well ahead of China in investment in Vietnam, for example). The emphasis on the Indo-Pacific region is bearing fruit. Merriden Varrall and Charlie Lyons Jones of the Lowy Institute, a think-tank in Sydney, say that Australia's interest in the New Southbound Policy contrasts sharply with its wait-and-see approach to China's Belt and Road Initiative. Japan has signed a memorandum on search-and-rescue operations with Taiwan, bolstering its maritime security; intelligence-sharing may be formalised next. And Taiwanese officials are increasingly being invited to regional dialogues on the Indo-Pacific organised by think-tanks. Taiwan does not enjoy being chastised by China. But, as Ms Varrall and Mr Jones suggest, China also does not realise quite how counter-productive its approach is. ■



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Propaganda

Nation shall preach Xi unto nation

China is spending billions on beefing up its foreign-language news media

ON THE 26th floor of an iconic glass skyscraper, nicknamed the “Trousers”, in Beijing’s main business district, half a dozen casually dressed 20-somethings gather in a rainbow-coloured lounge, chatting away on ergonomic chairs. The office has the vibe of a hip tech startup. In fact, it is the headquarters of the country’s foreign-language television service, which rebranded itself in 2016 as China Global Television Network (CGTN). The young staff are Chinese who have studied abroad and are proficient in one of the network’s five languages—English, French, Spanish, Arabic and Russian. CGTN is at the forefront of China’s increasingly vigorous and lavishly funded efforts to spread its message abroad. Xi Jinping, the president, has told the station to “tell China stories well”.

CGTN—a consolidation of the foreign-language operations of CCTV, the state broadcaster—is secretive about its budget but open about its ambitions to compete with global broadcasters such as CNN and the BBC. In November it plans to open a new broadcasting centre in Chiswick, a wealthy suburb of London. It will complement the two others the station inherited from CCTV in Washington and Nairobi, each of which has around 150 reporters. BuzzFeed News, citing an e-mail sent by a local recruiter, reported this week that the new centre is planning to hire more than 350 London-based journalists over the next 18 months. Salaries on offer are “well

over” average for journalists in the city, the news site said, quoting someone headhunted for a job. (CGTN’s choice of name may help, too: when they were called CCTV, China’s overseas television operations suffered from association with surveillance equipment.)

To ensure its grip on the message put out by its domestic and international broadcasting services, including CGTN, the government consolidated them in March into a single media group known as Voice of China (its name in English perhaps consciously echoing that of the American government’s broadcasting service, Voice of America). The reorganisation allows CGTN and the other services to retain their separate identities under a combined management controlled by the Communist Party’s Publicity Department, a powerful agency in charge of propaganda and media censorship. Voice of China’s missions include “overall planning of important propaganda reports”. Writing in a state-owned newspaper, Jia Wenshan of Renmin University in Beijing said the group would try to “combat fake news, give the lie to the ‘China threat’ propaganda meme and fight the Western media’s hegemony”.

Chinese officials have long complained that Western media dominate global discourse and harbour prejudice against China. A decade ago, hit by a barrage of critical coverage in the wake of anti-Chinese unrest in Tibet, the government decided to

step up its efforts to seize “discourse power” from the West. According to the *South China Morning Post*, a newspaper in Hong Kong, it allocated 45bn yuan (\$6.6bn) for the purpose. The money has been poured into expanding “flagship” foreign-language media, in print and online as well as on air. In 2009 *China Daily*, then the country’s only English-language daily, launched an edition tailored for the American market. In the same year *Global Times*, a tabloid owned by the party’s main mouthpiece, *People’s Daily*, began publishing its own English-language daily, offering somewhat racier fare than that of *China Daily*, while still avoiding criticism of the party. (*Global Times* has been producing an American edition since 2013, with the help of its own printing-press there.)

All China, all the time

Over the past decade, Xinhua, China’s main news agency, which publishes in numerous languages, has set up more foreign bureaus than any rival, boosting its tally to 180 from just over 110. In 2010 it set up a global television channel in English, called CNC World. China Radio International, part of Voice of China, now broadcasts in 65 languages, up from 43 a decade ago. These outfits have also been building up their online presence in English and other languages, making extensive use of social media that are blocked in China such as Facebook, Instagram and Twitter. In 2012 China Tibet Online, an official website, began publishing in French and German.

Results have been mixed. In 2009, when China began beefing up its foreign-language news media, Pew Research Cen- ▶▶

Award: On June 13th Rosie Blau, our former China correspondent who is now editor of our culture and lifestyle magazine, *1843*, won an award for excellence from the Society of Publishers in Asia for her reporting in this section on Chinese culture.

▶ tre asked people in 38 countries about their views of China. The median rating was 50%. By 2017 it had dropped slightly, to 47%. But respondents in developing countries were more positive than those in rich ones. A survey in 2016 of youth from 18 African countries found that, of those who had watched CGTN, 63% had liked the channel and only 13% had a negative view. More than half said they agreed with CGTN's "ideological agenda". In countries where media are already muzzled, people may be less judgmental about state-controlled outlets run by foreigners, says Hugo de Burgh of the University of Westminster.

For CGTN, the headline numbers look good. It has 62m followers on Facebook, as many as the BBC and Al Jazeera combined. Two-thirds of CGTN's online traffic, however, comes from China itself—mainly from people who want to learn English. CGTN does not release audience numbers, but analysts believe that few people outside China have heard of, let alone watch, the channel. In America's biggest cities, more people watch the online videos of NTDTV, a channel founded by Falun Gong, a spiritual movement that is outlawed in China, than those of CGTN, reckons Sarah Cook of Freedom House, a think-tank. Videos posted on CGTN's YouTube page rarely attract more than a few hundred views. Those on the BBC's often exceed 50,000.

Circulation figures for China's foreign-language print media are similarly dodgy. An audit in 2014 found that 94% of copies of *China Daily's* weekly European edition, which is priced at £2 (\$2.65), were being given away. If the newspaper has made inroads in the West it is largely by paying Western newspapers to distribute its content as free inserts. In 2016 *People's Daily* reached a deal whereby Britain's *Daily Mail* would run up to 40 of its stories every week online. (*People's Daily*, in turn, would run a similar number of stories from the Mail Online). *Beijing Review*, a weekly magazine in English, publishes articles in the advertising pages of foreign publications, including *The Economist*. The tactic is used in broadcasting, too. In 2015 Reuters, a news agency, found that China-friendly news and other programmes made by CRI were airing on at least 33 radio stations in 14 countries, including America, with no acknowledgment of CRI's involvement.

It is not for want of trying that China's foreign-language media find it hard to compete. Every now and then CGTN tries to make itself appear less of a mouthpiece by covering sensitive social and political topics that are off-limits to its domestic-facing counterparts. In a recent episode of "Dialogue", a talk show on CGTN, the host prodded his guests into talking about an online essay written by a disgruntled Beijinger lamenting the "emptiness" of life in the city—even though the once-viral piece had been scrubbed from the internet in

China by censors. Officials call their common practice of giving foreign-language media such leeway "*neijin waisong*": strict domestically, relaxed externally. They point to Russia Today as a role model.

Despite his calls for innovation, however, Mr Xi has also been talking up the need for news media to act as the party's mouthpiece. China's foreign-language media have been paying heed. Fawning coverage of Mr Xi is a staple of their output. On YouTube, more than 1.6m views of CGTN's video "A side to Xi Jinping you probably haven't seen before", uploaded in January, suggest it may have learned a trick about the packaging of flattery. ■

Activism in Hong Kong

The riot act

HONG KONG

A lengthy jail term sends a message to the territory's rebellious youth

In 1967 Mao's tumultuous Cultural Revolution washed into Hong Kong, stirring anti-colonial riots and bombings. The territory's British rulers decided to restore order by imposing tougher legislation aimed at preventing crowds from assembling. A new Public Order Ordinance required permission for a public gathering of three or more people. If an illegal assembly resulted in a breach of the peace, each participant could be convicted of rioting.

That sweeping law has been used by the post-colonial government to deter further outbreaks of unrest such as occurred in 2014 when pro-democracy protesters occupied busy streets for weeks, and in 2016

when rioting broke out following officials' efforts to clear away food stalls selling traditional snacks (the violence was joined by young people who were enraged by the deployment of large numbers of police). On June 11th a well-known activist, Edward Leung, was jailed under the Public Order Ordinance for six years for his role in the mayhem two years ago—the worst disorder on the streets of Hong Kong since the Cultural Revolution. A lesser-known co-defendant received a seven-year term. The two sentences were the longest meted out to any of the more than 100 people who have been prosecuted in connection with the episodes of 2014 and 2016.

Mr Leung, who is 27, enjoys a degree of public sympathy. Soon after the riot, with charges relating to it hanging over him, the then-student of philosophy at the University of Hong Kong stood in a by-election for the Legislative Council, or Legco. He won 15% of the vote—an achievement that alarmed the government in Beijing because it suggested some public approval for the support he had given to the idea of Hong Kong's independence from China. Later that year he was barred from standing in another Legco election for having expressed such views.

There is no doubt that Mr Leung acted badly: he pleaded guilty to hitting a police officer during the riot, for which he was given a concurrent sentence of one year. But police arrested him within minutes of his assault of the officer, long before the unrest descended into what was far more clearly a riot, involving brick-throwing and lighting of fires. The jury acquitted Mr Leung of incitement. Many local lawyers and politicians have accused the court of sentencing him too harshly.

Among those who have waded into debate about the case is Chris Patten, Hong Kong's last colonial governor. In a statement, he noted that in the build-up to the territory's handover in 1997, his administration had revised the Public Order Ordinance "because it was clear that the vague definitions in the legislation are open to abuse." Many of those changes were revised after China took over to make the law stricter again. "It is disappointing to see that the legislation is now being used politically to place extreme sentences" on democrats and other activists, he said.

Hong Kong's judiciary remains widely admired for its independence. But the numbers of worriers are growing. "The discretion of prosecutions is ultimately held by a political appointee. There is no insulation from that political process," says Alvin Cheung of New York University, who has worked as a barrister in Hong Kong. Carrie Lam, Hong Kong's chief executive, has brushed aside suggestions of political interference in this case. In a territory where anxieties about China's hidden hand run deep, her words will change few minds. ■



A philosopher given time to think



they've done something wrong." He adds: "In America if you steal state secrets they put you in the electric chair, don't they?"

At an election on June 24th, Mr Erdogan is expected to consolidate his power. Despite double-digit inflation and a tottering currency (see Europe section), he is likely to win re-election (though his party may struggle). And his office will become much more powerful, thanks to a constitutional change he pushed through last year. As "executive" president, he will be able to issue decrees with the force of law and pack the judiciary with loyalists.

Turkey exemplifies a dismal trend. The world has grown far more democratic since the second world war. In 1941 there were only a dozen democracies; by 2000 only eight states had never held a serious election. But since the financial crisis of 2007-08, democracy has regressed.

Most watchdogs concur. The latest survey by Freedom House, an American think-tank, is called "Democracy in Crisis". In 2017, for the 12th consecutive year, countries that suffered democratic setbacks outnumbered those that registered gains, it says (see chart 1 on next page). According to the Democracy Index from The Economist Intelligence Unit, a sister company of *The Economist*, 89 countries regressed in 2017; only 27 improved. The latest "Transformation Index" from the Bertelsmann Foundation, another think-tank, which looks at emerging economies, finds that the "quality of democracy...has fallen to its lowest level in 12 years." What these indices measure is not simply democracy (ie, rule by the people), but liberal democracy (ie, with a freely elected government that also respects individual and minority rights, the rule of law and independent institutions).

This distinction is important. In "The People v Democracy", Yascha Mounk of Harvard University stresses that liberalism and democracy are separable. Voters often want things that are democratic but not liberal, in the most basic sense, which has nothing to do with left- or right-wing policies. For example, they may elect a government that promises to censor speech they dislike, or back a referendum that would curtail the rights of an unpopular minority.

At the same time, plenty of liberal institutions are undemocratic. Unelected judges can often overrule elected politicians, for example. Liberals see this as an essential constraint on the government's power. Even the people's chosen representatives must be subject to the law. In a liberal democracy, power is dispersed. Politicians are not only accountable to voters but also kept in line by feisty courts, journalists and pressure groups. A loyal opposition recognises the government as legitimate, but decries many of its actions and seeks to replace it at the next election. A clear boundary exists between the ruling ►►

Geopolitics

Democracy's retreat

BUDAPEST, DIYARBAKIR, KUALA LUMPUR, LUSAKA AND MANAGUA

After decades of triumph, democracy is losing ground. Why?

IN A glass case at the Diyarbakir Bar Association are a striped shirt, dark coat and coiled belt. They belonged to the former chairman, Tahir Elci, a lawyer who was murdered in 2015 amid clashes between the Turkish army and Kurdish separatists. He was standing by the Four-Legged Minaret, a 500-year-old landmark in the ancient city, calling for peace. Someone shot him in the head. No one knows who killed him. The government blames Kurdish terrorists. Many Kurds blame the government. After Elci's death, the army pounded the rebel-held part of Diyarbakir to rubble. The debris, including body parts, was heaped onto trucks and dumped by a river. Locals are scared to talk about any of this.

Barely a decade ago, Turkey was a budding democracy and aspired to join the European Union. Now it is galloping towards dictatorship. In 2016 army officers

tried to mount a coup, putting tanks in the streets, bombing parliament and nearly assassinating the president, Recep Tayyip Erdogan. It was quickly scotched. Mr Erdogan launched a purge. Over 200,000 people, mostly suspected members of the Gulen movement—the Islamist sect said to have led the failed putsch—were jailed or sacked. Anyone could be arrested for having attended a Gulenist school, holding an account at a Gulen-owned bank, or even possessing \$1 bills, which the government says were a mark of Gulenism.

Millions of Turks are now terrified of their president. However, plenty admire him for protecting them from the Gulenists. Adem, an estate agent in Istanbul, congratulates Mr Erdogan for "cleaning away the enemies within"—echoing a government slogan. He says, of the purge's victims: "They've been arrested because

▶ party and the state.

This system is now under siege. In many countries, voters are picking leaders who do not respect it, and gradually undermine it, creating what Viktor Orban, Hungary's prime minister, proudly calls "illiberal democracy". Eventually, when enough checks and balances have been removed, a would-be autocrat finds it easier to neuter democracy itself, by shutting down the opposition (as in Turkey) or neutering the legislature (as in Venezuela, where the government staged a sham election on May 20th).

The mature democracies of the West are not yet in serious danger. Donald Trump may scorn liberal norms, but America's checks and balances are strong, and will outlast him. The real threat is to less mature democracies, where institutions are weaker and democratic habits less ingrained. Nonetheless, what happens in the West affects these places. America once inspired subjugated people and sought to promote democracy. It now has a president who openly admires Vladimir Putin and claims a "special bond" with Kim Jong Un.

Meanwhile, China supplies an alternative model. Having grown much less dictatorial after the death of Mao Zedong, it is re-concentrating power in one man, Xi Jinping, whose term limits as president have just been removed. Some would-be autocrats cite China as evidence that authoritarianism promotes economic growth—though what they often mean is that they too want to be presidents for life.

Globally, public support for democracy remains high. A Pew poll of 38 countries found that a median of 78% of people agreed that a system where elected representatives make laws was a good one. But

hefty minorities approved of non-democratic alternatives. A worrying 24% thought that military rule would be fine, and 26% liked the idea of "a strong leader" who "can make decisions without interference from parliament or the courts" (see chart 2). In general, autocracy was more popular among the less educated.

With such large majorities favouring it, leaders cannot openly admit that they plan to abolish democracy. However, many have grown adept at subverting its essence while maintaining its outward appearance. The details vary from country to country, but it is striking how much the new autocrats have in common and how attentively they learn from each other.

To oversimplify, a democracy typically declines like this. First, a crisis occurs and voters back a charismatic leader who promises to save them. Second, this leader finds enemies. His aim, in the words of H.L. Mencken, a 20th-century American wit, "is to keep the populace alarmed (and hence clamorous to be led to safety) by an endless series of hobgoblins, all of them imaginary." Third, he nobbles independent institutions that might get in his way. Finally, he changes the rules to make it harder for voters to dislodge him. During the first three stages, his country is still a democracy. At some point in the final stage, it ceases to be one. All four stages are worth examining.

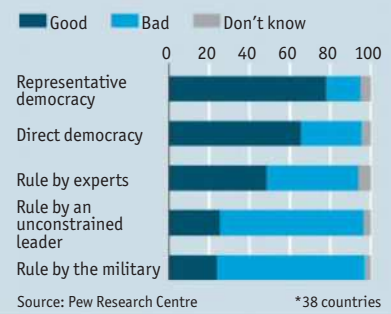
In Hungary, two shocks undermined faith in the old order. First came the financial crisis. Before it, many Hungarians took out absurdly risky foreign-currency mortgages. When the Hungarian forint crashed against the Swiss franc and they lost their homes, they were furious. Fidesz, a party that was once quite liberal but has become dramatically less so, won an election in 2010 by blaming the previous government and vowing to make borrowers whole.

The second shock was the Syrian refugee crisis of 2015-16. Hardly any Syrians settled in Hungary, but thousands passed through on the way to Germany, so Hungarians saw them on television. They gave Fidesz's leader, Mr Orban, two handy enemies: the Muslim hordes and the liberal elite who wanted to let them in.

Mr Orban built a fence that largely stopped the flow of refugees. But still, he continued to play up the threat. His government ordered a poll asking voters what they thought of a fictitious plan by George Soros, a Hungarian-American billionaire, to bring in Middle Eastern and African migrants to Europe. A campaign poster showed Mr Soros grinning evilly and embracing opposition leaders holding wire cutters. "They would remove the fence together" ran the slogan. On April 8th Mr Orban's party was re-elected with a thumping majority. In May Mr Soros's foundation closed its office in Budapest. "Hungary disproves the notion that when you reach an income per head of \$14,000 your democra-

By the people

"Would ... be a good or bad way of governing our country", global median*



cy is safe," says Mr Mounk of a theory popular with political scientists.

Picking the right enemies is crucial. Migrants are good, because they cannot vote. Mr Soros is even better, because he is rich, funds liberal causes and is, you know, Jewish. He can be painted as all-powerful; but because he is not, he cannot harm the demagogues who demonise him.

Stirring up ethnic hatred is incredibly dangerous. So rabble-rousers often use dog-whistles. South Africa's former president, Jacob Zuma, denounced "white monopoly capital" rather than whites in general. Many leaders pick on small, commercially successful minorities. Zambia's late president, Michael Sata, won power after railing against Chinese bosses.

Criminals make ideal enemies, since no one likes them. Rodrigo Duterte won the presidency of the Philippines in 2016 on a promise to kill drug dealers. An estimated 12,000 extra-judicial slayings later, the country is no safer but his government has an approval rating of around 80%.

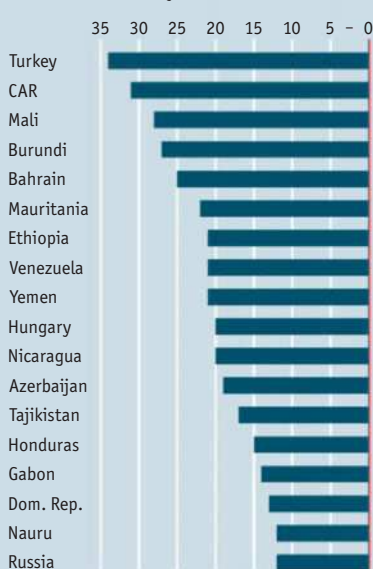
Would-be autocrats need a positive agenda, too. Often they pose as defenders of an identity that voters hold dear, such as their nationality, culture or religion. Poland's ruling party, for example, waxes lyrical about the country's Catholic way of life, and lavishes subsidies on big families, who are likely to be rural and religious.

Parties of the nationalist right have learned from the left how to exploit identity politics. Both sides tend to favour "group rights" over those of individuals. The "Hungarian nation is not a simple sum of individuals," Mr Orban said in 2014, "but a community that needs to be organised, strengthened and developed." Steve Bannon, Donald Trump's nationalist guru, calls him "a hero".

To remain in power, autocrats need to nobble independent institutions. They do this gradually and quietly. The first target is often the justice system. Poland's ruling party passed a law in December forcing two-fifths of judges into retirement. On May 11th Mr Duterte forced out the chief justice of the Philippines, who had objected to his abuse of martial law. ▶▶

How big is my backslide?

Decrease in democracy index score, 2008-18



▶ The media must be nobbled, too. First, an autocrat in waiting puts his pals in charge of the public broadcaster and accuses critical outlets of spreading lies. Rather than banning independent media, as despots might have done a generation ago, he slaps spurious fines or tax bills on their owners, forcing them to sell their businesses to loyal tycoons. This technique was perfected by Mr Putin in Russia, and is now widely copied. In Turkey, the last big independent media group was in March sold to a friend of Mr Erdogan.

Getting the security forces on side is essential. Robert Mugabe, Zimbabwe's former president, took their loyalty for granted and was thrown out. Other strongmen are less complacent. To keep the men with guns happy, Venezuela's president, Nicolás Maduro, lets them loot the national food-distribution system. Abdel-Fattah al-Sisi, the president of Egypt, who won 92% of the vote in March, lets the police top up their salaries by robbing civilians.

With the courts, press and armed forces in his pocket, a strongman can set about neutering every other institution that counts. He can sideline parliament, redraw the electoral map and bar serious opponents from politics.

Whatever ideology they profess, autocrats are often opportunistic. President Daniel Ortega in Nicaragua started as a revolutionary Marxist, seizing power in 1979. He lost an election in 1990 partly because he was anti-Catholic. So he rebranded himself as a devout Catholic—pushing a ban on abortion even if the mother's life is at risk—and was re-elected in 2006 against a divided opposition. Last year his wife, Rosario Murillo, became vice-president, thus establishing a dynasty resembling the dictatorship he once overthrew.

Mr Ortega and his Sandinistas have commandeered the supreme court, which abolished presidential term limits, and created shell "opposition" parties to simulate choice while repressing genuine oppo-

nents. Critical media find themselves under new ownership, often that of Mr Ortega's family.

None of this chipping away at democracy sparked unrest. It was only when Mr Ortega tried to grab Nicaraguans' pensions that they rioted. The ruling Sandinistas' mismanagement and graft has left the public-pension pot all but empty. Mr Ortega told workers to top it up. In response, tens of thousands took to the streets in April and tore down hideous statues erected in honour of Ms Murillo. The regime has clung to power only by shooting people.

Autocrats who plan to stay in power for ever need to indoctrinate children. "Most countries don't have events from two years ago in their school history books. We do," says a Turkish liberal, aghast that Turks as young as four are taught that their president saved the nation from the Gulenists. Venezuela's Bolivarian University offers free tuition to students who submit to lectures blaming America for food shortages.

Liberalism and its discontents

Much has been said about the failures of liberal democracies. Although they are typically rich and peaceful, many of their citizens are disgruntled. Globalisation and technology have made them fear for their jobs. The culture wars ensure that more or less everyone feels disrespected by someone. The rise of autocracy is in part a reaction to these big historical trends. But it is also because power-hungry leaders have learned how to exploit them. You cannot have autocracy without an autocrat.

Many people crave power. Some, because they want to change the world. Some, for its own sake. Some, because power brings adulation, money and sex. Many who attain power have all these motives. Small wonder they cling to it.

Most authoritarian regimes are filthy. Of the countries and territories in the dirtiest third of Transparency International's corruption perceptions index, not one is

rated "free" by Freedom House. Of those in the cleanest 20, only Singapore and Hong Kong fail to qualify as free.

Autocracy and graft create a vicious circle. Power with few constraints enables those who wield it, or their friends, to get rich. The more they steal, the more incentive they have to rig the system to remain in charge. If they lose power, they risk prosecution, as Mr Zuma is discovering in South Africa. Thus, whenever an autocrat makes a stirring speech about national pride, his real aim may be to deflect attention from his own skulduggery. Mr Orban's opponents would love to discuss why his friends are now among the richest people in Hungary, or why there is a huge football stadium in his tiny hometown. But his friends control the media, and would rather talk about immigrants.

Democrats can fight back. Five recent examples stand out. In Sri Lanka, the opposition united to beat a spendthrift, vicious autocrat. In the Gambia, the threat of an invasion by neighbouring countries forced a strongman to accept that he had lost an election. In South Africa, an elected leader who subverted institutions and let cronies loot with impunity was tossed out by his own party in January. In Armenia, an autocrat was ousted in April by mass protests.

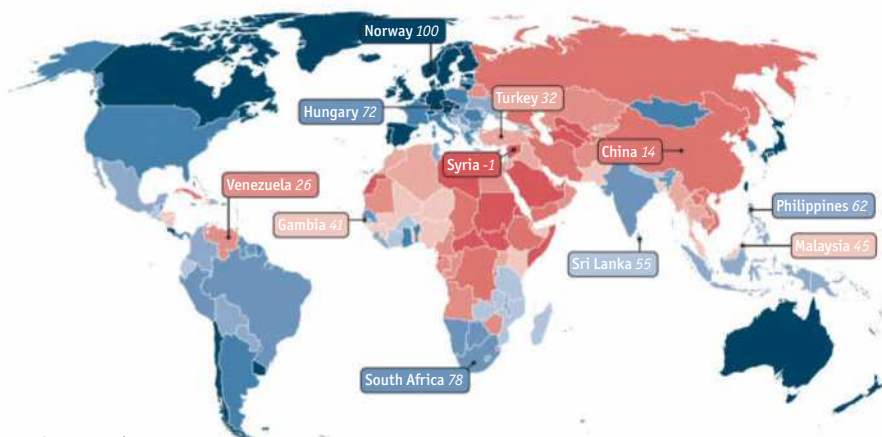
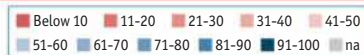
And in Malaysia, the prime minister, Najib Razak, tried to steal an election in May but failed. Despite gerrymandering, censorship and racist appeals to the Malay majority, voters dumped the ruling party of the past 61 years. Its sleaze had grown too blatant. America's justice department has accused Mr Najib of receiving \$681m from 1MDB, a state fund from which \$4.5bn disappeared. He says the money was a gift from an unnamed Saudi royal. The opposition gleefully contrasted the vast sums Mr Najib's wife spends on jewellery with the difficulty ordinary folks have making ends meet. "Najib just makes up his own rules," says a taxi-driver who switched sides to back the new government.

That strongmen make up their own rules is why liberal democracy is worth defending. And in the long run, it seems to deliver better material results. A study by Daron Acemoglu of the Massachusetts Institute of Technology found that switching from autocracy to democracy adds 20% to income per head over 30 years, though some economists dispute these findings. Guillermo Vuletin of the World Bank argues that autocrats fall when economies slump, and the democrats who succeed them take credit for the inevitable recovery.

What is certain, however, is that freely elected governments bound by the rule of law have less power to abuse citizens. "Little by little they took away our rights," says a journalist in Diyarbakir, who was recently arrested for five innocuous tweets. "Every day I check the news to see which of my friends has been detained." ■

Freedom House democracy index score

2018, 0=least free, 100=most free



Source: Freedom House



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Solar energy

On the solarcoaster

After a clampdown in China, could the global photovoltaic industry survive without subsidies?

ALITTLE over a decade ago, when Jinko Solar, a Shanghai-based company, entered the solar business, it was such a novice that when it visited international trade fairs, all it had was a bare table and a board with its name scribbled on it. But it also had luck, a technological edge and lots of public money on its side.

The industry globally was riding high on subsidies. Generous feed-in-tariffs (FITs), financial incentives for installing solar, made Germany the world's largest solar market by around 2010. Germans turned to China for cheap sources of crystalline silicon solar panels, not least because subsidised land and loans enabled China's fledgling manufacturers to undercut European and American competitors.

When European solar subsidies slumped during the euro crisis, the Chinese government once again stepped in to support its renewable-energy champions. It offered FITs to slather the remote west of China with solar farms. By 2013 China had eclipsed Germany as the world's largest solar-panel market; last year it installed 53 gigawatts (GW), almost five times as much as in America, now the next-biggest market. Jinko became the world's largest provider of solar panels in 2016, shipping almost 10GW globally last year. Six of the top ten producers are Chinese.

These ups and downs are known globally as the "solarcoaster": just as subsidies can quickly build the market up, their

withdrawal can tear it down. On June 1st this happened with a particularly heart-stopping lurch when Chinese authorities, with almost no notice, strictly limited new solar installations that qualified for FITs, blitzing the shares of Jinko and some of its peers in China, as well as of First Solar, one of America's biggest solar suppliers.

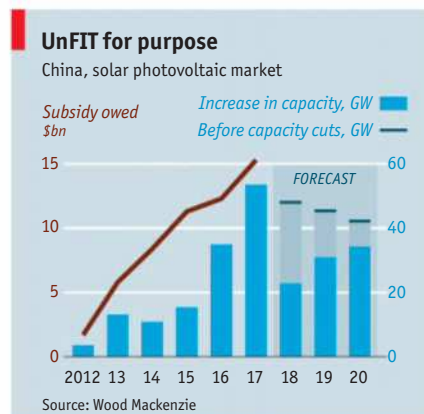
Analysts reckon that at least 20GW of solar projects expected to be built in China this year will now be scrapped (see chart). As demand wilts, they predict, Chinese panel prices will fall by at least a third. Benjamin Attia of Wood Mackenzie, an energy consultancy, says that, depending on how quickly the price falls encourage an uptake of solar in new markets, this could be the first year since 2000 that the global solar

industry stalls. "In the short term, the policy change will rack the China market with angst," says an industry insider there.

The clampdown comes at a time when the solar industry globally is increasingly able to compete toe-to-toe on price with more conventional sources of power generation, such as coal, natural gas and nuclear. Countries in Europe, including Britain and Spain, and elsewhere too, have drastically slashed FITs. It all raises an important and tricky question: is this the end of the line for solar subsidies?

China provides an illustration of the likely answer, which is that FITs may be disappearing but other subsidy-lite alternatives are taking their place. Analysts say China's decision to scrap FITs follows a rise to about \$15bn last year in the deficit in the subsidy fund earmarked for developers; plugging the gap would have strained public finances. As a result of this shortfall, solar developers were not getting the subsidies they were owed. As one industry insider puts it, everyone loves subsidies—but only when they get paid.

Paolo Frankl of the International Energy Agency, a global forecaster, notes that China had recently begun to experiment, via a programme called "Top runner", with an alternative to FITs that is gaining popularity internationally. This is a reverse auction in which solar developers that offer to build and run projects most cheaply win. The price they bid is what they will charge in long-term power-purchase agreements (PPAs) for the electricity they generate. Such reverse-auction PPAs have produced startlingly low bids in sunny places from Arizona and Nevada to Mexico, Abu Dhabi and India. In China recent PPAs sharply undercut the FITs, he says. One even beat coal-fired power. Hence China's aim to encourage more of such auctions to make solar, on the face of it, subsidy-free. The bene- ▶▶



fits could be significant in China. Lower prices of panels as a result of a temporary glut will encourage more aggressive bids, saving the government money and making solar more competitive against coal.

Yet though few doubt that PPAs are better than FITs, there is still fierce debate about whether they are also a sort of market-distorting subsidy. For instance, utilities may be forced to offer renewable PPAs, rather than fossil-fuel alternatives, because governments hold them to renewable-energy targets. The very existence of long-term contracts may make it cheaper for solar developers to get funding than

they would otherwise. That said, it is hard these days, in China or elsewhere, to build any power plant without some public support. And purists say that any fossil-fuel project that goes ahead without taxing the carbon it produces is also enjoying an implicit subsidy.

China's move—though it will stall new solar installations for a while—may nonetheless make the global industry healthier over time. The shift may hasten consolidation in the industry in China, bringing the four main manufacturing components, polysilicon, wafer, cell and panels, under one roof, as they are at Jinko.

Bloomberg New Energy Finance, a consultancy, says that by 2019 more markets may embrace solar, given the fall in panel costs. The cheaper solar gets, the more appealing it becomes, especially in poor countries struggling to satisfy rising energy demand. Mr Attia of Wood Mackenzie notes that pre-qualified bidders for a solar tender in Kuwait, announced after June 1st, involved Chinese property, mining and defence firms, which are not usually associated with photovoltaics (PVs). They may opportunistically be attempting to shift a surfeit of Chinese PV abroad.

The price cuts may also give Chinese so- ▶▶

Bartleby | A job is for Christmas, not for life

The insecurity of freelance life

THE decline of the conventional job has been much heralded in recent years. It is now nearly axiomatic that people will work for a range of employers in a variety of roles over their lifetimes, with a much more flexible schedule than in the past. Opinion is still divided over whether this change is a cause for concern or a chance for workers to be liberated from the rut of office life.

Is the shift really happening? Some figures from the Bureau of Labour Statistics (BLS), released on June 7th, showed that only 10.1% of American workers were in “alternative employment” last year, a lower proportion than the 10.7% recorded in 2005. In contrast, a study of the British economy by the Institute for Fiscal Studies (IFS) shows that the self-employed sector has been growing, with the number of self-employed sole traders rising by 25% between 2007-08 and 2015-16.

These two measures are different. But getting a good statistical fix is not easy when the jobs are hard to define. The ecology of the alternative-employment market has many species. At the top end are independent consultants with six-figure salaries and tax advantages from their self-employed status; at the bottom are cleaners on the minimum wage working for an agency. Some people will be on “zero hours” contracts where they are unsure of their income from week to week. Then there are jobs in the “gig economy”—people connected to work via websites, such as freelancers labelling photos to help artificial-intelligence programs. Plenty of people use the gig economy to top up income, rather than relying on it.

The best placed are skilled professionals and artisans whose work is in demand from a wide range of customers. But many people will be dependent on a single client, which makes them vulnerable



to any change in their circumstances. An old friend of Bartleby has a rolling contract to provide tech support to a big firm. The money is good but there is no paid holiday, sick pay or pension, and the contract can be ended with a month's notice.

The IFS figures show that, although the number of self-employed traders has increased since 2007-08, their aggregate turnover dropped by 19% and their average profits fell by 23% in real terms over the same period. The eight years in question, which included the Great Recession, were thus much worse for self-employed Britons than for conventionally employed people, whose real earnings fell by 6%. One explanation may be that a lot of self-employed work comes from firms “contracting out” tasks in busy periods. When the economy stutters, they have less need for help.

As for the gig economy, it actually seems to be quite a small part of the alternative-employment sector. Far more people work in construction or business services than drive cars for Uber. And gig-economy workers are not a homogeneous group. In her book, “Gigged: The Gig Economy, the End of the Job and the Future

of Work”, Sarah Kessler tells the stories of several workers. One, Curtis Larson, a computer programmer, prospered because of his skills—he eventually took a full-time job, at SpaceX, Elon Musk's rocket firm. But others found the pay low and the benefits poor. As Ms Kessler writes: “It's easier than ever to get work done without hiring someone as an employee. But the growing group of non-traditional workers that results has no access to labour protections or safety nets provided by law to employees.”

Some gig-economy workers have tried to organise their colleagues into the equivalent of trade unions in America. But it is a difficult task. Gig employees do not gather in a single place where they can be recruited. It took a long fight for a British plumber to win his case this week before the Supreme Court to be classed as a “worker” with benefits rather than self-employed.

The most vulnerable employees seem to be those classed as “contingent workers”—3.8% of the American workforce, according to the BLS. These temporary workers can be viewed as a “reserve army” of labour that employers can use to hold down wages. (This might explain the sluggish growth of real earnings in America of late; but that argument holds water only if the reserve army is growing over time, and the BLS data cast doubt on that.)

Such workers are more likely to be under 25 and less likely to have health insurance than those in regular employment; 55% of them would prefer a permanent job. Insecurity makes it difficult for such workers to save for home ownership or even to get married. Alternative employment may be a trendy concept, but some of the alternatives turn out to be not that great for ordinary workers.

lar manufacturers, stung by 30% tariffs imposed by the Trump administration in January, an opportunity to regain competitiveness in America (which maintains subsidies of its own via tax credits). The tariffs kept their silicon PV products out of the American market, bolstering sales of First Solar. But a fall of 30% or more in PV prices should make the tariffs less of a hindrance. Analysts say that is why First Solar's shares have fallen by a fifth since June 1st.

Solar experts expect the solarcoaster to rattle out of its current trough. But the ride still has a long way to go. Though solar was the world's biggest source of new power-generating capacity last year, it still generates a paltry 2% of global electricity. Technological improvements to make it better at turning sunlight into energy are slowing down. Here again, China offers a lesson. Its "Top runner" programme rewards those companies experimenting with the latest PV technologies, in a bid to make solar more competitive. Jinko says no other country offers such a scheme. The shame is that it is only open to Chinese firms. ■

Latin American oil giants

In deep water

MEXICO CITY AND SÃO PAULO

Beware the heavy hand of the state

IT SEEMED like such a comeback. When Pedro Parente took over as boss of Petrobras in 2016, Brazil's state oil firm was drowning in \$130bn of debt. It had lost \$200bn in shareholder value, and its executive board had been gutted by the massive *Lava Jato* corruption scandal. Mr Parente slashed subsidies, sold assets and adopted a market-friendly pricing policy. The company's debt shrank and the share price reached a 3½-year high in May.

Then, on June 1st, Mr Parente resigned and Petrobras's shares plunged by over 20%. The cause was a ten-day lorry drivers' strike that crippled Brazil's economy and forced Petrobras to freeze diesel prices for ten days and the government to subsidise them for two months. That revived a conversation about price controls and fuelled concerns about future state meddling.

The same fears hang over Pemex, Mexico's state-owned oil giant, ahead of a general election on July 1st. The populist front-runner in the polls, Andrés Manuel López Obrador, is promising to freeze fuel prices for three years. As significantly, he railed for years against reforms in 2013 that opened Mexico's oilfields to foreign firms and sought to turn Pemex into a more efficient leviathan. The future of two of the

biggest companies in Latin America, both symbols of national sovereignty with a history of cronyism and corruption, is about as clear as a barrel of oil.

Start with Petrobras. The appointment of its market-friendly former chief financial officer, Ivan Monteiro, to replace Mr Parente has restored some confidence. But the strike and an unpredictable presidential election are big challenges ahead.

The lorry drivers, who operate on razor-thin margins, demanded a return to the costly price subsidies of the past. Some 87% of Brazilians supported them, according to Datafolha, a pollster. So, the government's short-term goal is to work out a fuel-pricing system that protects drivers from excessive volatility without tearing holes in Petrobras's pockets. Fuel prices might be adjusted once a month or once every three months, rather than every day. Taxes could be tweaked in order to serve as a pressure valve: high when oil is cheap, low when it is expensive. Petrobras has been on a trajectory toward market-oriented policies, efficiency and privatisation, but the strike and debate about price controls has slowed that progress and revealed just how unpopular privatisation would be.

Pemex is also in a political predicament. Enrique Peña Nieto, Mexico's outgoing president, repeatedly promised that the energy reforms he passed in 2013 would lower fuel prices for ordinary Mexicans. Alas, Mr Peña raised the price of fuel by around 20% in January last year. The *gasolinazo*, as Mexicans call it, triggered widespread protests and rioting.

But the *gasolinazo* was just one explosion in the minefield that is oil politics in Mexico. Since Lázaro Cárdenas, a former president, expropriated the oil sector in 1938, state control over oil reserves has become knitted into Mexican notions of national sovereignty. The energy reforms of



Truckers' pricing power

2013 began to unstitch this by allowing foreign firms to bid for oil contracts in transparent auctions broadcast online. The reforms also aimed to reduce Pemex's bloated workforce by around half.

Mr López Obrador opposed all this, and pledged to reverse the reforms via referendum. But though the reforms are unpopular with voters, investors view them as vital. Mr López Obrador, whose pragmatic streak is increasingly visible as election day nears, now promises only to review the contracts already awarded, to check for corruption. But even without repealing the reforms, he could stall them through bureaucratic gridlock. The consequences of that for Pemex would be bleak. ■

Technology politics

Playing with fire

Google runs into more flak on artificial intelligence

DISCOVERING and harnessing fire unlocked more nutrition from food, feeding the bigger brains and bodies that are the hallmarks of modern humans. Google's chief executive, Sundar Pichai, thinks his company's development of artificial intelligence trumps that. "AI is one of the most important things that humanity is working on," he told an event in California earlier this year. "It's more profound than, I don't know, electricity or fire."

Hyperbolic analogies aside, Google's AI techniques are becoming more powerful and more important to its business. But its use of AI is also generating controversy, both among its employees and the wider AI community.

One recent clash has centred on Google's work with America's Department of Defence (DoD). Under a contract signed in 2017 with the DoD, Google offers AI services, namely computer vision, to analyse military images. This might well improve the accuracy of strikes by military drones. Over the past month or so thousands of Google employees, including Jeff Dean, the firm's AI chief, have signed a petition protesting against the work; at least 12 have resigned. On June 1st the boss of its cloud business, Diane Greene, conceded to those employees that the firm would not renew the contract when it expires next year.

The tech giant also published a set of seven principles which it promises will guide its use of AI. These included statements that the technology should be "socially beneficial" and "built and tested for safety". More interesting still was what Google said it would not do. It would "proceed only where we believe that the bene- ▶▶

fits substantially outweigh the risks," it stated. It eschewed the future supply of AI services to power smart weapons or norm-violating surveillance techniques. It would, though, keep working with the armed forces in other capacities.

Google's retreat comes partly because its AI talent hails overwhelmingly from the computer-science departments of American universities, notes Jeremy Howard, founder of Fast.ai, an AI research institute. Many bring liberal, anti-war views from academia with them, which can put them in direct opposition with the firm in some areas. Since AI talent is scarce, the firm has to pay heed to the principles of its boffins, at least to some extent.

Military work is not the only sticking-point for Google's use of AI. On June 7th a batch of patent applications made by DeepMind, a London-based sister company, were made public. The reaction was swift. Many warned that the patents would have a chilling effect on other innovators in the field. The patents have not yet

been granted—indeed, they may not be—but the request flies in the face of the AI community's accepted norms of openness and tech-sharing, says Miles Brundage, who studies AI policy at the University of Oxford. The standard defence offered on behalf of Google is that it does not have a history of patent abuse, and that it files them defensively in order to protect itself from future patent trolls. DeepMind's patent strategy is understood to be chiefly defensive in nature.

Whatever Google's intent, there are signs that the homogeneity of the AI community may lessen in future. New paths are being created to join the AI elite, other than a PhD in computer science. Hopefuls can take vocational courses offered by firms such as Udacity, an online-education firm; the tech giants also offer residencies to teach AI techniques to workers from different backgrounds. That might just lead to a less liberal, less vocal AI community. If so, such courses might serve corporate interests in more ways than one. ■

Italian business and the Mafia

Price of protection

PALERMO

Anti-extortion groups are making a difference

THE toll of "pizzo" protection payments made by firms to Sicily's Mafia is closely monitored. Nearly half pay up these days, according to estimates from the Confartigianato, a national business association—a big improvement from the early 1990s, when at least four-fifths of Sicilian firms paid it. Back then the levy claimed nearly a tenth of the turnover of victimised businesses. Today's ratio is around half that. Other regions in Italy's south, where the pizzo system is most entrenched, have also seen big drops.

For that businesses can thank a clutch of anti-pizzo groups. One is *Addiopizzo* ("goodbye, pizzo") in Palermo, which advises businesses on pressing charges against crooks. It also encourages them to publicly forswear pizzo payments. Extortionists now think twice before bullying shopkeepers, knowing there will be a flurry of media attention and police investigations, says its founder, Daniele Marannano.

Addiopizzo has endorsed as pizzo-free 1,045 (and counting) businesses in Palermo and surrounding areas that display window stickers to discourage would-be extortionists. Entrepreneurs say the stickers seem to work, a claim supported by intercepted phone calls in which *mafiosi* complain about the difficulty of meeting extortion targets. Other anti-pizzo groups including *Libero Futuro*, also in Palermo, have cropped up.

Their efforts have registered on a national level. A group in Naples, the Italian Federation of Anti-Racket and Anti-Usury Associations, says that pizzo payments now amount to a fifth at most of all income for Italy's organised-crime groups, down from a whopping half in the early 1990s. The biggest drop came in the past four years, says the group's founder, Tano Grasso.

But the system itself is worth more to crooks than the money and is unlikely to disappear. This is because it provides power over payers, who are often also pressed into aiding more lucrative crime by, say, concealing drugs or firearms, or by turning a blind eye to a robbery, fugitive hideout or insurance scam.

An operation may begin with a squirt of superglue in a shop's keyhole, or a bottle of petrol left on a doorstep. Mafia members might threaten a new bar's prospects by starting drunken brawls. Such ops are "word-of-mouth marketing" for pizzo compliance in a targeted area, notes Giuseppe Todaro, an entrepreneur in Cinisi, near Palermo, who handed over about €245,000 (\$290,000) in 17 years. Many remaining payers are largely content to continue, he says, for the pizzo payments also elicit useful services from the Mafia. These include help with debt collection; stopping a competitor from opening; and discouraging workers from unionising or suing for mistreatment.

Entrepreneurship in Germany

Taking off

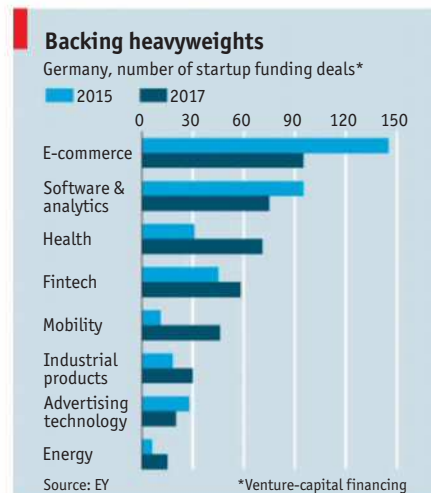
BERLIN

Germany's startup system is opening a new chapter in technology innovation

At a rooftop bar in Berlin on May 29th, the Agilitati of Germany's startup scene toasted a new arrival. Silicon Valley Bank, a commercial lender which counts as customers half of American startups that went public in 2017, has just opened an office in the country. "They are doing unique, cool things here," gushed Greg Becker, the bank's boss. One of his first German clients is Liliium Aviation, whose electric flying taxis have mastered the tricky combination of a drone-like vertical take-off and forward jet propulsion.

Silicon Valley Bank arrives as a new breed of German startups is gaining altitude. At first e-commerce firms dominated the scene, often by copying ideas from abroad. Rocket Internet, an early success, went further, cloning American e-commerce models in other countries, too. Rocket and Zalando, a fashion e-tailer, did initial public offerings in 2014. After that only two big stockmarket debuts followed, of Hello-Fresh (which sells meal-kits) and Delivery Hero (a food-delivery firm), both in 2017.

The latest crop have in common an emphasis on science and manufacturing, Germany's historical strengths. These younger startups are developing technologies that address areas such as health care, finance and transport. As would be expected in a decentralised economy, Berlin is gradually ceding ground as the hub of the startup scene. At *Unternehmertum*, an incubator just outside Munich, for example, a hangar-sized workshop is buzzing with 3D printers, welding stations and a gigantic metal-cutting machine. It is attached to the Technical University of Munich (TUM) but ▶▶



owned by Susanne Klatten, heiress to an industrial fortune.

Its boss, Helmut Schönenberger, lists some of the stars born there in the past five years. One is Liliium. Another is NavVis, which makes 3D maps of indoor spaces. Konux, another young firm, makes artificial-intelligence sensors that predict when and where railway-track repairs are due.

Such firms are off most people's radar. "You'll not hear about many of them," says Peter Lennartz of EY, a consultancy. Unlike e-commerce firms, startups that make business-to-business products, such as measurement systems, are bound to be less visible. But they are becoming increasingly popular with investors.

Although e-commerce startups still draw the lion's share of financing, that is largely because they are more mature. The three biggest venture-capital rounds in 2017, all in e-commerce, accounted for almost a quarter of the total amount invested in Germany last year. But the number of funding rounds in e-commerce fell by 34% between 2015 and 2017 (see chart on previous page). For startups in health care the figure more than doubled; in mobility it increased fourfold.

This shift reflects the emergence of new firms in industry hubs such as Frankfurt, Germany's financial centre; Hamburg, which has a cluster of logistics firms; and Munich, home to firms such as BMW, Airbus and Siemens. In 2014-16, Hamburg had 253 new business founders per 10,000 working people annually, compared with 238 in Berlin. The capital remains the centre for entrepreneurs in e-commerce and entertainment; but the number of funding rounds for startups in Berlin increased by 14% between 2015 and 2017, compared with 33% for those elsewhere.

Wherever they are based, funding rounds at all stages of a firm's life are becoming bigger and easier. For a young company with a strong product, team and global ambitions, raising money has never been easier, says Julian Riedlbauer of GP Bullhound, a tech advisory firm in Berlin. In 2017 investors poured €4.3bn (\$4.8bn) into German startups, 53% more than the average in 2015-16. KfW, the federal development bank and one of the biggest startup financiers, is about to launch a subsidiary that will invest €2bn in early-growth firms in the next decade.

Firms have better access to talent as well as to money. Entrepreneurship programmes at technical universities are proliferating. And according to Dietmar Harhoff of the Max Planck Institute for Innovation and Competition, a think-tank, experienced managers are more willing to join startups. Liliium, for example, poached senior staff from Airbus and Tesla when it was a fledgling with just \$10m of backing. For entrepreneurs there seem likely to be further occasions for parties. ■



Airbnb and Uber in Japan

Can share, won't share

TOKYO

Japan's sharing economy is minuscule compared with what it could be

AIRBNB, an American platform for booking stays in other people's houses, can barely conceal its frustration. A law passed last year for the first time legalised *minpaku*, or home-sharing, in Japan, but also sharply restricted it. From June 15th hosts can rent out their property for a maximum of 180 days each year, provided they register with the local authorities. Most hosts will not meet that deadline because they are still obtaining their registration numbers, and on June 1st Japan's main tourism body unexpectedly decreed that any without them had to cancel reservations at once. Airbnb accordingly eliminated four-fifths of its roughly 60,000 listings in Japan. Holidays are at risk.

The experience illustrates the country's hesitant approach to the sharing economy, in which people rent goods and services from one another through internet platforms (a broader definition includes companies renting out goods they own, such as bikes, for a short time). A generous estimate of the sharing's economy value in Japan is just ¥1.2trn yen (\$1bn), compared with \$229bn for China. "It's a very difficult situation," says Yuji Ueda of Japan's Sharing Economy Association.

Opportunities certainly abound. Almost 29m tourists visited Japan last year; the goal is to attract 40m by 2020, when Tokyo hosts the Olympics. But the number of hotel rooms is not keeping up with demand. Japan's government reckons that sharing could also help it to provide public services such as transport, especially in rural areas, as it struggles with a declining

and ageing population.

Successes do exist. There are thriving platforms to share meeting rooms, office space and parking spots. One popular site is Laxus, which lets cash-poor city dwellers share designer handbags. Airbnb's own offering of "experience sharing", in which people sell and buy experiences such as city tours and cooking classes, is more successful in Japan than almost anywhere else, says Mike Orgill, its head of policy in Asia, as foreigners in particular seek a window into the country.

Yet regulation, which tends to favour big companies and industries, is a key obstacle to faster and more mainstream growth. The *minpaku* law's 180-day limit, which local authorities have the right to tighten further, is a nod to powerful hotel chains. Shinjuku, a ward in Tokyo that is popular with visitors, is banning homeowners in residential areas from renting out their homes from Mondays to Thursdays. Uber, a ride-hailing firm, is prevented from offering anything but its premium services, such as black cars with professional drivers, thanks in large part to the objections of established taxi fleets. There are ways to get round it—a local ride-sharing app, Nottoco, has avoided the regulations by getting passengers to pay for petrol and tolls rather than a fee for transport, for example. But the rules hinder growth.

Another hurdle is the attitude of the Japanese public. Many people are simply ignorant of the existence of sharing apps. Others reckon they may be illegal. "Public anxiety is the main factor impeding the development of the sharing economy," thinks Yusuke Takada of the government's Sharing Economy Promotion Office. Another barrier is social custom. Chika Tsunobu, the head of Anytimes, a local platform where users share skills from gardening to baby-sitting, says women in particular feel they should be doing everything themselves, pointing to criticism she attracted after hiring a cleaner through the site. Mr Ueda says the Japanese fret that sharing platforms will not provide the high level of service they are accustomed to. Because of this, the Sharing Economy Association has developed a "trust mark" to give consumers more confidence.

International firms are also adapting their tactics. Airbnb is "partnering with areas that don't get as much love as they might like," says Mr Orgill. It worked with the authorities and locals in Kamaishi, on the north-east coast, to attract tourists, even creating a local guidebook. As for Uber, helping established firms is not something the firm does anywhere else, notes Ann Lavin, who heads policy in Asia-Pacific for the firm, but it is piloting a ride-hailing programme for local taxis on the remote island of Awaji, near the city of Kobe. This caring, sharing approach may pay off, but it will take more time. ■

Schumpeter | Canaries in the coal mine

As the global trade system fractures, multinational firms are cutting cross-border investment



IF YOU look only at the headline numbers, populism and protectionism seem to be weirdly good for global business. Since 2015 there has been Brexit, the rise of fringe parties in the euro zone, the election of President Donald Trump and a more nationalistic China under Xi Jinping, its president. Yet over this period the profits of the world's biggest 3,000 listed firms have risen by 44% in dollar terms. Share prices have soared. As for tariffs, for now they are little more than an irritant for most bosses. Plenty of Western firms are still keen on exotic thrills far beyond their borders—in May, Walmart bid \$16bn for Flipkart, an Indian e-commerce company. Starbucks is opening a new shop in China every 15 hours.

Look more closely, however, and you will see that the decay of globalisation is accompanied by a steady demoralisation of multinationals. Between the fall of the Berlin Wall in 1989 and the subprime crisis some 20 years later, a few thousand corporate cosmopolitans became ever more powerful, acting as the brains of the global economy, controlling intellectual property as well as international supply chains. During the past decade, however, they got stuck in a rut. And, as a new report from UNCTAD, a multilateral body, underlines, that rut deepened last year.

Consider cross-border investment by firms, which consists of takeovers and greenfield investments such as factories. It fell by 23% in 2017. The sums flowing to Asia and Latin America were stable, but dropped in all other regions. As a share of global GDP, such investment has fallen by half compared with 2007, to 2.4% last year—the lowest ratio since the financial crisis. And global supply chains have stagnated. One gauge is the share of all exports that comes from cross-border inputs. Having steadily risen from 26% in 1995 to 31% in 2010, it has since dropped to 30%.

Multinationals' malaise has deep causes. Many global firms succumbed to indiscipline and poured money into vanity projects abroad. Plenty relied on arbitrage, basing production in places with cheap labour and booking profits in countries with low taxes. But Chinese wages have risen. European countries and America have made it harder to dodge taxes. In many industries local scale is more important than global reach. Walmart, for instance, is selling control of its business in Britain to J. Sainsbury, a local company, after years of dim performance.

As multinationals' advantages have eroded, so has their claim

to supercharged performance. Schumpeter has grouped the biggest 500 companies by market value into local firms and multinationals (firms which make over 30% of their sales outside their home region). Since 2015 the globetrotters' profits have increased by 12%, compared with 30% for the homebodies. Multinationals once had glittering returns on equity; last year they managed only 11%, compared with 12% for local firms. UNCTAD measures the returns of just the foreign operations of multinationals, excluding their domestic businesses (which for American firms can be lucrative). Such returns dropped to 7% last year, from 9% before the financial crisis—probably below their cost of capital.

Faced with soggy profits, bosses are being more cautious, an impulse further amplified by trade tensions. For one thing, regulators are more likely to block deals. Chinese buyers in particular are effectively playing roulette. Even saintly Canada prevented a \$1bn takeover of a construction company, Aecon, by a Chinese firm in May. America's security watchdogs recently kiboshed the takeover of Qualcomm by Broadcom, a rival semiconductor firm then domiciled in Singapore. And who wants to build new cross-border supply chains while the world's trade regime is in flux?

Perversely, protectionism can sometimes stimulate cross-border investment. After the 1930s, some firms "tariff hopped" by building factories within countries to avoid exporting to them. The White House doubtless hopes this will happen in America, which Mr Trump says is "open for business". There are a few examples—some foreign solar-panel manufacturers made plans for new plants in Uncle Sam's backyard after tariffs were announced in January. But across all industries, inbound investment into America fell by 39% in 2017, according to the Bureau of Economic Analysis. The number of greenfield projects in the United States announced by foreign firms fell by 29% in the first quarter of 2018 compared with the prior year, according to fDi, a data firm.

Perhaps digital flows could provide a new leg for globalisation, a view backed by McKinsey, a consulting firm. Netflix now has more subscribers abroad than at home, for example. But these flows are fragile. They tend not to create lots of jobs, exports or tax revenues for the recipient countries, which is their main motivation for welcoming multinationals. And protectionism has gone digital, too. The control of tech innovation is at the heart of the rows between America and China.

Fade away

The base case is that cross-border investment will be subdued until Mr Trump leaves office. The weight of multinationals in the pool of global investment (including takeovers) will fade. It has already dropped to 6% last year, compared with a 20-year average of 8% and a peak of 10% in 2007.

But if trade tensions persist beyond the American presidential election in 2020, firms may seek a more radical rethink. One option would be to separate the flow of investment from control. In the 19th century global firms often gave contracts to local managing agents to run their foreign businesses. These could be revived. Or multinationals could seek only minority stakes in their operations abroad, guaranteeing them local autonomy.

Such structures could muffle political risks but are far less efficient than the model of globally integrated firms that thrived in the 2000s. Consumers and productivity will both suffer, and investors might, too. But after the past few months it is the duty of anyone running a multinational firm to consider how to redesign their business for a pricklier, nastier world. ■



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Chinese finance

Light on the shadows

SHANGHAI

Stricter oversight of shadow banking, prompted by fears of financial instability, begins to bite

THE teller at ICBC, China's (and the world's) biggest bank, ushers a new, well-heeled customer into a private room. It is not for VIP treatment but a stern warning. The customer wants to invest in products offering higher returns than a basic savings account. The teller fixes a camera on her and reels off a series of questions. Are you aware that prices can go down as well as up? Do you understand that the bank does not guarantee this product? Only when the customer has been recorded saying "yes" does she get her wish.

Some complain that these videotaped agreements, now mandatory at Chinese banks selling similar investment products, feel like interrogations. But for the financial system, they are a step away from the precipice. Banks have used such transactions to channel cash into off-balance-sheet loans, serving riskier corners of the economy. Firms with little lending expertise have also muscled into the same space.

The catch-all phrase to describe this is shadow banking. It is a global phenomenon, partly a response to stricter regulation after the financial crisis of 2007-08. But China is at the extreme end. Its shadow-banking sector is vast, fuelled by a big rise in corporate debt. Estimates of its assets run from 50trn to 90trn yuan (\$7.8trn-14trn); the middle of that range is more than three-quarters of GDP. Its growth has

been dizzying, from almost nil ten years ago. Its structure is byzantine. And its pathologies have been worsened by the belief that if anything goes wrong, the government will cover the losses. The International Monetary Fund has repeatedly highlighted shadow banking as one of the big dangers to the Chinese economy.

The best disinfectant

Yet in the past year shadow banking's seemingly unstoppable progress has all but stopped. Last year the 30trn yuan market for "wealth-management products" (WMPs), a main conduit for savings to fund banks' off-balance-sheet loans, stalled for

the first time in its decade of existence. Insurers had also been sucked in, selling short-term, high-yield products. But in 2017 sales of these fell by about half. Between 2010 and 2017 non-banks issued a third of all new credit; in the first four months of 2018 their share plunged (see chart).

The reason is much tighter regulation, ordained from the top of the political system by the economic officials around President Xi Jinping—notably Liu He, a vice-premier. A government adviser says their appraisal of the past few years is that the economy has performed well, and that all the big dangers have been outgrowths of the financial system. He pointed to three incidents that shook Mr Liu and his colleagues: the stockmarket boom and bust of 2015; the ensuing gush of capital outflows; and the reckless investments of companies such as Anbang, a disgraced insurer.

So since 2016 the focus of economic policy has been to reduce financial risks. This is not the first time these have been targeted, but Zhang Licong, an analyst with CITIC Securities, a broker, says that this campaign has been the hardest-hitting yet. The rise in corporate debt has slowed. Banks have recognised more of their bad loans, writing off about 1.5trn yuan per year. The government has merged regulatory bodies to strengthen its oversight. And it has clamped down on shadow banking.

Officials began slowly, requiring banks to video customers acknowledging the risks of WMPs, a way of forestalling disputes if they go bad. They soon turned to peer-to-peer (P2P) lending, a small, unruly segment of shadow banking. The authorities capped loan sizes and required lenders to go into partnership with custodian banks. The number of online P2P platforms has dropped from 3,433 at the end of

Blinking in the spotlight

China, non-bank credit as % of total credit



Source: CEIC

▶ 2015 to below 1,900 today. Then they ordered banks to reassess their own books. Many had classified large dollops of credit as investments in order to hide bad loans.

The biggest step in the clean-up came on April 27th, when regulators published sweeping new asset-management rules. Among other things these bar firms from giving punters guarantees against losses and from pooling funds to invest in bank loans. Banks will still be able to offer investment products, but they will resemble mutual funds. They have until the end of 2020 to comply, longer than first planned. Banks need the time. They are under pressure to fortify their balance-sheets with more capital. Even before factoring in the new rules, Jason Bedford, an analyst at UBS, a Swiss bank, reckons China's banks have an equity shortfall of about 1trn yuan.

The regulators' clampdown was overdue. Moody's, a rating agency, says the new asset-management rules give it more confidence in China's banking system. The biggest banks' share prices have rallied by about a third since the start of 2017, in part reflecting the easing of investors' worries. There is, however, still far less enthusiasm for hard-charging smaller banks, which have a sketchier asset mix and a much weaker deposit base.

China's growth has held up well over the past two years, partly thanks to a strong global economy. But the stricter rules are now starting to weigh on activity. Infrastructure investment, a pillar of growth, has slouched to its slowest since 2012. Liquidity is also tightening. Annual growth in the broad M2 gauge of money supply has slowed sharply, to 8%, the lowest in more than 30 years, and companies are finding finance harder to obtain. Since late 2016 the gap between the yields on AA-rated corporate bonds and those on top-rated government bonds has doubled to two percentage points. Borrowers have defaulted on 20bn yuan of bonds in 2018, up by nearly a third from a year ago, though still just 0.1% of the overall market.

The question is whether China will flinch as the pain mounts. In the stop-go style of the past decade, supervisors have relaxed their grip whenever the growth toll looked too high. Banks have already been lobbying them to ease up: the extended deadline for complying with the asset-management rules is one result. "Regulators are using very strong drugs to cure an ill person," says a manager at a Chinese bank. "If the drugs are too strong, they will create another disease."

So far the government has paid little heed to such gloomy talk. Mr Liu, the vice-premier, said recently that investors must bear the risks for their own investments. In most countries that would sound like common sense. But in China it was taken as a hawkish sign. The cameras in the banks are not just for show. ■

International trade

Hidden obstacles

WASHINGTON, DC

American trade policy is more protectionist than the president thinks

"JUSTIN has agreed to cut all tariffs and all trade barriers between Canada and the United States," claimed President Donald Trump to laughter on June 8th, at the G7 summit in Quebec. The next day, in apparent seriousness, Mr Trump—who has slapped tariffs and quotas on imports of aluminium and steel from all the G7 countries, and others—called for unfettered trade within the group: "No tariffs, no barriers. That's the way it should be."

Over the next two days a more familiar Mr Trump reappeared. After Mr Trudeau said, at a post-summit press conference, that Canada would not be pushed around, he fired off a barrage of tweets calling him "very dishonest & weak". He blasted Europe too. And he tweeted: "Sorry, we cannot let our friends, or enemies, take advantage of us on Trade anymore."

Suspend disbelief and suppose that Mr Trump's offer of a barrier-free world is serious. He may want to tear down tariffs and quotas out of a yearning for open markets and lower prices for consumers. More likely, he reckons that the status quo is unfair because America is more open than any other rich country. In a free-trading world, other countries would have to lower their barriers by more than America would. Is he right? Reality is a little more complicated than he may suppose.

Mr Trump is fond of picking out his trading partners' egregiously high tariffs. In his Twitter tirade he slammed Canada's 270%



Shell game



levy on dairy products (which applies after quotas with much lower tariffs have been filled). He despises the European Union's 10% tariff on cars. But others can play that game too. Once quotas are filled, shelled peanuts going into America face a tariff of 132%, and raw tobacco duties of 350%. EU negotiators note that America applies a 14% levy on incoming train carriages.

Averages are generally more instructive than anecdotes. According to the World Trade Organisation (WTO), on a trade-weighted basis in 2015 America's tariffs averaged 2.4%, slightly higher than Japan's at 2.1%, but a bit lower than Canada's at 3.1% and the EU's at 3.0%. Even these figures should be treated with caution. America allows in more products tariff-free than the EU, for example, but the duties it does charge are higher. And trade-weighted averages can mislead, because goods with crushingly high tariffs will naturally have lower weights.

To Mr Trump, who prefers one-on-one deals to multilateral rules, bilateral figures may mean more than averages. Some of America's highest tariffs are on products it buys relatively little of from the EU. Textiles, apparel, footwear and travel goods accounted for 6% of American imports in 2017, but 51% of tariff revenue, mostly paid on stuff from Asia. According to WTO data, American tariffs on agricultural products imported from the EU, Canada and Japan are lower than on those flowing the other way. But the picture is different for other goods (see chart).

All these figures describe the tariffs trade negotiators usually haggle over. But they leave some things out, like defensive ▶

▶ duties against imports that are subsidised or sold below cost. America is a heavy user of both. It applies far more than the EU, Canada or Japan. Its trading partners sometimes object that it breaks its WTO commitments in the process. In December Canada filed one such complaint.

Overall, however, rich-world tariffs are generally low already. Other distortions are more pernicious. Agricultural subsidies are one example. According to the OECD, in 2014-16 the gap between producer prices and world market prices for agricultural goods in America was smaller—ie, less distortionary—than in the EU,

Canada and Japan. (Overall, China doles out more support than those three.)

Other non-tariff barriers include the “Buy American” rules that favour America suppliers for public procurement, and complex labelling requirements. Not all barriers have protectionist intent; other countries have plenty of them, too. Their effects are tricky to quantify, but trade geeks think they crimp commerce among rich countries more than tariffs do.

Finally, there are barriers to trade in services as well as goods. These include rules obliging foreign insurers in New York to hold more capital than domestic ones, or

laws like the Jones Act, which says that boats travelling between American ports must be made in America, carry the American flag and be owned and operated by American citizens. Of 22 sectors measured in 44 countries in the OECD’s Services Trade Restrictiveness Index, America had seven that were more restrictive than average. Italy was the only country in the G7 with more. None of this, of course, means that America is a closed economy. But if the president were serious about creating a barrier-free G7, every member would have work to do—and America more than he seems to imagine. ■

Buttonwood | Playing Argentina

Navigating a market with bags of potential but plenty of perils

THESE is a type of footballer who inspires the affection of fans and the ire of coaches. He is talented, usually extravagantly so. But he is also wayward to the same lavish degree. Discipline seems beyond him, on or off the pitch. It was said of one of this kind, Stan Bowles of Queens Park Rangers and England, that if he could pass a betting shop as well as he passed a ball he’d be a rich man.

Which brings us, naturally, to Argentina—not to its footballers, who have mostly fulfilled their potential, but to its economy, which has not. A century ago, it was the country of the future. It betrayed that promise without ever quite extinguishing hopes that it might eventually live up to it. Like a talented but troublesome sportsman, it keeps being given another chance. The board of the IMF will soon approve a \$50bn support package for Argentina. It has had countless such programmes in the past without much changing. The fund is betting that this time is different. Should investors make a similar wager?

Judicious bets on serial underperformers can pay off handsomely. Reforms have led to bountiful investment returns in surprising places, such as Turkey and Brazil in the early 2000s or Pakistan and Ukraine after 2013-14. None of these places became an earthly paradise. But moving from an unruly economic policy to something more disciplined is a big turnaround. Many attempts fail. A prudent course in such cases is to buy hard-currency or short-dated bonds at first. Only later should riskier assets, such as equities, be considered.

Turnarounds follow a pattern. They start with a devaluation. The flow of foreign capital dries up. There is a costly effort to prop up the currency. It dawns that stiffer measures are needed to restore confidence. The IMF is called in. That, more or



less, describes Argentina’s recent travails. But there is a crucial difference, says Graham Stock of BlueBay Asset Management. Argentina was already on the right course. Mauricio Macri was elected president in 2015 to fix the economy, but his efforts ran aground. Rising interest rates in America prompted investors to take a charier view of emerging markets. Argentina’s central bank had eased its inflation targets and cut rates; skittish investors saw a lack of resolve. The peso fell by a fifth in two weeks.

Pass or shoot?

Things could now go one of two ways. With luck, by October 2019, when elections are due, inflation will be falling and the economy will be picking up. In the meantime, real interest rates are likely to stay high, offering investors in short-dated bonds a handsome return. But with such rewards come risk. The medicine might not take. Reforms may be derailed by hardship and unrest. It helps that Argentina has negotiated a fairly modest tightening in fiscal policy. The IMF has learned that if it wants the patient to recover, it must not kill it first, says Claudia Calich of M&G, a fund-

management group.

A harder task will be managing the peso. Inflation in Argentina is 26% and set to rise further. That means the peso will need to drift down to keep the real exchange rate steady and exports competitive. Yet it must not fall too quickly. That might spur locals, who recall a brutal devaluation in 2001, to rush into dollars. A run on the peso and on Argentina’s banks would be fatal. A fresh sell-off in other emerging-market currencies would put pressure on the peso. A particular worry is Brazil, Argentina’s biggest trading partner, which faces a rocky period ahead of its own elections in October.

Still, the IMF’s package is enough to fund Argentina until 2020. And if the emergency repairs go well, the country can look forward with optimism. Should real incomes begin to rise and the middle class to swell, the value of stocks might multiply. The MSCI dollar index of Argentine stocks surged last year on such hopes. Much of that gain has been lost. Bank stocks are a way investors might choose to regain equity exposure. “Nothing good happens without access to credit,” says Andrew Brudenell of Ashmore, a fund manager. Businesses will need working capital and loans. Consumer economies thrive on credit. And Argentina is underserved in this regard. Bank credit to the private sector amounts to just 16% of GDP.

Progress never follows a straight line. Reformed characters, such as Turkey, have since fallen from grace. Complacency sets in. It is much the same with wayward footballers. The pragmatic coach does not bank on changing a maverick. He instead hopes to keep him on track long enough to benefit the team. It is an approach that investors might also consider.

Regulating American banks

Under the rug

NEW YORK

Other banks may have misbehaved as Wells Fargo did. Which ones?

IF THERE is a single example of how dramatically the regulatory environment has changed for American banks in the past 18 months, it may be the trickle of information that has recently emerged about an inquiry into their sales practices. The Office of the Comptroller of the Currency (OCC), a banking watchdog, began it in 2016 after widespread malpractice was uncovered at Wells Fargo, one of the country's biggest banks. It ended the inquiry quietly by writing to several banks on June 4th; it sent the letters to Congress on June 11th. The public learned of the probe only because of diligent reporting by *American Banker*, a trade publication which appears to have gleaned its information mainly from banking consultants.

The OCC responded to *American Banker's* report by releasing enough information to suggest that some banks were guilty of at least minor jiggery-pokery. It confirmed as much in testy exchanges between the comptroller, Joseph Otting, and members of the House of Representatives Financial Services Committee on June 13th. The inquiry encompassed more than 40 large and medium-sized banks and covered three years of activity. The banks had opened 10,000 accounts without customers' permission, the same offence (though on a much smaller scale) as at the heart of the Wells Fargo affair.

The OCC blamed "short-term sales promotions" with poor controls, "deficient ac-

count opening and closing procedures", "employee misconduct" and bad technology. Remedies included refunding fees, closing unwanted accounts and correcting information misreported to credit bureaus. Banks changed procedures. Over 250 such fixes were required. But beyond this aggregate information, the OCC has published nothing—naming no banks, not saying whether any were penalised financially, nor whether malpractice was concentrated among a few or was widespread.

Banks had much to grumble about under Barack Obama. Their sins were broadcast and they paid heavy fines, yet because they settled with regulators out of court, allegations went unproven. Under Mr Otting, Donald Trump's appointee, the OCC seems to be trying a very different approach. Unless they had fees refunded or ghost accounts closed, not even customers were told of the dodgy practices.

One Democratic congresswoman, Carolyn Maloney of New York, asked why the OCC had not broadened its inquiry to other banks and called its failure to take public action "deeply disturbing". Stephen Lynch, also a Democrat, from Massachusetts, said that by failing to provide public accountability and thus lumping the good with the bad, the review created moral hazard. After *The Economist* went to press, Mr Otting was due at a similar hearing before the Senate Banking Committee, where he could expect more acute discomfit. State attorneys-general and class-action attorneys are doubtless pondering lawsuits.

For many years, Wells Fargo was considered to be a model bank—thanks largely to its prowess in persuading customers to open new accounts. The ghost-account scandal put paid to that. It would be no surprise if others had chosen to emulate its virtues—and adopted its vices, too. ■

Statistics in Greece

Significant figure

The hounding of the country's former chief statistician is disturbing

IMAGINE the tale of Sisyphus, the mythical king doomed to spend eternity pushing a boulder up a hill only for it to roll back down, retold by Kafka. The result would be very like the tortuous story of Andreas Georgiou, Greece's former statistics chief.

Since 2011 Mr Georgiou has faced several criminal charges. One is that he inflated budget-deficit figures, forcing Greece to seek a bail-out and resulting in alleged damages of €171bn (\$190bn). Another is that he violated his duty by failing to seek approval from the statistical agency's board before sending the figures to the European authorities.

Although Mr Georgiou was acquitted several times on both charges, the acquittals were annulled and he was retried. In 2017 he was found guilty of a violation of duty. He has now learnt that the Supreme Court had rejected his appeal, rendering the conviction final. It carries a two-year suspended sentence. In May prosecutors said they were refiling the charges that he inflated the figures and thus injured Greece. He will now be tried for a third time in the court of appeals. If found guilty, he could face life in prison.

Yet both Mr Georgiou's numbers and his methodology were verified by Europe's statistical agency. The method is still accepted by Greece's creditors and its government. The chief statistician is also legally required to be independent: statistics tend not to be decided by committee.

A former official at the IMF, Mr Georgiou moved to the newly independent

statistical agency in 2010, after Greece had been bailed out for the first time and its budget-deficit figures were found to have been severely underreported. He oversaw a relatively small revision to the deficit for 2009, from 13.6% to 15.4% of GDP. Nevertheless, his detractors—from both ends of the political spectrum—have accused Mr Georgiou of conspiring with outsiders to subject Greece to austerity. Political appointees to the statistical agency's board initiated the charge that he violated his duty.

The sheer number of times that charges against Mr Georgiou have been dropped and refiled raises eyebrows, says Elias Papaioannou of London Business School. But the case, he argues, accords with a broader picture of a dysfunctional, overloaded judicial system that is open to influence from politicians and oligarchs. Swingeing cuts to salaries and budgets have worsened the problem.

Cases such as Mr Georgiou's are unlikely to tempt foreigners to invest in Greece—at least not without demanding compensation for the risk that they will be ensnared in litigation. Nor will they convince investors that Greece's days of fiddling figures are well in the past.

Mr Georgiou says that the bleak implications of his case extend beyond Greece. Unscrupulous politicians will be tempted to fudge figures to win votes, or to give lenders false reassurance. His experience may be a cautionary tale for statisticians too. Objectivity is their most precious virtue. They can pay dearly for it.



Role model

Banking in Africa

Making waves

LOMÉ

As Western lenders retreat, African banks see an opportunity to build pan-continental businesses

ADE AYEYEMI'S office in Lomé, the capital of Togo, is a good place to think about crossing borders. Ghana is ten minutes' drive away. From his window the boss of Ecobank can watch trucks rumble along the seafront, some bound for Burkina Faso, a day's journey, or Mali, perhaps another day on. At night, cargo ships twinkle offshore. From here Ecobank's vision—"to integrate the continent", Mr Ayeyemi says—is clear. Whether it will be profitable is less obvious.

Ecobank was founded in 1985 by business leaders with backing from the Economic Community of West African States, a regional bloc. It has branches in 33 countries, more than any other African bank (see chart). It is not alone in its ambitions. Nigeria's United Bank for Africa (UBA) wants to make half its profits elsewhere in the continent by 2022. South Africa's Standard Bank recently opened in Ivory Coast, its 20th African country. Moroccan banks are trekking across the Sahara.

African bankers have long preached some version of what Tony Elumelu, UBA's chairman, calls "Africapitalism": the idea that far-sighted, home-grown businesses can drive development. In Nigeria banking reform in 2005 set off a wave of consolidation. The survivors were heftier and more profitable, with capital to invest abroad. Kenyan banks have used their edge in innovation, such as mobile banking, to push into neighbouring markets.

Regional banks are now filling gaps left by their European and American rivals, which are retreating from a continent they once dominated. Barclays sold a majority stake in its African business last year. Other global giants have also reduced their exposure to African markets, which they judge too small and too risky in an era of tightened regulation. African banks work closer to the ground. "Banking is a relationship game," says Ugochukwu Nwaghodoh, chief financial officer of UBA. "We have local knowledge."

The pan-African vision often clashes with the reality of a fragmented continent. Africa's regional banks earn lower returns and grow more slowly than domestic rivals, calculate consultants at McKinsey. One problem is the wide diversity of regulations and markets. Another is that banks are too small outside their core markets to grow organically, says Olamipo Ogunsanya, an analyst at Renaissance Capital. Some have made risky acquisitions, inher-



iting loan books with hidden troubles. Most banks, she argues, would do better to focus on a few key countries.

Consider Ecobank. The board ousted a previous boss in 2014 over allegations of mismanagement. In 2016 a recession in Nigeria, its biggest market, resulted in a \$131m pre-tax loss. It has shut 74 branches there and laid off 2,000 staff. It has scaled back its ambitions beyond west Africa. Although it has returned to profit, about 10% of its loans are non-performing. Expansion may have been too rapid, Mr Ayeyemi admits.

But regional bankers see two big trends in their favour. The first is new technology, says Mr Ayeyemi, which makes it possible to operate on a continental scale as never before. Ecobank can design products and process data centrally, he notes, providing services even where it lacks physical branches. Is Africa's diversity a problem? "You don't ask Unilever the same question," he replies, likening retail banking to

selling consumer goods. Ecobank's mobile app, which lets people open accounts on their phones, has attracted over 5m users since its launch in 2016.

The other helpful trend is the spread of regional banks' corporate clients. A recent study by the Boston Consulting Group finds that the top 30 African companies now operate in an average of 16 countries, twice as many as a decade ago. Standard Bank's clients range from construction firms to airlines, says Sola David-Borha, who heads its operations on the continent outside South Africa. "They are helping to grow our market share, as we use our expertise to support their expansion."

Regional banks are also using their geographical reach to act as natural conduits for cross-border flows of capital, such as migrants' remittances. Mr Nwaghodoh argues that UBA's large footprint reduces the cost of intra-African trade, since the bank can stand at both ends of the transaction. He also cites the example of the aid sector, where donors need a "last-mile" presence to distribute cash or pay workers.

The growth of cross-border banking carries risks, says Amadou Sy of the IMF. Regulators need to patch the holes through which a crisis in one country could leak into another. A supervisory college for Ecobank, comprising regulators from the countries where it operates, first met in 2015. European experience shows that such measures are not always enough, warns Thorsten Beck of Cass Business School in London. "When a bank actually fails," he says, "then the politics comes in." Although most African banks hold plenty of capital, problem loans have been rising.

Yet Mr Sy also notes that regional banks can spur competition and export innovation. A study by Mr Beck published in 2015 found that African firms got loans more easily when foreign banks held a larger market share—as long as those banks came from Africa or elsewhere in the developing world. Expansion has not yet paid off for Africa's banks. But, like the incoming waves beyond Mr Ayeyemi's window, they have the tide behind them. ■



Rumbling across Africa



Employing refugees in Germany and Sweden

Situations vacant

STOCKHOLM

The hope that refugees would help to meet European economies' shortages of skilled workers is proving hard to fulfil

THE canteen of Stockholm University could scarcely be more Swedish. Young blond students sip coffee and tap away on Macs. In room 3.89, an outpost of the campus, is another, newer Sweden. Refugees, all of them teachers, from lands far to the south and east are preparing for the classrooms of their new home. Several keep their coats on as Khadije Obeid takes them through the basics of the curriculum and shows a YouTube clip about education law. "In Syria the teacher has much authority," says Samer, an English teacher, as he raises his hand above his head. "Here he is equal to the students," he adds as he lowers it.

The ten women and seven men are on a "fast-track" programme for refugees with experience in occupations where labour is short. As well as learning Swedish, they get 26 weeks of daily classes, teaching practice and mentoring. The hope is that they will then train or, if their previous qualifications are recognised, go straight to the classroom. The government is running some 30 other programmes, for builders, chefs, medics and more; 5,300 people were enrolled in 2016 and 2017, of whom around 1,000 were in the teachers' scheme. Within two years most fast-trackers are employed.

In 2015 no European country took in more asylum-seekers, relative to its population, than Sweden. None accepted greater absolute numbers than Germany. Both countries badly need workers. Sweden is training 8,500 fewer teachers annually than it should. A study by the German Chamber of Commerce estimates that

1.6m open jobs cannot be filled with appropriately skilled workers. Today Germany lacks 110,000 nurses and carers; by 2030 it will need 300,000 as its population greys.

When 2.6m asylum-seekers arrived in Europe in 2015-16, the political mood quickly turned sour. Yet many argued not only that it was right to welcome them on humanitarian grounds, but also that both the new arrivals—most of them young and, it was said, educated—and their host countries could gain economically.

Hope and experience

Those hopes have not yet been borne out. Both Germany and Sweden have pumped resources into getting newcomers into training or employment and have shifted legal barriers in order to let them work sooner. But Sweden's fast-track programmes serve only a fraction of the 110,500 adult arrivals in 2015 and 2016 (around half of whom were granted asylum). In 2017 only a third of refugees who completed a two-year full-time integration programme were working or studying three months later, according to Statistics Sweden. In the first quarter of 2018 this rose to 41%, but only 6% were in unsubsidised jobs. Refugees in Germany have historically fared a bit better. Yet nearly three-quarters of those in work have jobs needing few skills and with poor prospects.

Given time, things may come right. Of refugees arriving in the EU in the 1990s and early 2000s, 56% were in work after a decade; those who had clocked up two de-

acades had caught up with natives. But time and patience are short. "We're at a critical junction," says Thomas Liebig of the OECD. The political mood has hardened. Last year the populist Alternative for Germany entered the Bundestag; coalition talks this year nearly collapsed over migration. The right-wing Sweden Democrats have been polling strongly, ahead of an election in September.

"The talent pool is not huge. The refugees who arrived here in Sweden are less skilled than we initially thought," says Patrick Joyce, a Swedish economist. Of the 92,000 adult asylum-seekers who arrived in 2015, half did not finish high school. Language is often the biggest hurdle. The skills asylum-seekers do have often do not fit local needs. Many newcomers to Germany are experienced car mechanics, for example, but Germany's shortage is in mechatronics, which requires knowledge of information technology rather than fiddling with fuel pumps.

Even when refugees' skills are in demand, regulations can still keep them out of jobs. Germany lacks workers in some certified professions, which require lengthy training. Nurses from abroad, regardless of experience, must do up to three years of vocational training before being taken on. Such barriers push refugees into less skilled, poorly paid jobs. Sweden has fewer regulated trades. Even so, employment rates among graduates of the health-care fast-track scheme are half the average.

The best hope of matching supply more precisely to demand is to build up the skills of young migrants. "Apprenticeships really are the golden route in Germany," says Mr Liebig. Most refugees are young; within a few years they can gain a skill that is in demand and a job for years to come. But time to train is a luxury: often their priority is to get a job, however poorly paid, to send money home or to reunite their families. And both countries have become less generous in granting permanent residency, reducing both migrants' incentive to train and employers' incentive to train them.

Now comes a new difficulty: getting women to work. Those who arrived in 2015-16 were mainly men; their wives are following them. Female refugees typically have the lowest employment rates of any group. "Getting them into work and to leave children at a creche can be a big barrier," says Caroline Jonsson from the Public Employment Service. "But here in Sweden we don't have stay-at-home mums."

Focusing on female refugees, as both Germany and Sweden have begun to do, can pay. If they have jobs, the better their children—especially daughters—tend to do when they join the labour market, says the OECD. As with men, so with women: moving on from receiving refugees to integrating them is a long game. But in fractious Europe, how long do policymakers have? ■

Free exchange | What goes around

The Fed should bear in mind how rate rises affect global markets—and feed back to America

ON JUNE 13th the Federal Reserve raised its benchmark interest rate by a quarter of a percentage point, the seventh such increase since it began shouldering rates away from zero in December 2015. Markets shrugged—a rather different reaction from the one that followed a policy adjustment made five years ago this month. The chairman then, Ben Bernanke, dared advise investors that the Fed might soon start winding down its stimulative bond-purchases. Traders fell to their fainting couches, but not before pausing to sell. Yields on ten-year Treasury bonds leapt. Currencies around the world flopped. This “taper tantrum”, as it became known, raised concerns that Fed tightening might so perturb global markets that America itself could suffer. Having survived both tapering and rate increases, Fed officials now seem inclined to dismiss such worries. They should not. The danger of a nasty Fed feedback loop remains.

Wise central bankers are prepared for ill winds blowing from abroad. Thanks to global financial integration, these have strengthened in recent decades. The ratio of assets held across borders to world GDP has roughly tripled since 1995. In the same period market movements have become more closely aligned internationally. According to a new working paper by Oscar Jordà, Moritz Schularick, Alan Taylor and Felix Ward, this co-movement has reached levels unseen for at least 130 years—surpassing the highs of the early 20th century. Correlations are particularly high across equity markets (see chart), a trend the authors believe is driven by shared fluctuations in the appetite for risk. So, as even the most casual observers can see, bad days for Asian shares are usually accompanied by ugly ones in Europe and America.

America’s financial power means it is responsible for a disproportionate amount of shared trouble. The vast majority of trade is invoiced in dollars. Dollar-denominated assets account for two-thirds of global foreign-exchange reserves, with Treasury bonds making up the bulk. America’s banks play a crucial role in global financial intermediation, helping to propagate changes in sentiment around the world. Foreign banks hold lots of American assets. Shifts in their value affect the banks’ capital-adequacy ratios, pushing them to adjust their risk posture.

Thus the world cannot help but sway to the Fed’s tunes. Messrs Jordà et al reckon that American monetary policy is increasingly important in driving global risk appetites. Their work echoes that of Silvia Miranda-Agrippino and Hélène Rey, who write that the price of risky assets around the world, credit

growth and other variables are influenced in large part by the Fed. Indeed, Ms Rey has argued that countries which open themselves to global capital flows necessarily sacrifice some monetary-policy independence (in effect, to the Fed). Flexible-exchange rates seem to dampen but not eliminate these effects.

The Fed cannot prioritise economic conditions abroad over domestic priorities and hope to stay politically independent. Yet what goes around may also come around, to affect the American economy. Changes in global risk sentiment prompted by Fed tightening can reduce the price of assets held by Americans as well as the prospects and share prices of American multinationals, amplifying the effect of the initial change in policy. This loop, evident during the taper tantrum, kicked in again as the Fed prepared to begin raising interest rates in 2015. Lael Brainard, a Fed governor, warned of such feedback effects shortly before rate increases began, noting that expected tightening pushed the dollar up and led to straitened financial-market conditions, imposing a “material restraint” on American growth even before the first bump in rates.

Ultimately the Fed raised rates only twice by the end of 2016, rather than the five times widely foreseen in mid-2015. But as rates have gone up, worries about feedback have since subsided. In May Jerome Powell, now the Fed’s chairman, noted that while global financial conditions affect the American economy, the role of American monetary policy in driving them is “exaggerated”. Ms Brainard herself reckons that the risks of feedback are lower than they were. Markets are more likely to be wrong-footed by announcements about unprecedented asset-purchase programmes than by garden-variety interest-rate tweaks, she has noted. And when rates are above zero, the Fed has more room to react to a policy miscalculation. What is more, the American economy seems as hale as ever. Job growth looks imperturbable. The gut-wrenching surge in Treasury yields of 2013 fizzled out; indeed, the yield on ten-year bonds is still a shade lower than at the end of that year.

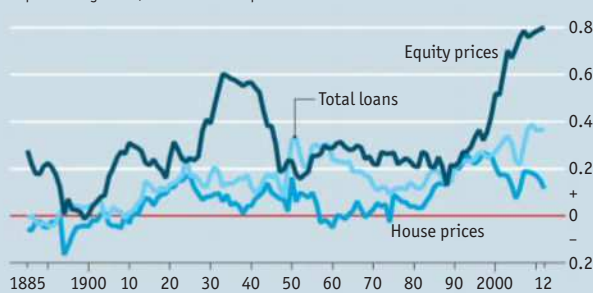
Careful now

But the world economy is no less integrated or dollar-dependent than it was a decade ago. And the winds may be shifting. Global growth looks likely to slow. Emerging markets are feeling the heat from a rising dollar. Credit growth seems to have levelled off. Most important, the world economy is no more ready for a financial storm than it was during the taper tantrum, or when Ms Brainard sounded her alarm. Interest rates across much of the world remain close to zero, and asset-purchase plans could prove politically difficult to expand—particularly in Europe. Debt loads in much of the world are higher than in 2013, leaving households more vulnerable to tighter credit conditions and governments less able to spend flagging economies to safety. Political systems are under strain. As the rancour at the G7 suggests, the scope for international co-operation in a crisis has surely diminished.

Against all that, the cushion between the Fed’s benchmark rate and zero, at less than two percentage points, is thin indeed. The Fed is understandably keen to increase it while markets look resilient. Yet it should take care, especially with the pace of rate increases. Feedback from global markets may be subdued for now. But that doesn’t mean America’s monetary policymakers should take it for granted. ■

The Fed’s feedback loop

Correlation* of financial cycles in:
1=perfect alignment, 0=no relationship



Source: “Global financial cycles and risk premiums” by Oscar Jordà, Moritz Schularick, Alan Taylor and Felix Ward

*Across 17 advanced economies



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Materials science

Industrial plants

How to make buildings, cars and aircraft from materials based on natural fibres

USING carrots to create concrete, turning wood into plastic, or even compressing it into a “super wood” that is as light and strong as titanium might sound like a series of almost Frankensteinish experiments. Yet all three are among the latest examples of employing natural fibres from plants as eco-friendly additives or alternatives to man-made materials.

Materials-science researchers are finding that plant fibres can add durability and strength to substances already used in the construction of buildings and in goods that range from toys and furniture to cars and aircraft. A big bonus is that, because plants lock up carbon in their structure, using their fibres to make things should mean less carbon dioxide is emitted. The production of concrete alone represents some 5% of man-made global CO₂ emissions, and making 1kg of plastic from oil produces 6kg of the greenhouse gas.

Start with the carrots. These are being investigated by Mohamed Saafi at Lancaster University, in England. Dr Saafi and his colleagues do not use whole carrots, but rather what they call “nanoplatelets” that have been extracted from carrots discarded by supermarkets or as waste from food-processing factories. Sugar-beet peelings are also a useful source of nanoplatelets. The researchers are working with Cellu-Comp, a British firm that produces such

platelets for industrial applications, including as an additive that helps toughen the surface of paint as it dries.

Each platelet is only a few millionths of a metre across. It consists of a sheet of stiff cellulose fibres. Although the fibres are minute, they are strong. By combining platelets with other materials a powerful composite can be produced. Dr Saafi is mixing the platelets into cement, which is made by burning limestone and clay together at high temperature. (The chemical reaction between them releases carbon dioxide from the limestone.) To turn cement into concrete it is mixed with aggregates such as sand, stones and crushed rocks, which act as reinforcement, and with water, which reacts with the chemicals in the cement to form a substance called calcium silicate hydrate. This starts off as a thick gel, but then hardens into a solid matrix that binds the aggregates together.

Carrot soup

By adding vegetable platelets to the mix, Dr Saafi and his colleagues can make concrete stronger. This is useful in itself, but it also permits a reduction in the ratio of cement to aggregates that is required to achieve a given level of strength. Reducing the amount of cement in this way consequently reduces CO₂ emissions.

The group is still exploring exactly how

strong it can make concrete by adding platelets, but initial studies suggest that the impact could be considerable. Just 500 grams of platelets can reduce the amount of cement needed to make a cubic metre of concrete by about 40kg—a saving of 10%. Dr Saafi and his team have now embarked on a two-year study to investigate the process in more detail and to perfect the best mix for use by the construction industry.

Unlike cement, wood is already a composite material. It is made of cellulose fibres embedded in a matrix of lignin, an organic polymer that serves a number of purposes, including providing woody plants with their rigidity. In May Stora Enso, a Finnish forestry-products company, launched a wood-derived alternative to oil-based plastics. This material, called DuraSense, looks a bit like popcorn. It consists of wood fibres, including lignin, obtained from pulping and other operations. The fibres are mixed with oil-based polymers and other additives, such as colouring agents. The resulting granules can be melted and moulded in the same way as plastic is in factory processes. Adding wood fibres, the company says, can reduce the amount of plastic needed to make goods with plastic parts by 60%.

Stora Enso has also found a use for pure lignin, which is often a waste product of papermaking, since most paper is made of pulp with the lignin removed. Stora Enso's engineers have worked out how to use lignin as a substitute for the oil-based resins and adhesives employed in the manufacture of engineered timbers, such as plywoods. Nor are they alone in looking for structural applications for lignin. Along with others they are seeking ways to use it to replace oil-based materials in carbon-fibre composites, which are used to make ►►

▶ lightweight parts for cars and aircraft.

By contrast, Hu Liangbing and Li Teng of the University of Maryland are trying to make a better material by removing, rather than adding, lignin. Their aim is to create a “super wood” that is stronger than most metals. Their approach is to treat blocks of wood with sodium hydroxide and sodium sulphate in a chemical process similar to that used to remove lignin from paper-making pulp. The difference is that they remove only enough lignin to make the wooden blocks easier to compress. They do that by squeezing the treated wood at around 100°C, which causes most of the pores and tubelike fibres within the wood to collapse. This increases its density threefold and its strength elevenfold.

That puts super wood on a par with

some of the lightweight titanium alloys used in high-strength aerospace components. It is also bulletproof. In one test Dr Hu and Dr Li made a laminated sample by placing five sheets of the stuff on top of one another, each sheet having its fibres aligned at right-angles to those of the sheet below. When shot at, this material splintered but was still able to trap a steel projectile that passed effortlessly through a similarly sized sample of natural wood.

The team are now trying to commercialise their process, which Dr Hu thinks will be cheap to scale up. It works on both hardwoods and softwoods, so a range of materials can be created. Dr Hu reckons that, one day, houses, cars, furniture and many other things will be made mainly or partly from densified wood. ■

Seismology

A light shaking

Submarine cables could be used as earthquake detectors

EARTH is observed as never before. Satellites track typhoons, monitor volcanic ash plumes and catalogue the changing ways in which human beings use the land. The sort of high-quality imagery that, a couple of decades ago, was the preserve of spies in rich and powerful countries is now freely available to users of Google Maps.

But despite its name, most of Earth is covered in water, and it is much harder to monitor what goes on beneath the waves. In a paper just published in *Science*, Giuseppe Marra, of Britain’s National Physical Laboratory (NPL), proposes to shine a little light into the oceans by co-opting infrastructure built for an entirely different pur-

pose. Dr Marra and his colleagues hope to use the planet’s 1m-kilometre network of undersea fibre-optic cables, which carry the internet from continent to continent (see map), as a giant submarine sensor.

Dr Marra is particularly interested in earthquakes. The dry bits of the planet are well-stocked with seismographs. The oceans are much less well covered, with only a handful of permanent sensors on the sea floor. This means that many small earthquakes go unrecorded because the vibrations they cause are too mild to be picked up by distant land-based sensors.

The genesis of the idea is a good example of the way in which advances in one

field of science can lead to new developments in other, apparently unrelated fields. The NPL is Britain’s national metrology laboratory, devoted to the science of measurement. It is linked to other labs around Europe by fibre-optic cables that are used to synchronise the measurements of atomic clocks. Those cables often run beneath roads, and the vibration of traffic overhead introduces noise into the line that interferes with measurements, and must constantly be cancelled out.

Dr Marra proposes to use other sorts of noise to detect earthquakes. The idea is to shine a high-quality laser beam through one of the optical fibres in the cable. At the other end that fibre is connected to another in the same cable for the return journey, forming a loop. The seismic waves from a nearby earthquake will deform the cable minutely, leaving the returning light slightly out of phase with the light emitted by the laser. The discrepancies involved are tiny: on the order of millionths of a metre for a cable several thousand kilometres long. Measuring them requires equipment capable of discriminating between femtoseconds. A femtosecond is a millionth of a billionth of a second, which is roughly to a second what ten cents is to the GDP of the entire planet.

But Dr Marra’s bright idea works. In 2016, for instance, the NPL was able to spot a magnitude-six earthquake that had struck central Italy from the noise it produced in the fibre-optic cable, 79km long, which rather circuitously connects the NPL’s headquarters in London with a data centre in Reading. An underwater trial in 2017 used a 96km cable between Malta and Sicily. It detected a tremor of magnitude 3.4 that had an epicentre 89km from the cable’s nearest point.

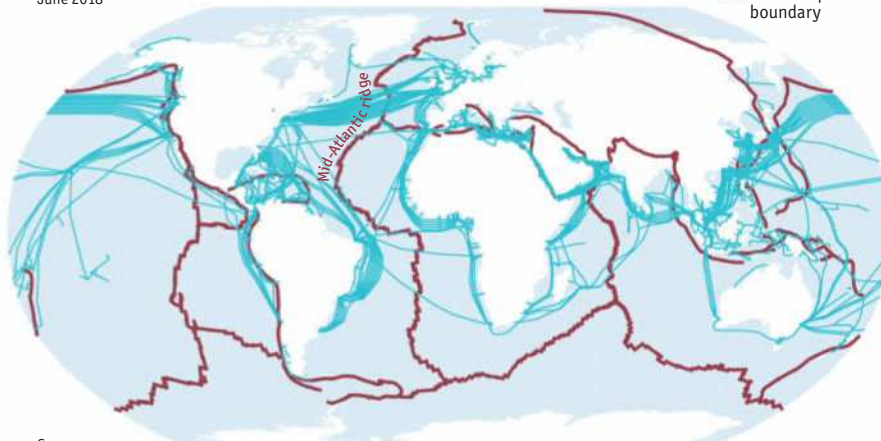
One advantage of subsea cables is that they experience less noise. The Sicily-Malta cable had background noise levels a fifth to an eighth of those in cables on land. Dr Marra and his colleagues have not yet tested their system on a fully fledged ocean-crossing cable. But they hope that, when they do, things will be even quieter, helping them detect all sorts of seismic rumbles which go unheard today. That would be a boon to geologists. Dozens of cables cross the mid-Atlantic ridge, for instance. This is where the Eurasian and African tectonic plates drift away from those that carry North and South America, creating new crust in the process.

There may be other uses, too. In principle, the system can track any source of sound, from the migrations of animals such as dolphins and whales to the gas guns used in oil and gas exploration. If the communication cables that carry Earth’s data traffic can be used to work out what is going on in the 70% of the planet covered by water, then it really would count as a world-wide web. ■

Floor coverage

Active and planned undersea fibre-optic cables
June 2018

— Undersea cable
— Tectonic-plate boundary



Sources:
TeleGeography; USGS

Anti-predator behaviour

Fight or flight?

It depends on whether you are a pilot whale or a dolphin

THAT the best form of defence is attack is an old maxim. In reality, it is frequently untrue; running away is a far better option. But it seems to be the approach taken by pilot whales when faced with a pod of killer whales which are looking for dinner.

That, at least, is the conclusion of Matthew Bowers of Duke University in North Carolina. He came to it as the result of a study, just published in *Experimental Biology*, which he and his team conducted on pilot whales (pictured) and Risso's dolphins—two closely related species of small cetacean. He knew that killer whales, which are partial to snacking on both of these species, chat with one another during the normal course of events, even if they tend to stay quiet when making an attack. He therefore speculated that potential prey would react to distant killer-whale communications, it being risky to do nothing. What he did not know was what the reaction would be.

To find out, he and his colleagues gathered a library of cetacean calls. These included those of killer whales, pilot whales, Risso's dolphins and humpback whales. They then played these calls to pods of their target animals, in order to find out what happened.

In a series of experiments—ten on pilot whales and four on Risso's dolphins—the researchers tagged one member of the pod under observation, in order to gather detailed information about what was happening to it. They also employed a team of experienced marine biologists to make observations of the entire pod from boats.

The tags were fitted with several instruments: pressure sensors to measure depth; magnetometers to record orientation with respect to Earth's magnetic field; accelerometers to measure movement; and microphones to record chatter. They were attached to the animals' bodies by specially designed suckers and detached themselves four hours after attachment, to float to the surface for recovery.

The team employed two small vessels to tag the target animals and to observe as far as possible from the surface the positions and behaviours of pod members. One or other of these boats played the recorded calls, in random order, modified to sound as if the creatures making them were about a kilometre away. The observers were not told which calls were being broadcast, in order not to bias their observations. Once the detached tags were re-



Charge!

covered, the data therein were correlated with the biologists' records of events.

As might be expected, neither pilot whales nor dolphins reacted much to the calls of conspecifics, of the other prey species or of humpbacks. Both, though, reacted rapidly to killer-whale calls.

The dolphins did so by forming into a tight cluster and then bolting at top speed away from the observation vessel that was playing the calls. The pilot whales also formed a tight cluster on hearing the killer-whale calls. But in contrast to the dolphins they increased their chatter, turned in the direction of the boat broadcasting the calls and moved at a steady, almost threatening, pace directly towards it.

Since no actual killer whales were involved in this experiment, Dr Bowers cannot say what would have happened in any subsequent confrontation. But he suspects that it would have led to a form of attack called mobbing. This is a tactic employed by terrestrial and aerial prey species but not widely recorded under water. As the name suggests, it involves members of a group of potential prey attacking a predator as a mob, confusing it and threatening it with injury. This generally causes it to retreat, permitting the potential prey to get on with their lives in peace.

Why pilot whales and Risso's dolphins behave differently in response to the threat from killer whales is unclear. Both live in groups of several dozen animals and so have the numbers needed for collective defence. It may be because pilot whales are bigger than Risso's dolphins. But the dolphins are not so small as to be a negligible threat to a killer whale. As to seeing a pod of pilot whales take on killer whales, that would surely be the money shot of any wildlife documentary that managed to get the footage. ■

Scientific honesty

Something to crow about

Computer algorithms can test the dodginess of published statistics

IN AN ideal world the data on which a scientific study is based should be, if not publicly available, then at least available to other researchers with a legitimate interest in asking. Sadly, this is not always the case. Though attitudes are changing, many scientists are still quite proprietorial about their data. They collected them, they reason, and thus they own them, and with them the right to analyse them without sharing them with rivals.

This attitude, though selfish, is understandable. But sometimes it can cover a darker secret. The statistics presented in a paper may have been manipulated to achieve a desired result. The author may, in other words, have cheated. If he releases the data, that cheating will be obvious. Better to keep them hidden.

That, though, will be harder in the future—at least for sets of data that consist of integer numbers in a known range, as do, for example, the answers to many questionnaires in psychology experiments. As they describe in a paper in *PsyArXiv Preprints*, Sean Wilner and his colleagues at the University of Illinois at Urbana-Champaign have come up with a way of reconstructing, given the mean, standard deviation and number of data points in a result (all three of which are usually stated as part of such a result), all the possible data sets which could have given rise to that result.

They call the resulting algorithm *CORVIDS* (Complete Recovery of Values in Diophantine Systems). If *CORVIDS* cannot come up with a valid set of data for a result, that result is self-evidently fishy. If it can reconstruct a valid data set or sets, then the team running it can look at them and assess whether or not they look plausible.

The trick behind *CORVIDS* is to find all possible combinations of numbers that solve the linear equations from which the statistics being examined are calculated. The principle of how to do this was worked out in the third century AD by Diophantus of Alexandria (hence the “D” in “*CORVIDS*”). Diophantus did not, however, have access to computers and so could not take the idea very far. Mr Wilner does, and has.

To simplify the task of spotting anomalies, *CORVIDS* turns the possible data sets into histograms and arranges them into a three-dimensional chart. This makes any unusual patterns apparent. For example, every reconstructed data set may be missing values at one end of the scale. That ►►

▶ might make sense occasionally. Generally, though, such a gap would be a red flag. It would suggest either that the statistics were reported incorrectly or that there were problems with the underlying data. Such problems might be caused by anything from biased methods of data collection to outright fabrication.

CORVIDS is likely to be of immediate value to editors and reviewers at academic journals, who will be able to spot problems with submitted papers early, and so discuss them with the authors. That will often be easier than asking for every paper to be accompanied by its data and then reworking the statistics from those. If an unresolvable problem does show up then the technique can be applied to previous work by the author in question, to see if anything systematic is going on.

A drawback of CORVIDS is that in some

circumstances it may take hours to run. But another recently published algorithm is not beset by this problem. SPRITE (Sample Parameter Reconstruction via Iterative Techniques) was described last month in *PeerJ Preprints* by James Heathers of Northeastern University, in Boston. SPRITE is a “heuristic search algorithm”—meaning that it may not nab all possible solutions. But its speed makes it a useful first step. If the data sets it finds do not show any strange patterns, CORVIDS is unlikely to show oddities either.

Sloppy reporting of statistics in research papers is widespread. How common made-up studies are is anyone’s guess. With CORVIDS, SPRITE and their kind around, though, there will soon be no hiding place for such failings—and the trustworthiness of scientific papers will take a step up. ■

messages to all the others within range. As the number of nodes increases, these messages rapidly multiply and crowd out other traffic. The upshot is that a MANET with more than about 30 nodes starts to experience problems, and one with more than about 50 will grind to a halt.

Faced with that, America’s Defence Advanced Research Projects Agency, DARPA, decided in 2013 to launch a challenge to build a MANET with more than 50 nodes, with the carrot of a juicy contract for the winner. The challenge worked. Earlier this year the American army tested a MANET with 320 nodes at its urban-training facility at Fort Bragg, North Carolina. This system can support the equivalent of a brigade-sized expeditionary unit, with voice, text and data traffic at up to 30m bits per second (bps). Each node is a hand-held unit like a chunky smartphone. During the test, users were distributed across dozens of buildings. To make things extra tricky, some of them were in basements.

The new MANET was able to perform so well because it overcame both the routing-table problem and the hello-message problem. Engineers at Persistent Systems, a firm in New York that designed it, simplified the routing task by employing tricks such as remembering the route taken to reach another node and reusing it, rather than working out the best path every time a message is sent. Another trick they perfected is “overhearing”. This occurs when a node happens to pick up a message it was not intended to receive, and can provide a shorter path than the planned one.

To deal with the hello-message problem, the packets that carry those messages are simplified. Louis Sutherland, Persistent Systems’ head of business development, likens the process to saying “hi” rather than “hello, how are you?”

Persistent Systems is not the only company trying to develop better MANETS. Thales, a European defence giant, has one it claims can support 150 nodes at speeds of up to 6m bps. TrellisWare, of San Diego, claims 8m bps over more than 200 nodes. Nor need MANETS be restricted to communications between people. They could enable robots, whether on the ground or in the air, to work in co-operative groups. Persistent Systems already has a contract to supply communications for the American army’s PackBot ground robots.

MANETS will also appeal to some groups of civilians. Rescue workers in places hit by natural disasters, where existing communications have been destroyed, will benefit. So may miners. A MANET can easily stretch from above ground into underground areas. Industrial sites where there is too much interference for conventional communications may be suitable for MANETS as well. Altogether, then, these particular MANETS may soon paint a picture of communications perfection. ■



Military communications

Jaw-jaw and war-war

A new type of battlefield network is in development

MOBILE armies need mobile communications. Those communications, though, must be secure—and not just from eavesdropping. They also need to be uninterrupted. And that is a problem. Many mobile networks (think Wi-Fi routers or mobile-phone towers) operate via hubs. Destroy the hub and you destroy the network. Even a peer-to-peer system in which messages travel in a series of hops between nodes (in the form of the devices that comprise the system) rather than via a hub, can be degraded by a loss of nodes. Existing versions of such systems, which are usually static, rather than mobile, require each node to be set up individually, in advance, to talk to particular other

nodes. Mobility brings a need for constant reconfiguration.

In theory such a system is possible. It is called MANET, an approximate acronym for mobile ad-hoc network. In practice, though, a workable MANET has proved impossible to design—until now.

The main problem is mathematical. To avoid the pre-programming required by existing systems, a MANET must maintain routing tables that keep track of the shortest routes between nodes. Updating these tables takes geometrically increasing amounts of processing power as the number of nodes increases. A second, related problem is that to maintain the routing tables each node has to send regular “hello”



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Inequality and its costs

The crack-up

Is inequality to blame for suicide, drug abuse and mental illness?

HERE is something peculiarly haunting about the recent suicides of Kate Spade, a well-known designer, and Anthony Bourdain, a chef and author (see Obituary). Evidently success—building brands and businesses, achieving wealth and fame—does not ease the psychic pain that many people suffer. Even at the top of the capitalist pyramid, these deaths insist, there is no escape from inner demons. That sad rule applies to nations as much as celebrities. Nearly 45,000 Americans took their own lives in 2016, an increase of almost 30% since 1999, according to new figures released by the Centres for Disease Control. Another 42,000 died from opioid overdoses, victims of America's drug epidemic. The world's richest large country, the city on a hill, sometimes seems to be coming apart. But why?

In "The Sane Society", published in 1955, Erich Fromm, a German-American psychologist and philosopher, asked whether a society could grow sick—whether conditions within it might so distress the inhabitants as to generate mass mental illness. Fromm's argument focused on the strains of economic life at the time he was writing, such as the tendency to work long hours in pursuit of ever more consumer goods. In recent decades globalisation and mechanisation have added new kinds of worry. Yet, so far as mental health is concerned, the pain of these trials has not

The Inner Level: How More Equal Societies Reduce Stress, Restore Sanity and Improve Everyone's Well-being. By Richard Wilkinson and Kate Pickett. *Allen Lane*; 352 pages; £20. To be published in America by Penguin Press in January 2019; \$28

been evenly distributed.

In a paper published in 2010, Kate Pickett and Richard Wilkinson found that about one in ten people in Japan and Germany suffered some form of mental illness in the year they studied, compared with one in five Britons and Australians and one in four Americans. If economic ups and downs are the source of such troubles, they seem to have torn at the minds of citizens in some societies more than others.

The key to the puzzle, Ms Pickett and Mr Wilkinson argue in their new book, "The Inner Level", is inequality. When the distribution of income spreads apart, a society begins to malfunction, affecting the mental health of everyone living within it.

Curse of the social animal

The pair have addressed the subject before. In "The Spirit Level", a bestseller released in 2009, they sought to demonstrate a link between high levels of inequality and all manner of social ills, from poor health and obesity, to crime and violence, to educational failure and low social mobility. The

more unequal a society, they wrote, the worse it was likely to perform on such measures. Indeed, the social damage wrought by inequality might be severe enough that the rich in less equal societies would benefit from efforts to even things up. The book attracted its share of criticism, as theories of everything tend to, in particular for confusing correlations with causality. Nonetheless, it helped to inspire a burgeoning debate about the costs of widening inequality.

"The Inner Level" seeks to push that debate forward, by linking inequality to a crisis of mental health. This time the authors' argument focuses on status anxiety: stress related to fears about individuals' places in social hierarchies. Anxiety declines as incomes rise, they show, but is higher at all levels in more unequal countries—to the extent that the richest 10% of people in high-inequality countries are more socially anxious than all but the bottom 10% in low-inequality countries. Anxiety contributes to a variety of mental-health problems, including depression, narcissism and schizophrenia—rates of which are alarming in the West, the authors say, and rise with inequality.

Manifestations of mental illness, such as self-harm, drug and alcohol abuse and problem gambling, all seem to get worse with income dispersion, too. Such relationships seem to apply within countries as well as between them. Damaging drug use is higher in more unequal neighbourhoods of New York City, in more unequal American states and in more unequal countries. The authors emphasise that it is a person's relative position rather than absolute income that matters most. A study of 30,000 Britons found that an individual's place in the income hierarchy predicted the incidence of mental stress more ac- ►►

curately than absolute income did. And in America, relative income is more closely linked to depression than absolute income. It is not enough to lift all boats, their work suggests, if the poshest vessels are always buoyed up more than the humblest.

The fact that relative status matters so much is a result of human beings' intrinsically social nature, Ms Pickett and Mr Wilkinson argue. Group interaction and cooperation have been an essential component of humanity's evolutionary success; indeed, the authors say, its social nature helped drive the growth of human brains. Across primates, they write, the size of the neocortex—a part of the brain responsible for higher-level cognitive functions—varies with the typical group size of a species. Living in complex social groups is hard cognitive work. Survival requires an understanding of roles within the social hierarchy, and intuition of what others are thinking. Thus people are necessarily sensitive to their status within groups, and to social developments that threaten it.

Such hierarchies are found in all human societies. But as inequality rises, differences in status become harder to ignore. There is more to be gained or lost by moving from one rung on the ladder to another. And however much some maintain that disparities in pay-cheques do not correspond to differences in human worth, such well-meaning pieties feel hollow when high-rollers earn hundreds or thousands of times what ordinary folk take home. Money cannot buy everything, but it can buy most things. The steeper the income gradient, the less secure everyone becomes, in both their self-respect and their sense of the community's esteem.

And so people compensate. They take pills, to steel their nerves or dull the pain. Some cut themselves. Some adopt a more submissive posture, avoiding contact with others. Yet such withdrawal can feed on itself, depriving recluses of the social interaction that is important to mental health, undermining relationships and careers and contributing to economic hardship.

Others respond in the opposite way, by behaving more aggressively and egotistically. Studies of narcissistic tendencies showed a steep increase between 1982 and 2006, the authors report; 30% more Americans displayed narcissistic characteristics at the end of the period than at the beginning. Scrutiny of successive American cohorts found a progressive rise in those listing wealth and fame as important goals (above fulfilment and community). Over time, more people cited money as the main motivation for attending college (rather than intellectual enrichment).

Domineering responses to anxiety are associated with loss of empathy and delusions of grandeur. Thus highly successful people often display narcissistic or even psychopathic behaviour. In surveys, the

rich are generally less empathetic and more likely to think they deserve special treatment than others. Modern capitalism, the authors suggest, selects for assertiveness, for a lack of sentimentality in business and comfort in sacking underlings, and for showy displays of economic strength. From the top to the bottom of the income spectrum, people use conspicuous consumption and other means of enhancing their image to project status.

The least secure are often the most likely to exaggerate their qualities. For example, countries with lower average life-expectancy tend to do better on measures of self-reported health; 54% of Japanese say they are in good health compared with 80% of Americans, though the Japanese live five years longer on average. Whereas 70% of Swedes consider themselves to be above-average drivers, 90% of Americans



Feast and famine

do. Such figures cast declamations of America's greatness, and the politicians who make them, in a new light.

"The Inner Level" is not a page-turner in the usual sense. But it holds readers' attention by elaborating a phenomenon most will already have observed, and by providing an explanation for the dysfunction they see around them, from the brazen disregard for rules among many corporate and political leaders to the nihilism of drug addicts and school-shooters. And yet the idea that inequality alone is responsible for all this, and that reducing inequality will solve it, does not in the end convince.

That is partly because the authors are not always as circumspect with their evidence as they should be. They declare, for instance, that "growth has largely finished its work", and that "higher average material standards in the rich countries no longer improve well-being". This is a controversial judgment. Work by another pair of analysts, Betsey Stevenson and Justin Wolf-

ers, concludes that, "If there is a satiation point" beyond which income no longer boosts subjective well-being, "we are yet to reach it." Moreover, the highly egalitarian policies of the post-war decades were themselves made feasible by rapid economic growth. Slower growth in recent years has strengthened the hands of political leaders looking to trim the safety-net.

So the link between growth and equality is stronger than the authors allow. More important, they aver that inequality causes stress without admitting the possibility that some other factor is contributing to both, or indeed that social breakdown contributes to inequality. They argue, for instance, that "social cohesion is reduced in more unequal societies", noting that higher inequality is associated with less willingness to help others, diminished levels of trust, and lower participation in civic groups, from recreational clubs to unions. But causation almost certainly runs in the other direction as well. Civic institutions foster solidarity, reminding citizens that there is such a thing as society. Research suggests that higher levels of "social capital" are associated with more support for redistribution and welfare states.

Towards a great awakening

That is not to say that close community ties are an unalloyed good. They constrain individual freedom, increase suspicion of outsiders and discourage mobility, all of which limit a place's dynamism and inventiveness. But low levels of trust, poor governance and corruption do all that too. The ideal, perhaps, is a world in which strong communities help individuals to thrive—a Nordic model, producing high incomes, low inequality and rosy levels of well-being. Unfortunately, such societies cannot simply be conjured out of a hat.

Which is one reason to be sceptical of the policies proposed by Ms Pickett and Mr Wilkinson, such as an infusion of "economic democracy". Worker representation on boards is one suggestion; a move towards employee-owned or co-operative-style firms is another. These are not crazy ideas. Worker representation in Germany has probably dampened inequality without making the country an economic backwater. But it is hard to imagine that such schemes alone could put a broken society back together. Reversing the cycle of institutional fraying, gaping inequality and mental distress seems likely to require a much broader civic rejuvenation.

That is not impossible. American history has been punctuated by civic awakenings that yielded social, political and economic reforms. Those movements were generally bottom-up affairs, however, powered by a sense of purpose and moral outrage. Whether America, Britain or other sickly places retain the capacity for such mobilisations is an open question. ■

The making of an auteur

The painting and the moth

Room to Dream. By David Lynch and Kristine McKenna. *Random House*; 592 pages; \$32. *Canongate Books*; £25

ONE evening in the 1950s David Lynch and his brother were wandering along the quiet, dimly lit streets of Boise, Idaho, when they encountered a stumbling, naked woman. “Maybe it was something about the light and the way she came out of the darkness, but it seemed to me that her skin was the colour of milk, and she had a bloodied mouth,” Mr Lynch remembers. He wanted to help her, but did not know what to do or say. “She was scared and beat up, but even though she was traumatised, she was beautiful.”

Fans of Mr Lynch will recall a disturbing scene like this one from “Blue Velvet”, a film released in 1986 that starred Isabella Rossellini. That movie, the director’s fourth, established him as an auteur of woman-in-trouble surrealism. Critics have strived to interpret his idiosyncratic oeuvre, but “Room to Dream”, a story of his life, shows that many of his themes derive from childhood—ideas and images lurking in shadows that Mr Lynch has filled with imagination and dread.

“Room to Dream” is itself an unusual artefact. Its chapters alternate between a biography by Kristine McKenna and a memoir by Mr Lynch. Ms McKenna narrates the major turning points in her subject’s life: his move to Virginia for high school, where he became a painter; the early experimental films he made in Philadelphia, including a creepy short called “The Grandmother”; his acceptance at the American Film Institute in Los Angeles, where he studied alongside Terrence Malick and Paul Schrader and embarked on his first feature film, “Eraserhead” (1977).

Several of his friends tell Ms McKenna that Mr Lynch combines a sweet nature with dark, twisted fascinations. Jack Fisk, who would become a production designer on his films, recalls a moth landing in the thick paint of one of his pictures and struggling to death: “I remember he got so excited about that, seeing that death mixed in with his painting.” Mr Lynch asked Raffaella de Laurentiis, a film producer, for her uterus when she had a hysterectomy (she gave him a pig’s instead).

Still, the humour and eccentricity of Mr Lynch’s own reminiscences and observations are the book’s main pleasure. He is reticent, in an old-fashioned way, about his love affairs (he has been married four times). But he says he likes “librarian types ... their outer appearance hiding smoulder-



Damn good coffee in “Twin Peaks”

ing heat inside”. He didn’t “get there” until he was 18. Of one Catholic girl in high school, he reports: “We probably did more on the early dates than later, because she kept going to catechism and finding out more things she wasn’t allowed to do.” Characters in his life might as well be characters in his films. “His head was as big as a five-gallon can,” he writes of an acquaintance, “and he had a huge beard and giant torso and the legs of a three-year-old.”

Mr Lynch betrays an affinity for spirituality, numerology, conspiracy theories and fate. He thinks Lyndon Johnson was behind the Kennedy assassination, since he was just “one twenty-five cent bullet” away from the presidency. He believes people “can go into the future”, though he allows that this is “not easy”. Scenes in his films come to him in dreams, “the logic” of which appeals to him. He is a devotee of transcendental meditation, and he believes in karma: “There’s a law of nature that says what you sow is what you reap and you come into life with the certainty that some of your past is going to visit you in this life.”

With each quirk Mr Lynch gives fans further clues to understanding his art. Laura Palmer of “Twin Peaks”, his television masterpiece, seems to be his favourite woman in trouble, aside perhaps from Marilyn Monroe, whose story he says he wanted to tell on screen. He implies that Monroe may have been murdered by the Kennedy family (the book is full of suspicious deaths, both famous and obscure).

When he cast Ms Rossellini in “Blue Velvet”, it was not just her beauty but the look in her eyes, “a fear in there”, that made her right for the part. Mr Lynch has been seeing the same dark visions since he was a boy, translating them to a spectacular canvas. As he writes in this book, “you’re basically who you are from the start.” ■

South African fiction

Together, once

OK, Mr Field. By Katharine Kilalea. *Tim Duggan Books*; 208 pages; \$21. *Faber & Faber*; £12.99

WHEN Max Field, a failing British concert pianist, breaks his wrist in a train accident, he tries out a new life. He buys a replica Le Corbusier house in Cape Town that was, according to the estranged wife of its architect, intended only as a modernist holiday home. After Max moves there with his wife Mim, his life seems to deteriorate further. Out of this simple premise emerges a dazzling debut novel.

Katharine Kilalea is a poet who grew up in South Africa and has worked in an architecture practice. All these experiences inform “OK, Mr Field”, whether through her luminous use of language, her descriptions of Cape Town or her understanding of how space can be constricting and expansive, vertiginous and comforting, at the same time. Details are observed intimately, like pin-pricks. The muscles around the eyes of Hannah Kallenbach, the architect’s wife, contract “very slightly as though focusing on something very small or squinting against the sun”.

Max narrates the book. His voice is detached and wry, not unlike a character from a story by Samuel Beckett. Events seem to just happen to him; he frequently seems absurd. “I didn’t miss her in the way you’re meant to miss someone you love,” he thinks after Mim leaves him, before realising how much her absence has affected him. Soon he finds himself talking more and more to an imaginary version of Hannah, and then driving to her house each night to spy on the real woman.

As with much of Beckett’s writing, “OK, Mr Field” is often bleakly comic. But at moments it is also tender (without being sentimental), depicting the strange dream-like inner life of someone who is terribly lonely. Its descriptions of piano-playing—even with a damaged wrist—are superb:

That night, as I sat at the piano, the piece wasn’t just a retelling of the story of Chopin and his situation (like mine, only more lonely), it was something that was happening, there on the piano, a relationship unfolding between two hands which were like two characters, one expressive, the other inexcitable, who’d been together once but were now detached.

This sense of something being separated from what made it whole runs through the novel. Ms Kilalea sketches this sad, slightly surreal situation without mawkishness or morbidity. “OK, Mr Field” introduces a striking new voice in fiction. ■

Art and posterity

Rising up to heaven

NEW YORK

Alberto Giacometti's figures are as compelling today as when they were made

THE man strides forward, bent slightly at the waist as if resisting a stiff breeze. He is not so much gaunt as spectral, stretched out like chewing gum, as insubstantial as smoke. And yet, despite his frailty, he is determined, even heroic. "Walking Man I", a bronze made by Alberto Giacometti in 1960, is a searing monument to an era of anxiety, and a symbol of endurance in the face of overwhelming odds.

During his own life Giacometti, who was born in Switzerland in 1901, sometimes seemed too outmoded and idiosyncratic to win acclaim. But his reputation has continued to grow while those of his contemporaries, who clung to modernist orthodoxy, have faded. Today his humanity and pathos appeal to audiences in a way that more formal sculptors cannot. A flurry of recent activity has solidified his place among a small group of artists, including Pablo Picasso and Frida Kahlo, whose work and persona have seeped into public consciousness.

A large-scale retrospective of his work opened at the Guggenheim Museum in New York on June 8th (Tate Modern in London hosted a similar show last year). Meanwhile the Giacometti Institute will open in Paris on June 21st. Both are projects of the Fondation Giacometti, which was established in 2003 to promote study and appreciation of the artist, and to manage the world's largest collection of his paintings, sculptures and drawings (bequeathed by his widow, Annette). The institute will serve as a permanent exhibition space; enthusiasts will be able to make a pilgrimage to Giacometti's studio, preserved like a holy shrine after his death in 1966 and now reconstructed.

Giacometti has also featured on the silver screen. "Final Portrait", a homage released in America in March, stars Geoffrey Rush as the tormented genius. His stock is rising at the auction house, too. In 2015 "Man Pointing" (1947) fetched \$141m, the highest price ever paid for a sculpture.

It helps that Giacometti looked the part. With his craggy features and mane of wild grey hair, his roguish charm and serial infidelities, he conforms exactly to popular notions of what an artist should be. But, says Catherine Grenier, director of the Fondation Giacometti, the artist himself was largely uninterested in fame and fortune. He insisted on following his own path, shrugging off the whims of art-scene fashion. Megan Fontanella, chief curator of the

Guggenheim exhibition, says Giacometti was "an artist in some way lonely in his own time".

After the second world war, Ms Fontanella notes, abstraction was widely viewed as the art of the future. Stubbornly, Giacometti returned to the human form. In the 1940s and 1950s he developed his signature style, creating those impossibly attenuated figures that his friend Jean-Paul Sartre compared to "the fleshless martyrs of Buchenwald". But while these fragile mortals, often so spindly that they seem to be on the point of vanishing, emerged in response to war and genocide, they embody more than horror. These "fine and slender natures rise up to heaven," Sartre continued; "they are dancers, they are made of the same rarefied matter as the glorious bodies that were promised us." Works such as "Walking Man I" and "Man Pointing", both currently on view at the Guggenheim, seem damaged but aspiring, resolute in the face of adversity.

Giacometti also stood apart from his peers in his willingness to embrace the past. Rejecting the modernist exhortation to "make it new" (in Ezra Pound's phrase), he conducted a lifelong dialogue with a sculptural tradition stretching back thousands of years. Many of his statues stand

with the stiff formality of an Egyptian pharaoh; "Chariot" (1950) echoes figures unearthed from Etruscan tombs. Several early works, made while he was a member of the Surrealist movement, recall the simplified forms of ancient Cycladic art.

But his output is also distinctly contemporary. Eschewing the heroic, monumental approach which for centuries was sculpture's default mode, his figures are evocations of disquiet and discontent that fit a world disillusioned with bombast. The bodies he models or carves have lost their physical integrity, a sense of a clear boundary between exterior and interior. They are kneaded, gnawed at, poked and gouged, reaching out across vast expanses even as they seem about to collapse under their own weight. They are rooted to the ground, their striving made more poignant by its obvious futility.

The strength of frailty

This sense of yearning and seeking, but not finding, is equally evident in his lesser-known drawings and paintings. Typical of Giacometti's restlessness is "Yanaihara Seated Full-Length" (1957), a portrait for which the sitter posed 230 times, for five to eight hours each day. After all that effort, the subject's features are almost entirely obliterated by a smear of brown paint—a testament to the difficulty of capturing another human being in full.

By providing resources for scholars, and facilitating exhibitions, Ms Grenier and the foundation have helped keep the Giacometti legend alive. Yet they have succeeded only because his work still resonates. A master of vulnerability, Giacometti offers solace in an age of doubt. ■



The legend in his lair

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Economic data

% change on year ago

	Gross domestic product			Industrial production	Consumer prices		Unemployment rate, %	Current-account balance		Budget balance % of GDP	Interest rates, %	Currency units, per \$	
	latest	qtr*	2018 [†]		latest	latest		2018 [†]	latest 12 months, \$bn			% of GDP 2018 [†]	10-year gov't bonds, latest
United States	+2.8 Q1	+2.2	+2.8	+3.5 Apr	+2.8 May	+2.5	3.8 May	-466.2 Q4	-2.6	-4.6	2.96	-	-
China	+6.8 Q1	+5.7	+6.6	+6.8 May	+1.8 May	+2.3	3.9 Q1 [§]	+121.0 Q1	+1.1	-3.5	3.55 ^{§§}	6.41	6.80
Japan	+1.1 Q1	-0.6	+1.3	+2.5 Apr	+0.6 Apr	+1.1	2.5 Apr	+196.2 Apr	+3.9	-4.7	0.02	110	110
Britain	+1.2 Q1	+0.4	+1.4	+1.8 Apr	+2.4 May	+2.5	4.2 Mar ^{††}	-106.7 Q4	-3.8	-1.8	1.51	0.75	0.79
Canada	+2.3 Q1	+1.3	+2.3	+4.9 Mar	+2.2 Apr	+2.1	5.8 May	-53.8 Q1	-2.6	-1.9	2.32	1.30	1.32
Euro area	+2.5 Q1	+1.5	+2.3	+1.7 Apr	+1.9 May	+1.6	8.5 Apr	+473.7 Mar	+3.2	-0.8	0.48	0.85	0.89
Austria	+3.4 Q1	+9.7	+2.9	+3.9 Mar	+1.8 Apr	+2.2	4.9 Apr	+7.7 Q4	+2.3	-0.6	0.61	0.85	0.89
Belgium	+1.5 Q1	+1.3	+1.7	+3.5 Mar	+1.8 May	+1.8	6.3 Apr	-0.8 Dec	-0.3	-0.9	0.85	0.85	0.89
France	+2.2 Q1	+0.7	+2.0	+2.1 Apr	+2.0 May	+1.8	9.2 Apr	-7.8 Apr	-1.0	-2.4	0.85	0.85	0.89
Germany	+2.3 Q1	+1.2	+2.2	+2.0 Apr	+2.2 May	+1.7	3.4 Apr [†]	+322.8 Apr	+7.9	+1.1	0.48	0.85	0.89
Greece	+2.3 Q1	+3.1	+1.8	+1.9 Apr	+0.6 May	+0.7	20.1 Mar	-1.8 Mar	-1.2	-0.3	4.58	0.85	0.89
Italy	+1.4 Q1	+1.1	+1.4	+1.9 Apr	+1.1 May	+1.2	11.2 Apr	+53.0 Mar	+2.7	-2.0	2.81	0.85	0.89
Netherlands	+2.8 Q1	+2.1	+2.8	+5.0 Apr	+1.7 May	+1.5	4.9 Apr	+84.9 Q4	+9.7	+0.8	0.67	0.85	0.89
Spain	+2.9 Q1	+2.8	+2.7	+11.0 Apr	+2.1 May	+1.5	15.9 Apr	+26.2 Mar	+1.8	-2.6	1.38	0.85	0.89
Czech Republic	+3.7 Q1	+1.6	+3.5	+5.5 Apr	+2.2 May	+1.8	2.3 Apr [†]	+1.9 Q4	+0.7	+0.9	2.13	21.9	23.3
Denmark	-1.3 Q1	+1.7	+1.8	+6.1 Apr	+1.1 May	+1.1	4.0 Apr	+20.9 Apr	+7.7	-0.7	0.51	6.33	6.64
Norway	+0.3 Q1	+2.5	+1.9	-1.3 Apr	+2.3 May	+2.2	3.9 Mar ^{††}	+22.8 Q1	+6.5	+4.9	1.90	8.02	8.43
Poland	+5.2 Q1	+6.6	+4.2	+9.2 Apr	+1.7 May	+1.9	6.1 May [§]	-0.8 Apr	-0.7	-2.2	3.25	3.63	3.74
Russia	+1.3 Q1	na	+1.8	+1.0 Apr	+2.4 May	+3.0	4.9 Apr [§]	+41.7 Q1	+3.3	+0.3	8.13	62.4	56.9
Sweden	+3.3 Q1	+2.9	+2.7	+3.2 Apr	+1.7 Apr	+1.7	6.8 Apr [§]	+16.8 Q1	+3.4	+0.8	0.65	8.63	8.70
Switzerland	+2.2 Q1	+2.3	+2.2	+8.7 Q4	+1.0 May	+0.8	2.6 May	+66.6 Q4	+9.2	+0.8	0.09	0.99	0.97
Turkey	+7.4 Q1	na	+4.3	+5.1 Apr	+12.1 May	+10.9	10.6 Feb [§]	-57.1 Apr	-5.5	-2.8	16.32	4.63	3.52
Australia	+3.1 Q1	+4.2	+2.8	+4.3 Q1	+1.9 Q1	+2.2	5.4 May	-36.8 Q1	-2.5	-1.2	2.81	1.32	1.33
Hong Kong	+4.7 Q1	+9.2	+2.9	+0.7 Q4	+1.9 Apr	+2.5	2.8 Apr ^{††}	+14.7 Q4	+4.0	+0.8	2.35	7.85	7.80
India	+7.7 Q1	+10.1	+7.3	+4.9 Apr	+4.9 May	+4.7	5.3 May	-48.7 Q1	-2.2	-3.5	7.93	67.6	64.4
Indonesia	+5.1 Q1	na	+5.3	+4.7 Apr	+3.2 May	+3.6	5.1 Q1 [§]	-20.9 Q1	-2.2	-2.5	7.23	13,932	13,291
Malaysia	+5.4 Q1	na	+5.5	+4.5 Apr	+1.4 Apr	+2.5	3.3 Apr [§]	+12.2 Q1	+3.2	-2.8	4.23	3.99	4.26
Pakistan	+5.4 2018**	na	+5.4	+4.2 Apr	+4.2 May	+5.0	5.9 2015	-16.7 Q1	-5.8	-5.4	8.50 ^{†††}	119	105
Philippines	+6.8 Q1	+6.1	+6.4	+31.0 Apr	+4.6 May	+5.1	5.5 Q2 [§]	-2.5 Dec	-1.2	-1.8	6.10	53.2	49.5
Singapore	+4.4 Q1	+1.7	+3.2	+9.1 Apr	+0.1 Apr	+0.9	2.0 Q1	+61.7 Q1	+20.6	-0.7	2.61	1.34	1.38
South Korea	+2.8 Q1	+4.1	+2.9	+0.9 Apr	+1.5 May	+1.8	4.1 Apr [§]	+69.2 Apr	+4.8	+0.7	2.72	1,077	1,128
Taiwan	+3.0 Q1	+0.8	+2.7	+3.1 Mar	+1.6 May	+1.5	3.7 Apr	+84.8 Q1	+13.5	-0.9	0.95	29.9	30.2
Thailand	+4.8 Q1	+8.1	+4.1	+4.0 Apr	+1.5 May	+1.4	1.1 Apr [§]	+50.2 Q1	+9.8	-2.9	2.57	32.2	34.0
Argentina	+3.9 Q4	+3.9	+2.2	+3.2 Apr	+25.6 Apr	+25.1	7.2 Q4 [§]	-30.8 Q4	-4.6	-5.1	8.08	25.5	15.9
Brazil	+1.2 Q1	+1.8	+2.2	+8.9 Apr	+2.9 May	+3.4	12.9 Apr [§]	-8.9 Apr	-1.1	-7.1	9.82	3.71	3.32
Chile	+4.2 Q1	+4.9	+3.7	+7.6 Apr	+2.0 May	+2.4	6.7 Apr ^{§††}	-3.1 Q1	-1.1	-2.0	4.57	635	663
Colombia	+2.8 Q1	+2.8	+2.5	-1.4 Mar	+3.2 May	+3.3	9.5 Apr [§]	-9.8 Q1	-2.9	-2.0	6.58	2,860	2,934
Mexico	+1.3 Q1	+4.6	+2.1	+3.8 Apr	+4.5 May	+4.4	3.4 Apr	-15.9 Q1	-1.7	-2.3	7.96	20.6	18.1
Peru	+3.2 Q1	+5.6	+3.7	+2.4 Mar	+0.9 May	+1.7	7.0 Mar [§]	-2.9 Q1	-1.6	-3.5	na	3.27	3.28
Egypt	+5.3 Q4	na	+5.4	+3.7 Apr	+11.5 May	+16.9	10.6 Q1 [§]	-9.3 Q4	-2.6	-9.3	na	17.9	18.1
Israel	+3.9 Q1	+4.2	+3.8	+4.2 Mar	+0.4 Apr	+1.5	3.9 Apr	+10.5 Q4	+2.6	-2.4	1.92	3.59	3.53
Saudi Arabia	-0.9 2017	na	+1.0	na	+2.6 Apr	+4.4	6.0 Q4	+15.2 Q4	+7.0	-4.4	na	3.75	3.75
South Africa	+0.8 Q1	-2.2	+1.9	-1.6 Apr	+4.5 Apr	+4.8	26.7 Q1 [§]	-8.6 Q4	-2.7	-3.5	9.00	13.2	12.8

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

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Markets

	Index Jun 13th	% change on one week	% change on Dec 29th 2017	
			in local currency terms	in \$ terms
United States (DJIA)	25,201.2	+0.2	+1.9	+1.9
China (Shanghai Comp)	3,049.8	-2.1	-7.8	-6.2
Japan (Nikkei 225)	22,966.4	+1.5	+0.9	+2.9
Britain (FTSE 100)	7,703.7	-0.1	+0.2	-1.0
Canada (S&P/TSX)	16,265.8	+0.5	+0.3	-3.1
Euro area (FTSE Euro 100)	1,215.1	+0.6	+0.4	-1.5
Euro area (EURO STOXX 50)	3,479.6	+0.5	-0.7	-2.6
Austria (ATX)	3,357.3	+1.7	-1.8	-3.8
Belgium (Bel 20)	3,813.9	+0.6	-4.1	-6.0
France (CAC 40)	5,452.7	-0.1	+2.6	+0.6
Germany (DAX)*	12,890.6	+0.5	-0.2	-2.2
Greece (Athex Comp)	769.7	-1.5	-4.1	-6.0
Italy (FTSE/MIB)	22,216.2	+1.9	+1.7	-0.3
Netherlands (AEX)	564.0	+0.3	+3.6	+1.5
Spain (IBEX 35)	9,899.1	+1.1	-1.4	-3.4
Czech Republic (PX)	1,082.0	+0.8	+0.4	-2.3
Denmark (OMXC20)	895.9	-0.5	-3.4	-5.3
Hungary (BUX)	35,868.6	-3.5	-8.9	-13.6
Norway (OSEAX)	1,018.3	+1.4	+12.3	+14.5
Poland (WIG)	58,686.2	-0.7	-7.9	-11.9
Russia (RTS, \$ terms)	1,147.6	-2.6	-0.6	-0.6
Sweden (OMXS30)	1,571.1	+0.8	-0.4	-5.5
Switzerland (SMI)	8,634.6	+1.0	-8.0	-9.0
Turkey (BIST)	93,504.8	-3.3	-18.9	-33.6
Australia (All Ord.)	6,133.1	-0.1	-0.6	-3.4
Hong Kong (Hang Seng)	30,725.2	-1.7	+2.7	+2.3
India (BSE)	35,739.2	+1.6	+4.9	-1.0
Indonesia (JSX)	5,993.6	-1.3	-5.7	-8.2
Malaysia (KLSE)	1,763.6	-0.8	-1.8	-0.5
Pakistan (KSE)	43,507.5	-1.4	+7.5	-0.5
Singapore (STI)	3,392.5	-2.2	-0.3	-0.2
South Korea (KOSPI)	2,468.8	+0.6	+0.1	-0.6
Taiwan (TWI)	11,173.2	-0.3	+5.0	+4.5
Thailand (SET)	1,718.3	-1.2	-2.0	-0.7
Argentina (MERV)	30,228.4	-0.7	+0.5	-25.9
Brazil (BVSP)	72,122.1	-5.2	-5.6	-15.5
Chile (IGPA)	27,943.0	+0.5	-0.1	-3.3
Colombia (IGBC)	12,301.3	nil	+7.2	+11.8
Mexico (IPC)	46,760.6	+3.5	-5.3	-10.1
Peru (S&P/BVL)*	21,137.4	-1.0	+5.8	+5.0
Egypt (EGX 30)	16,178.3	+1.7	+7.7	+7.1
Israel (TA-125)	1,392.6	+0.8	+2.1	-1.2
Saudi Arabia (Tadawul)	8,270.5	-1.3	+14.4	+14.5
South Africa (JSE AS)	58,437.2	+0.6	-1.8	-8.2

Coal

The world's coal market experienced an unexpected revival in 2017, according to an annual energy round-up from BP, an oil firm. The uptick was driven partly by a resurgence of demand for coal in China, which increased by 0.5% year on year, after falling for three consecutive years. Although China is attempting to diversify away from the dirtiest fuels, it used more coal to satisfy its growing electricity demand. The global power sector still remains heavily dependent on coal, too. Despite growth in the use of renewables in recent years, and efforts to shift power generation away from coal, it accounts for around two-fifths of the total, the same share as two decades ago.

Consumption, % change on a year earlier



Source: BP

Other markets

	Index Jun 13th	% change on one week	% change on Dec 29th 2017	
			in local currency terms	in \$ terms
United States (S&P 500)	2,775.6	+0.1	+3.8	+3.8
United States (NASComp)	7,695.7	+0.1	+11.5	+11.5
China (Shenzhen Comp)	1,731.4	-2.7	-8.8	-7.3
Japan (Topix)	1,800.4	+1.3	-0.9	+1.1
Europe (FTSEurofirst 300)	1,517.5	+0.4	-0.8	-2.7
World, dev'd (MSCI)	2,140.2	+0.2	+1.7	+1.7
Emerging markets (MSCI)	1,135.7	-1.3	-2.0	-2.0
World, all (MSCI)	519.7	nil	+1.3	+1.3
World bonds (Citigroup)	938.4	-0.1	-1.2	-1.2
EMBI+ (JPMorgan)	783.6	-0.9	-6.3	-6.3
Hedge funds (HFRX)	1,274.6 [§]	+0.2	-0.1	-0.1
Volatility, US (VIX)	12.9	+11.6	+11.0 (levels)	
CDSs, Eur (iTRAXX) [†]	69.1	+2.7	+53.1	+50.1
CDSs, N Am (CDX) [†]	63.6	-1.2	+29.5	+29.5
Carbon trading (EU ETS) €	15.3	-4.4	+88.3	+84.6

Sources: IHS Markit; Thomson Reuters. [†]Total return index. [‡]Credit-default-swap spreads, basis points. [§]Jun 12th.

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The Economist commodity-price index 2005=100

	Jun 5th	Jun 12th*	% change on one month	% change on one year
Dollar Index				
All Items	156.3	156.2	+0.2	+10.7
Food	156.7	155.0	-2.7	+0.9
Industrials				
All	155.9	157.5	+3.3	+23.1
Nfa [†]	148.8	148.1	+2.6	+12.8
Metals	158.9	161.5	+3.5	+27.6
Sterling Index				
All items	213.1	212.8	+1.2	+5.6
Euro Index				
All items	166.6	164.8	+0.8	+5.3
Gold				
\$ per oz	1,295.3	1,298.9	+0.4	+2.8
West Texas Intermediate				
\$ per barrel	65.5	66.4	-6.9	+42.8

Sources: Bloomberg; CME Group; Cotlook; Darmann & Curl; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Thomson Reuters; Urner Barry; WSJ. ^{*}Provisional [†]Non-food agriculturals.

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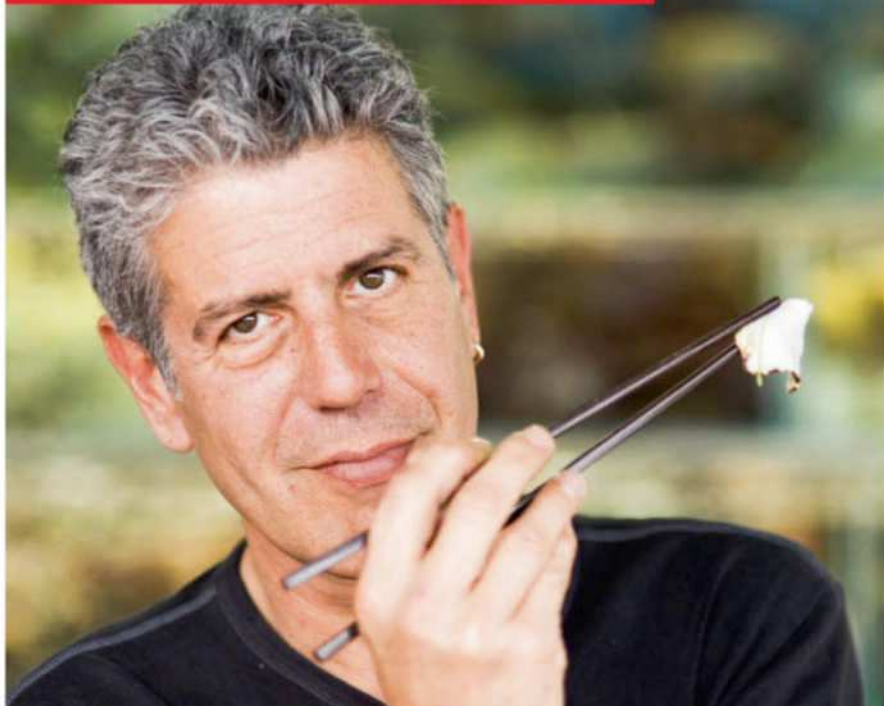
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The power of food

Anthony Bourdain, chef, traveller and food-writer, hanged himself on June 8th, aged 61

WHEN interviewers dug to the essence of him, Anthony Bourdain said he was a simple man. He knew his life didn't give that impression. Much of it was set in roaring, steamy, yelling kitchens, from his first job as a dishwasher at the Dreadnaught in Provincetown, Massachusetts, through the slow climb as prep drone, line cook or sous chef at various eateries round New York, to head chef at Les Halles in Manhattan. He weathered the hazards of pots, knives and fire, the dread of scorching the *demi-glace* or spilling a plate, under the half-friendly hail of colleagues denouncing him as a *pédé*, a *maricón*, a *puta* and a motherfucker, the international language of cuisine everywhere.

At Les Halles, he got through by crunching aspirins like sweets. Before that he was high all the time. From his teens he dropped acid, furiously miserable that he was too young and too suburban to have experienced the 1967 Summer of Love. In New York he moved on to heroin, just because it was the most dangerous drug in the room. He would always try anything once, but he used heroin for seven years. Should have died. He quit cold turkey, then stuffed his nose with cocaine. On drugs he was a self-destructive lout. Aggressive, depressive, almost unemployable. A mess.

And when all that changed in the 1990s,

most definitively in 1999 when the *New Yorker* published a piece by him and he became a storyteller, life got no simpler. The piece was called "Don't Eat Before Reading This". It reminded finicky New Yorkers that fine cookery was all about cruelty, blood, engorged livers, rot and decay. People liked it, so he wrote a book, "Kitchen Confidential", mostly at 5am between kitchen shifts, in which all the dirty secrets of restaurants came out. Uneaten bread sent out to the next table. Leftover butter strained of cigarette ash and used for hollandaise. Long-stored fish served up on Mondays. He praised offal and foie gras, cursed fascist vegetarians. People devoured it, and out of that came TV series on three networks. He just floated the idea of going to cool places, eating great food, while they paid. And they bought it.

From that point he travelled seven months a year, to almost every country on Earth. There he'd hop on a boat, a train or motorbike. He rode like a rocker with his gristly, tendony, jujitsu-honed body lean in jeans and T-shirt. He would seek out dim, hidden dives known only to locals. (Once, in deepest Tokyo, he ate the best seafood of his life in such a place. Twenty courses, a saké shot between each one). As well as eating, he would have adventures. Go sky-diving. Swim in a frozen lake. Hack

through leech-filled jungle. Deliberately get lost. For he was famous now. Not as a chef, for he'd never been a really great chef, and he loathed the commercialism of the celebrity-chef crowd; he would rather write "serial wanker" in his passport. But just as his own curious, restless self. His motto was to keep moving, as far as he could. Keep moving. Try everything.

In all this buzzing around, however, one thing was certain. Food had power. He recognised no god, was hostile to any kind of devotion. But "the food thing" ordered his life. That first taste of a glistening, vaguely sexual, seawatery oyster on a fishing boat in France, at 12, was an initiation. It determined his future. As for that nerve-shattering kitchen chaos, it masked the mechanical precision of a submarine crew. Endurance. Achievement. Three hundred eggs Benedict, not one returned. Food imposed absolutes: the things you *must* do (use a sharp knife) and things you *must not* do (eat unopened mussels, use a garlic press). And food conferred a place in a hierarchy of the scarred. Even if you entered as a miserable *puta*, hard work got you respect.

The power of food was also extraordinarily simple. His aim in his first TV series, "A Cook's Tour", was to find the perfect meal. And he knew it wouldn't be in some five-star restaurant. Food made him happiest if he experienced it in a purely emotional way. It might be the company, the moment, or some memory it evoked: of his mother's grilled-cheese sandwiches, or his mother-in-law's meatloaf. A plate of piss-poor peasant food could become something sublime, like *feijoada* in Brazil. His perfect meal was the street-stall *pho* of his favourite country, Vietnam. In "Kitchen Confidential" he warned readers to beware of restaurant dirt. He learned to relish many unwashed hands delving in one pot.

Fermented shark

So much globe-trotting frayed him. And it destroyed his marriages, though few knew better how food could bring people close. In his TV series perfect strangers opened up to him, telling him their stories over meals in their homes. He didn't go in as a journalist, but as a guest, asking "What do you like to cook? What makes you happy?" In reply they would offer him food steeped in culture, history and memory. It could be vile—fermented shark in Iceland, warthog rectum in Namibia. But he would always eat it. It wasn't worse (he said) than a Chicken McNugget. And he wanted to return the kindness. On one trip to the Middle East he wondered aloud—as similar feasts were served up by both Jews and Arabs—whether the world's problems couldn't all be solved if people just sat down, without fear, and ate together. For good food was made with love, just as good sex was. To share it was to love one another. ■

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