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Britain's election results



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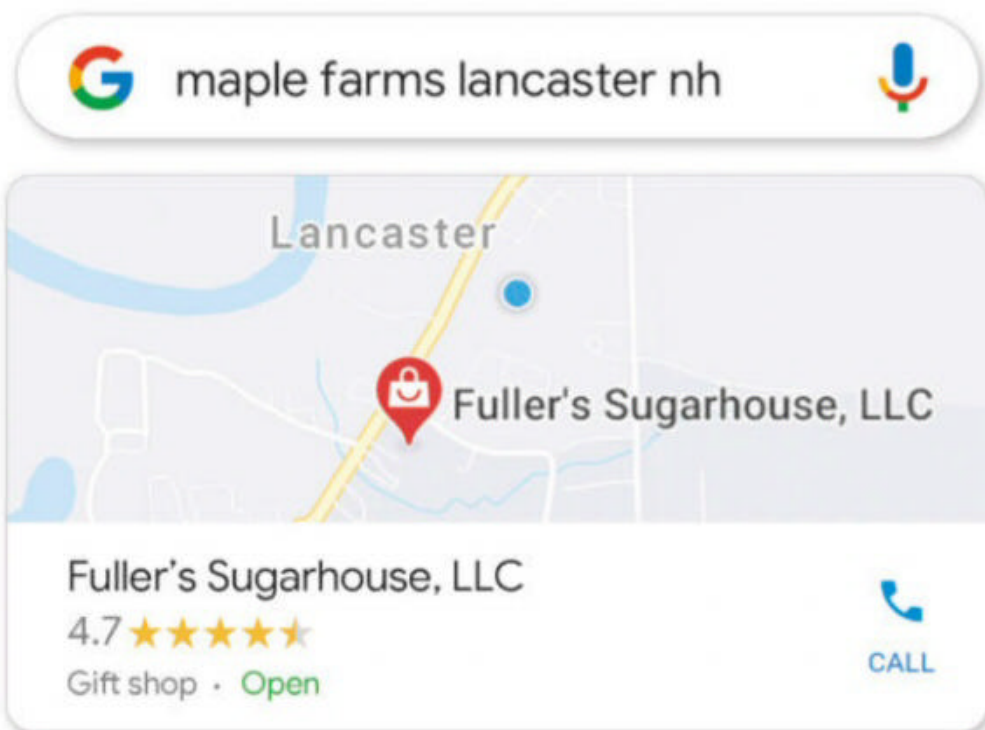
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On trial

Impeachment and American democracy



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The House of Representatives presented two **articles of impeachment** against Donald Trump: that the president abused his power by pressing Ukraine to dig up dirt on Joe Biden, and that he obstructed Congress by insisting that key witnesses cannot testify. The votes on those charges are expected to be swift and along party lines in the House. Mr Trump could be impeached before Christmas, setting up a trial early next year in the Senate, which will in all likelihood acquit him.

Officials in **Jersey City**, which lies across the Hudson river from Manhattan, said three people murdered in a kosher market may have been targeted for anti-Semitic reasons. The two shooters, linked to a black hate group that considers itself the true Israelites, also killed a policeman before entering the store. The suspects were killed during an hours-long gun battle with police.

A trainee in the Saudi air force murdered three sailors at a navy training base in Pensacola, **Florida**, before being shot dead by police. The motive was unclear but terrorism is one line of inquiry.

First-day priorities

Alberto Fernández, a Peronist, took office as **Argentina's** president. The economy he inherits from his centre-right predecessor, Mauricio Macri, is in recession and has an inflation rate of more than 50%. In his inauguration address Mr Fernández promised to end the "social catastrophe" of hunger and said Argentina could not pay its foreign creditors unless its economy grows.

Genaro García Luna, who was **Mexico's** secretary of public security during the presidency of Felipe Calderón, was arrested in Texas. Prosecutors say he took millions of dollars in cash from the Sinaloa drug gang in exchange for protecting its activities and providing intelligence to it. Mr Calderón, who was president from 2006 to 2012, waged a bloody war against Mexico's drug gangs.

Honduras's congress voted to recommend that the president not renew the mandate of MACCIH, a corruption-fighting mission backed by the Organisation of American States. Lawmakers complained that it disclosed names of people under investigation, but most Hondurans back MACCIH, which helped to jail a former first lady.

Regular polling

None of **Israel's** political parties was able to form a government before the December 12th deadline, so the country will hold another election, its third in less than a year, on March 2nd. Polls show little change in voter preferences.

America and Iran exchanged prisoners in a rare bit of diplomacy between the two countries. The swap involved a Chinese-American researcher who had been convicted of spying in Iran, and an Iranian stem-cell scientist who was held by America for trying to export biological material.

Opposition activists claimed that up to 1m people took to the streets in Conakry, the capital of **Guinea**, to protest against the rule of President Alpha Condé. Mr Condé is meant to step down at the end of his second term next year, but he may try to change the constitution so that he can run for a third term.

Militants killed 73 soldiers in an army base in western **Niger**. The attack, the deadliest in years, highlights the rapidly deteriorating security situation across the Sahel.

Security forces in **Nigeria** seized Omoyele Sowore, a journalist and activist, while he was appearing in court the day after judges had forced the state to release him. Mr Sowore, who had been held since August, has been charged with treason after criticising President Muhammadu Buhari and calling for civil unrest.

What about Shia Muslims?

India's parliament passed a law offering a fast track to citizenship to minorities who face persecution in Afghanistan, Bangladesh and Pakistan, as long as they aren't Muslim. The new law applies to Hindus, Sikhs, Buddhists, Christians and others. Muslims condemned it as an attempt by India's Hindu-nationalist government to marginalise them. The law has been appealed to the Supreme Court.



Aung San Suu Kyi defended **Myanmar** against charges of genocide at the International Court of Justice in The Hague. The Nobel peace-prize winner described the Myanmar army's bloody crackdown on Rohingya Muslims in 2017, in which thousands were killed or raped and 700,000 fled to Bangladesh, as an internal conflict started by Rohingya militants.

Police in **Malaysia** said they would interview Anwar Ibrahim, the country's prime-minister-in-waiting, about an allegation that he sexually assaulted a male aide. As leader of the opposition in 1999 Mr Anwar was imprisoned on trumped-up charges of sodomy, which is illegal in Malaysia. He dismissed the allegation as political.

Voters in Bougainville, an autonomous region of **Papua New Guinea**, voted by 98% to 2% for independence. Bougainville has long had a distinct identity; 15,000-20,000 people were killed in a civil war that was fuelled by separatist grievances and ended in 1998. The referendum, however, is non-binding.

Hundreds of thousands of people marched through **Hong Kong** in the city's first authorised protest since August and the largest in weeks. The demonstration, organised to mark the UN's human-rights day, was mostly peaceful. Afterwards, however, some protesters threw firebombs at official buildings.

A Chinese official, Shohrat Zakir, said everyone had "graduated" from "vocational education and training" camps in **Xinjiang**. An estimated 1m people, most of them ethnic-Uighurs, have been detained in what are in fact prison camps, often just for being devout Muslims. Mr Zakir said training would continue at the camps, with "the freedom to come and go". Independent witnesses were not allowed in to verify his claims.

Plus ça change

France's prime minister unveiled details of the government's plan for pension reforms, which put some of the toughest changes off into the future. But this may not be enough to halt a wave of strikes that have shut down most of the rail network, many schools and the Paris Métro.

A new government was sworn in in **Finland**. All five of the parties in the new ruling coalition are led by women.

Russia was banned from major sporting competitions for a period of four years, which will cover next year's Olympics, after revelations that it had hacked and faked medical records dealing with doping. The ban contains significant loopholes, however.

The prospect of Congress approving the **United States-Mexico-Canada Agreement** improved, after Democrats reached a deal with the White House to revise the trade deal. The reworked USMCA weakens intellectual-property protections for the drugs industry, which Democrats insist will lead to lower health-care costs, and beefs up workers' rights, putting more onus on employers to enforce labour standards. The USMCA will eventually replace NAFTA.

Ain't life a bitch

Still licking its wounds from its disastrous investment in WeWork, SoftBank was reportedly selling its 50% stake in **Wag**, a service that connects dog owners with people who will walk their pooch for them. Wag has struggled to compete against Rover, a rival. It has also been hounded by bad publicity about lost or dead dogs under its care.

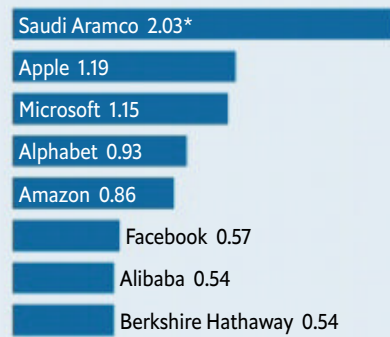
A judge on the New York state Supreme Court cleared **Exxon Mobil** of fraud related to its accounting for climate-change regulations. New York's attorney-general had sought to show that the oil company committed fraud by using two methods to estimate costs posed by possible climate policies. The ruling lowers the likelihood of similar litigation in other states.

Chevron said it would record impairments of more than \$10bn in its fourth quarter. More than half of the write-down comes from shale assets in the Appalachian region. An abundance of shale gas has depressed prices, which are at their lowest in 20 years.

America's boundless production in shale energy has also kept down oil prices. In an agreement by which they hope to shore up prices, **OPEC and Russia** agreed to cut output by another 500,000 barrels a day, extending a strategy started in 2016. Saudi Arabia wanted deeper reductions, which were resisted by Russia.

Market capitalisation

December 11th-12th 2019, \$trn



Source: Bloomberg

*Intraday

Saudi Aramco's share price surged when it began trading on the Riyadh stock exchange. Although just 1.5% of the state-controlled oil company's shares were sold, it raised \$25.6bn in its IPO, the most ever. Aramco is now the world's most valuable publicly listed company, hitting \$2trn on December 12th. That is the value that Muhammad bin Salman, Saudi Arabia's de facto leader, has decreed Aramco is worth, despite scepticism from global investors. Tranches of the shares are held by the Saudi elite, who have reportedly been pressed to trade the stock in order to reach the target.

Problems at an oilfield off the coast of Ghana were one factor that caused **Tullow Oil** to drastically reduce its production forecasts for the next few years. Its share price tanked by

70%, one of the worst falls on the FTSE 250 this decade.

Pacific Gas & Electric reached a \$13.5bn settlement with the victims of wildfires that were sparked by its faulty equipment. That brings the total charges incurred by California's biggest utility to \$25.5bn. The settlement with victims could hasten PG&E's exit from bankruptcy protection, though the deal must first be signed off by California's governor.

German industrial production fell by 1.7% in October compared with September, renewing concerns that the dip in German manufacturing may be deeper than had been thought. Compared with October 2018 output was down by 5.3%, the biggest drop by that measure in a decade.

The Federal Reserve left its benchmark **interest rate** on hold, and suggested it would stay on hold throughout next year. The central bank cut the rate three times this year, but now believes the risks to the economy have moderated.

Brazil's central bank lowered its main interest rate for a fourth consecutive time, to a record low of 4.5%. That may spur a further decline in the

real, which could be an issue for Donald Trump; he has accused Brazil of manipulating its currency to favour exports.

Tributes were paid to **Paul Volcker**, who died at the age of 92. Mr Volcker influenced monetary policy for decades, waging a war on inflation as chairman of the Federal Reserve. He also proposed what became known as the "Volcker rule", which bankers hate because it limits their trading. Asked how bad America's economy was when he took charge at the Fed in 1979, Mr Volcker replied, "by Latin American standards, it wasn't so bad".

Festive cheers

JD Wetherspoon, a pub chain in Britain, announced that it is pumping £200m (\$264m) into its business over the next four years, creating 10,000 jobs. The ailing sector has been anything but stout over the past two decades, seeing around 12,000 **pubs and bars** close down. However, recent statistics have given the industry something to toast: there was a net increase of some 300 boozers in the latest year. That may be small beer for now, but Wetherspoon, at least, expects hopy times ahead.





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On trial

Donald Trump, impeachment and American democracy

ON DECEMBER 10TH the House Judiciary Committee formally accused President Donald Trump of abuse of power and obstruction of Congress. It was a solemn moment, and the prelude to Mr Trump becoming only the third president to be impeached. It was also entirely predictable. Mr Trump will now almost certainly be indicted by the House and cleared in a trial by the Senate. If a single legislator crosses party lines, it will be news. That enough to convict him will do so is inconceivable.

Mr Trump's behaviour forced on Congress an invidious choice. He deserves to be removed for attempting to tip the 2020 election. But the impeachment that has unfolded over the past three months will leave Republicans unswayed, voters divided and Mr Trump in office. That is bad for America.

The main facts are not in dispute. Mr Trump ordered \$391m of military aid to be temporarily withheld from Ukraine, which is fighting a Russian-backed uprising (see Europe section). Using back channels, Mr Trump also promised Volodymyr Zelensky, Ukraine's new president, a coveted meeting in the Oval Office if he announced investigations into Ukraine's role in the 2016 American election and, more important, into whether Joe Biden, a potential rival to Mr Trump in the 2020 election, had corruptly protected his son, Hunter. Mr Trump's claim was that Mr Biden, when he was vice-president, had prevented a Ukrainian prosecutor looking into a gas company that had Hunter on its board.

The law is clear, too. Impeachment involves "high Crimes and Misdemeanours", threats to the state and violations of public trust that need not be crimes in themselves (see Briefing). Mr Trump's manipulation of a foreign government to smear his opponent is the sort of election-rigging that bothered the Framers. So much the worse that the president was also acting against the national interest by endangering an ally.

Instead, the arguments have been about what Mr Trump intended. The president's defenders insist that he was not smearing Mr Biden. He had a legitimate concern about corruption, and was conducting relations with the new government in Kyiv in his own way—as is his right. Ukraine's president, they say, did not even know about the delay to the \$391m, which in any case was mostly disbursed eventually. They note that Mr Zelensky denies that the aid depended on his investigations—and no wonder, because Mr Trump never intended such a *quid pro quo*.

Intentions are hard to get at, especially with a man like Mr Trump who routinely contradicts himself. But this defence does not ring true. Ukrainian officials did in fact know about the delay, and Mr Trump released the money only after a whistleblower had complained about his behaviour. Mr Zelensky's statement is open to doubt, as he has everything to lose from getting mixed up in an impeachment while Mr Trump remains in power.

Moreover, Mr Trump did not take the Ukrainian allegations seriously. If he had wanted the Bidens investigated, the proper course would have been to refer the matter to the FBI, not to use a foreign government. Before charging ahead, Mr Trump could have asked whether the allegations were substantial. They were

not. A Russia expert once on his own staff has warned that the story about Ukrainian meddling in 2016 was a Russian propaganda campaign. The Ukrainian prosecutor pushed out by Mr Biden was shielding corrupt firms: the father was not protecting his son, but exposing him to investigation by a new prosecutor.

"Shall any man be above justice?" George Mason asked when drafting the impeachment clause. "Shall that man be above it, who can commit the most extensive injustice?" Mr Trump wanted to tilt the 2020 election in his favour by tainting Mr Biden. Given a free hand, his illegal efforts to cling to power might continue from the Oval Office. That is why Mr Trump should be removed.

But he won't be. To expel him, the Senate needs to vote against the president with a two-thirds majority. The Democrats, with 47 of 100 seats, would count it a victory to win a simple majority. Public support for impeachment jumped in September when it was announced, to a little under 50%, but all the investigations and hearings since then have not shifted it. Only 21 states have a majority in favour of impeachment (see our Graphic detail page).

Democrats argue that this is because the White House has refused to let staff testify, or to release documents to Congress, the basis for that charge of obstruction of Congress. Republicans, they say, abetted by Fox News and others, have thrown sand in voters' eyes by mounting shifting and inconsistent defences.

The Democrats are right. The Republican refusal to take any allegations against Mr Trump seriously has been contemptible. In private, many Republican senators abhor Mr Trump and his methods. But they will not risk their careers by breaking with him in the national interest.

The key to shifting them is public opinion—and it still has the potential to move against Mr Trump. Pollsters report that a third of independent voters are undecided; some of those opposed to impeachment appear willing to reconsider. But the White House will not let the public hear from the witnesses closest to Mr Trump, such as John Bolton, a former national security adviser, and Mick Mulvaney, his acting chief of staff. Sworn testimony from the inner circle could have contained facts and insights with a unique power to change minds.

Democrats could have asked the courts to compel them to testify and turn over documents. If Mr Trump defied the judges, Republican senators would be under severe pressure to break with him. However, rather than submit to the grinding wheels of the law, the Democrats have settled for a vote simply to get it out of the way. They argue that they have already accomplished a lot. They have shown that the president did wrong, they say. Because the House has sole power over impeachment, they do not need the courts to prove obstruction. Even if they fail to remove Mr Trump, impeachment is deterrent enough.

That is a counsel of despair. Nobody can say how long the courts would take. Democratic leaders cite the months needed to force witnesses to testify in other cases but, mindful of the electoral timetable, the judges could just as well choose to proceed swiftly. While they deliberate, the impeachment inquiry will hang over Mr Trump. That will do more to restrain him from fur-

►



▶ther abuse than a rushed process that is done and dusted early next year. Even if time ran out, the impeachment lapsed and Mr Trump was re-elected, the case might be revived and he might be removed from office. Democrats, however, are focused on the risk that their party will suffer in next year's elections.

They are entitled to put their own electoral calculations first. The Republicans certainly have. But the Democrats should be clear that, even if their party benefits, America will bear the cost.

Mr Trump is getting off lightly. When the Senate absolves him next year he will claim to have been vindicated. On the evidence,

he is guilty of abusing his office. Instead, he will stay—possibly for another term. There is little doubt that his sense of impunity will be further redoubled.

Impeachment was designed to be a last solemn resort, not another partisan tool. Settling for today's doomed indictment ushers in tomorrow's. Impeachment's deterrent effect will erode, because it will be seen as a political gesture. The barrier to removal will rise because breaking with your party will be harder. Oversight will be weaker; the presidency more imperial. As the Senate trial draws near, America has nothing to celebrate. ■

Central banks

Green envy

Central bankers are keen to be green. They should not go too far

MOST GOVERNMENTS are criticised for failing to do enough about climate change. Much rarer is the public body that is doing too much. Yet central banks, the institutions whose job it is to control inflation, tame the economic cycle and police the financial system, are in danger of falling into this lonely category. Since the global financial crisis, their power in pursuit of those limited economic goals has grown substantially. Now they face pressure to wield it in order to save the planet.

Many are keen to rise to the challenge (see Finance section). A global network of central bankers, led by those in Britain, France and the Netherlands, is working on standardised methods for incorporating climate risks into the stress-tests that banks must pass. Some insurers have already been put through their paces. China's central bank has zealously promoted a new market in green—or at least greenish—bonds. Christine Lagarde, the new president of the European Central Bank (ECB), has declared that climate change should be a “mission-critical” priority for the institution. She wants to study whether the bank should tilt its bond-buying programme away from polluters' debt—a policy dubbed “green quantitative easing” (or “green QE”). Europe's regulators are also considering whether to give an easy ride to loans made to green projects.

Some of what central banks have done so far is welcome. But too much greenery risks politicising them and compromising their core missions, which work best when politics is at arm's length. Their leaders should ensure that they stick to tasks for which they were built—and for which they have a democratic mandate.

Start with what is necessary and good. Climate change does not pose a critical threat to the financial system today. But extreme weather and changes in sea-levels could eventually leave insurers with vast bills and banks with dud loans (such as those secured against properties which end up under water). An imminent risk is a sudden change in climate policy. Were governments to impose a swingeing tax on carbon, many fossil-fuel firms would get into financial trouble, as would firms that depend on dirty inputs. There could be knock-on effects for banks exposed to them. It is within regulators' remit to study such possibilities. Working out a coherent set of global standards for accounting for climate risk is a starting-point for such a task.

Unfortunately this agenda could spread into something less desirable, particularly in Europe, which has just set out new cli-

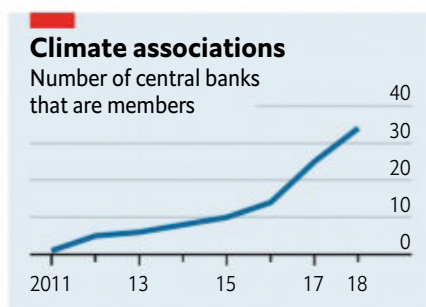
mate targets (see Europe section). It is easy to see the temptation of such policies as green QE. Pushing up the cost of capital that dirty firms pay could have a similar effect to a carbon tax, the holy grail of environmental policies. Firms that can cut emissions easily would do so to avoid the penalty. It might be attractive to outsource a politically risky policy to technocrats.

Yet green QE and schemes like it are misguided, for three reasons. First, central banks lack a democratic mandate to deter emissions. True, climate policy could affect the economy—but so do all kinds of things, such as unemployment benefits, with which central banks would never dream of interfering. This is also true for other catastrophic risks: a pandemic that killed lots of workers would have huge economic implications, but nobody thinks central banks should incentivise medical research. And policies to avert global warming also redistribute wealth. That is why proposals for a carbon tax are typically paired with some sort of compensation for the losers—something that is far beyond central banks' remit today.

Second, green QE would be inferior to a carbon tax. The size of the cost-of-capital advantage it gave green firms would vary with the quantity of bonds the central bank was buying. Because QE is a tool designed to stimulate the economy, that volume depends on unemployment and inflation. Why should the incentive to be green vary with the economic cycle?

Third, even if it carried democratic legitimacy, the expansion of central banks' goals beyond their core remit would be unwise. Power is delegated to technocrats precisely because they are supposed to be neutral and can be easily held accountable against narrowly defined targets. But if it becomes normal for them to tilt capital allocation in a desirable direction, why stop at climate change? The left would leap at the chance to penalise companies that are deemed too ruthless or which have pay structures that offend. Populists might want central banks to favour firms that invest at home and buy local. The more politicised central banks became, the less they would be perceived as independent authorities on economic policy.

If governments want to penalise polluters they can do so directly with taxes, or by empowering new environmental bodies. There is no need to muddy the waters over the responsibilities of central banks. And the banks themselves should resist the perennial temptation to expand their territories. ■



Hindu chauvinism

Undermining India's secular constitution

A bill purporting to help refugees is really aimed at hurting Muslims

THE IDEA seems anodyne, even laudable. India is amending its laws to make it easier for refugees from neighbouring countries to gain citizenship. The problem is in the fine print. While Hindus, Parsis, Jains, Sikhs, Buddhists and Christians from Afghanistan, Bangladesh and Pakistan will be put on a fast track to naturalisation, Muslims, Jews and atheists will receive no such benefit. That defeats the point of the change, since minority Muslim sects and secularists are among the most persecuted groups in those countries. Worse, it is a calculated insult to India's 200m Muslims. And most alarming of all, the change undermines the secular foundations of Indian democracy.

The Lok Sabha or lower house of the Indian parliament, where the ruling Bharatiya Janata Party (BJP) enjoys a large majority, approved the relevant changes to the law on citizenship on December 9th (see Asia section). The bill passed through the upper house two days later, despite impassioned objections from across the political and social spectrum. The law has already been challenged in the Supreme Court. In the interest of social stability, of India's reputation as a liberal democracy and of preserving the ideals of India's constitution, the court should speedily and unequivocally reject it.

After all, Article 14 of the constitution reads: "The State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India." To accept religion as a basis for speedier citizenship is to cock a snook at India's own founding fathers, who proudly contrasted their vision of an open, pluralist society against the closed, Islamic purity of next-door Pakistan (see Books & arts section).

The government justifies its exclusion of Muslim refugees by saying they cannot be persecuted by states that proclaim Islam as their official religion. This is nonsense. Just ask the Ahmadis, a Muslim sect whose members have been viciously hounded in Pakistan as heretics, or the Shia Hazaras who are routinely mur-

dered by the Taliban in Afghanistan. Also excluded are the Muslim Rohingyas fleeing mostly Buddhist Myanmar and the 100,000-odd Hindu Tamils who fled to India to escape civil war in Sri Lanka, a self-declared Buddhist state. And even as the government claims a wish to salve human misfortune, in parliamentary debate it brusquely rejected a proposal to extend the bill's embrace to all immigrants fleeing persecution.

The best explanation for the bill is politics. The BJP is the offspring of a larger family of Hindu-nationalist groups, whose long-term objective is indeed to subvert India's secular constitution by redefining the country as an explicitly Hindu state. Politically speaking, the BJP has long profited from driving a wedge between India's sects, with the aim of consolidating the Hindu vote in its own camp. The citizenship bill would be bad enough on its own, but combined with another initiative being energetically pursued by the BJP, the compilation of a National Register of Citizens, it could be explosive.

In the state of Assam the government recently determined that 1.9m out of 33m residents are not pukka Indians, largely because they have no papers, as is common in poor countries. To the chagrin of Hindu chauvinists who demanded the citizenship checks in Assam, many of those who failed to prove Indian roots turned out not to be Muslims, but Hindus of Bangladeshi origin. The new citizenship rules will allow these people to be naturalised, leaving only the Muslims to be stripped of rights, shunted into camps or expelled. The government has budgeted an initial \$1.7bn to extend this process nationwide.

Not surprisingly, Muslims across the rest of India now fear that they, too, will be singled out and obliged to dig up generations of tattered family documents to prove their Indianness. Already, there are calls for civil disobedience to resist such humiliation. It is easy to see how violence might follow. Seldom has apparent magnanimity disguised such malevolence. ■



The spying business

The digital dogs of war

Cyber-mercenaries should be stopped from selling virtual weapons to autocrats

THE ARMS trade is lucrative and controversial. Over \$80bn-worth of weapons are exported by Western countries each year. The business is governed by a mesh of rules designed to prevent—or at least limit—proliferation and misuse. This system is imperfect, but does have some bite. In Britain court cases have contested the legality of weapons sales to Saudi Arabia because they may have been used against civilians in Yemen. Germany froze exports to the kingdom in 2018.

These days, though, physical weapons such as missiles, guns and tanks are only part of the story. A growing, multi-billion-dollar industry exports "intrusion software" designed to snoop on

smartphones, desktop computers and servers (see Business section). There is compelling evidence that such software is being used by oppressive regimes to spy on and harass their critics. The same tools could also proliferate and be turned back against the West. Governments need to ensure that this new kind of arms export does not slip through the net.

Dozens of firms are involved in the cyber-snooping business; the largest has been valued at \$1bn. Many are based in Western countries or their allies, and employ former spooks who learned their craft in intelligence agencies. There is a legitimate business selling cyber-intelligence tools to foreign customers—for exam- ▶

▶ ple, to help governments track terrorists or investigate organised criminals. Unfortunately, in some cases, these surveillance tools have ended up in the hands of autocratic governments with more sinister aims.

A recent lawsuit brought by WhatsApp, for instance, alleges that more than 1,400 users of its messaging app were targeted using software made by NSO Group, an Israeli firm. Many of the alleged victims were lawyers, journalists and campaigners. (NSO denies the allegations and says its technology is not designed or licensed for use against human-rights activists and journalists.) Other firms' hacking tools were used by the blood-soaked regime of Omar al-Bashir in Sudan. These technologies can be used across borders. Some victims of oppressive governments have been dissidents or lawyers living as exiles in rich countries.

Western governments should tighten the rules for moral, economic and strategic reasons. The moral case is obvious. It makes no sense for rich democracies to complain about China's export of repressive digital technologies if Western tools can be used to the same ends. The economic case is clear, too: unlike conventional arms sales, a reduction in spyware exports would

not lead to big manufacturing-job losses at home.

The strategic case revolves around the risk of proliferation. Software can be reverse-engineered, copied indefinitely and—potentially—used to attack anyone in the world. The smartphone apps targeted by such spyware are used by everyone, from ordinary citizens to prime ministers and CEOs. There is a risk that oppressive regimes acquire capabilities that can then be used against not just their own citizens, but Western citizens, firms and allies, too. It would be in the West's collective self-interest to limit the spread of such technology.

A starting-point would be to enforce existing export-licensing more tightly. These rules were designed for an earlier age, but the principle remains the same: if firms cannot offer reasonable assurances that their software will be used only against legitimate targets, they should be denied licences to sell it. Rich countries should make it harder for ex-spooks to pursue second careers as digital mercenaries in the service of autocrats. The arms trade used to be about rifles, explosives and jets. Now it is about software and information, too. Time for the regime governing the export of weapons to catch up. ■

Menopause

Second spring

Hormone-replacement therapy is safer than people think. More women should take it

IT IS KNOWN colloquially as “the change”. The end of a woman's natural child-bearing years is a moment of transformation that is welcome to some and miserable for others. But for too many, menopause is also a painful process that can damage their bones, heart and brain. As societies age, the question of how best to preserve women's health during menopause is becoming more urgent. In 1990 nearly half a billion women were 50 or older (the age when menopause typically begins). Today there are almost twice as many.

About 47m women around the world reach the age of menopause each year. In Western countries, where most research has been conducted, up to 80% will experience symptoms such as hot flashes, night sweats, depression, insomnia, anxiety and memory loss. Symptoms can last up to 12 years. Around a quarter of women going through menopause feel so wretched that their quality of life is dimmed, according to studies in rich countries. Almost half of British women experiencing it say that their work suffers as a result.

Twenty years ago, doctors would routinely have prescribed hormone-replacement therapy (HRT) to women entering menopause. But in 2002 the results of a huge randomised trial were published, showing that the treatment brought health risks, including a slightly raised chance of breast cancer after five years. Women and doctors were alarmed. Around the world they abandoned hormonal therapy in droves. Before the study, 22% of menopausal women in America took HRT. Six years later that figure had fallen below 5%. In Australia, around 15% of menopausal women with moderate or severe symptoms receive the treatment. Take-up of HRT is now low in most countries. Women are scared and doctors wary.

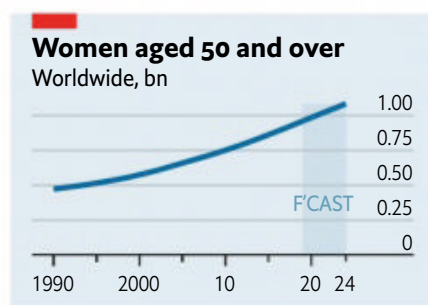
And yet the conclusions of the study in 2002 were rapidly de-

bunked (see International section). A re-examination of its results showed that women aged between 50 and 59 who took HRT were 31% less likely to die of any cause during their five to seven years of treatment with the hormones than those who did not. For a woman who has had her uterus removed or who starts menopause before the age of 45, HRT greatly reduces the risk of heart disease, a life-saving effect. It can also prevent osteoporosis, a disease in which bones become brittle. One study of post-menopausal American women over a ten-year period found that, of those who had had hysterectomies, between 18,000 and 91,000 died prematurely because they had shunned hormone therapy. HRT also lowers women's risk of uterine and colon cancers. Fears about the increased risks of breast cancer have been overplayed.

Hormonal therapies are typically off-patent and inexpensive. In Britain the annual price tag is only £125 (\$165); in the United States generic pills are similarly affordable. And the benefits vastly outweigh the costs. Nothing else controls the symptoms of menopause so well, and a heightened risk of any one disease must be

weighed against the lowered risks of contracting several others.

Hormonal therapies are not appropriate for all menopausal women. For some, the symptoms are insufficiently severe for it to be worthwhile. The treatment might not be suitable for those with liver disease, or a history of blood clots, or breast or ovarian cancer. But for serious symptoms, alternative treatments are worse than taking HRT. Herbal supplements, yoga and faddy diets—to which some turn in the absence of medical help—may alleviate the unpleasantness of menopause but do not offer the long-term health benefits of HRT. Moreover, the symptoms can portend serious health problems in the future. Doctors could usefully prescribe HRT far more widely than they do today. ■



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The debate on inequality

Your briefing on inequality went beyond official statistics to look at some of the latest academic research (“Measuring the 1%”, November 30th). You pitched this new work as a repudiation of the perception that income and wealth inequality have grown over recent decades. We see this latest research, however, as just another step in a lively debate in America and elsewhere.

In 2018, for example, 9,000 British taxpayers received £34bn (\$45bn) in capital gains, averaging nearly £4m each. Yet this is excluded from official income statistics, which only capture sums covered by income tax. Unlike many other countries, Britain still relies almost exclusively on survey data for wealth, even though we know this underestimates the fortunes of the very rich.

In many ways, the current debate in America is far ahead, both in terms of data availability and methodology. But it would be a mistake to think that advances there will fore-shadow similar findings elsewhere. Britain and America have different tax systems, which means that statistics based on tax data will be wrong, or incomplete, in different ways. We don’t yet know the true position in Britain, but our ongoing research provides reasons to think that differences at the very top may yet be larger, not smaller, than previously thought.

PROFESSOR MIKE SAVAGE
Director
International Inequalities
Institute

London School of Economics
Note: A full list of signatories to this letter is available in digital editions.

Doubts about data on top incomes have little relevance to the evidence of the harmful health and social effects of inequality shown in hundreds of studies during the past 40 years. Almost none of these depend on trends in top incomes. Many have compared sub-national states and

regions cross-sectionally and some have used the ratio of the 10th to the 90th percentile, which excludes both the richest and poorest 10%, or Gini coefficients with top incomes truncated. Even if inequality has not increased as much as some thought, the evidence is clear that reducing inequality would lower death rates, strengthen social cohesion and social mobility, and decrease homicides, incarceration and crime.

EMERITUS PROFESSOR
RICHARD WILKINSON
Co-author of “The Spirit Level”
University of Nottingham
Medical School
Note: A full list of signatories to this letter is available in digital editions.

For all its merits, your article had a serious shortcoming in that it relied almost exclusively on cross-section income data. This neglects the impact of investment in education on measured income inequality. Over the decades, the share of adults in industrial countries going to college has been steadily rising. They are poor by choice for several years, but add to measured inequality. Most of them will not, however, be permanently poor.

Therefore, the true development of income inequality can only be assessed using lifetime income data, not cross-section measurements that contain transitory components. Evidently, permanent income, a concept pioneered by Milton Friedman, not only determines consumption but should be used for measuring lifetime income inequality.

PETER ZWEIFEL
Professor of economics
emeritus
University of Zurich

In recent years it has become commonplace to observe that inequality has not grown over the past decade. But this rather misses the point, which is that inequality between the top 1% and the rest of the population remains very high and there is a widespread belief in society that it is too high.

Why should this be so, if

inequality has not grown? The answer is obvious. For most people in America and Britain, living standards over the past decade have been drastically squeezed, with average earnings barely above what they were in 2008. At the same time, it is evident that the rich and extremely rich continue to enjoy consumption lifestyles of a completely different order to the rest of us. In this sense they have not paid any real price for the financial crisis, or shared in the subsequent austerity, at all.

It doesn’t matter whether their income and wealth has fallen a bit or not. The widespread sense of injustice at the relative burden faced by the rich on the one hand and the majority of people on the other, is what has fuelled the political backlash against the elite, and the model of capitalism over which they now preside. Politicians—and *The Economist*—downplay this at their peril.

PROFESSOR MICHAEL JACOBS
Sheffield Political Economy
Research Institute
University of Sheffield

As a past director for some decades of the Survey of Consumer Finances at the Federal Reserve, I worried constantly about how to provide the most meaningful representation of the full spectrum of wealth for American households. Measuring the top of the distribution is important, and much effort still goes toward that endeavour. I have much admiration for Thomas Piketty, Emmanuel Saez, Gabriel Zucman and others for their seriousness in trying to improve wealth measurement and draw out the possible social implications. But I worry that there is a risk in the discussion elsewhere of so fetishising the top 1% that we lose focus on the issues affecting the vastly larger part of the population.

For example, according to the SCF, the share of households with negative net worth in America has gone from about 7% in 1989 to 11% in 2016.

ARTHUR KENNICKELL
Washington, DC

We have just seen yet another report about falling life expectancy in America attributed to deaths of despair and poverty, including liver disease, overdoses, obesity and diabetes. Clearly means-tested transfers have failed to deliver much to their intended beneficiaries. If your analysis was supposed to dissuade us from thinking that inequality is worsening, it definitely failed for me.

JACQUELINE COOLIDGE
Chevy Chase, Maryland

Those who complain about rising inequality fail to see the big picture. More people have been lifted out of poverty over the past 30 years than in the entire history of human civilisation. This is entirely due to capitalism. There was a time when inequality in America decreased dramatically. It was called the Depression.

OLIVER REIF
Seattle

Meetings of minds

Bartleby referred to Jeremy Bentham and George Orwell when describing his unease with videoconferences (November 16th). David Foster Wallace, a more recent prophet of dystopia, provided us with another cautionary tale of the rise and fall of “videophony”. In “Infinite Jest”, the vanity and anxiety of videophone users leads to the adoption of “tableau”, sumptuous scenes picturing very attractive actors with expressions of intense, focused interest. These images are placed in front of the videophone cameras, thus freeing everyone to return to the pre-video pleasures of cuticle picking and tactile facial-blemish scanning.

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Ethics in AI Institute Director

Faculty of Philosophy, University of Oxford

The University of Oxford has launched a major initiative in Ethics in AI, leading to the establishment of an Institute for Ethics in AI, to be based in the Stephen A. Schwarzman Centre for the Humanities, under the aegis of the Faculty of Philosophy. The Institute will build upon the University's world-class capabilities in the humanities to lead the study of the ethical implications of artificial intelligence and other new computing technologies.

Cross-disciplinary collaboration will be fundamental to the success of this new initiative and from its footing within Philosophy, the Institute will draw upon the entire educational and research endeavour of Oxford University – including the Social Sciences, Medical Sciences, Mathematical, Physical & Life Sciences – to deliver cutting-edge scholarship. It will also develop significant opportunities for collaboration with other distinguished research universities, and public and private sector institutions around the world.

The University now seeks a Director for the Institute to provide intellectual vision and to give strategic leadership to the Institute, as it establishes its research programmes and related activities. The post will be open to academics with an international reputation and wide-ranging research and leadership profile within Ethics in AI. A competitive salary will be offered to the successful applicant.

In addition to this post, two Associate Professorships to be based at the Institute will be advertised shortly.

Informal enquiries can be made, by email, to Professor Chris Timpson, christopher.timpson@philosophy.ox.ac.uk or Professor Sir Nigel Shadbolt principal@jesus.ox.ac.uk.

Further information and details about how to apply can be found here: https://my.corehr.com/pls/uoxrecruit/erq_jobspec_details_form.jobspec?p_id=144108

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The die is cast

WASHINGTON, DC

The politics and history behind the third ever impeachment of an American president

ON JULY 26TH, the day after President Donald Trump called the president of Ukraine to ask him for a favour, America's ambassador to the EU, Gordon Sondland, went out to lunch in Kyiv. The ambassador, who secured his position after donating \$1m to the Trump Presidential Inaugural Committee, placed a call to the White House while on the terrace outside a restaurant. He held the phone far enough away from his ear that David Holmes, a counsellor for political affairs at the embassy in Kyiv lurching with him, could overhear what was said.

"I heard Ambassador Sondland greet the president and explain he was calling from Kyiv," Mr Holmes testified to the House intelligence committee on November 15th. "I heard President Trump then clarify that Ambassador Sondland was in Ukraine. Ambassador Sondland replied yes, he was in Ukraine and went on to state that President [Volodymyr] Zelensky, quote, unquote, loves your ass. I then heard

President Trump ask, quote, so he's going to do the investigation? Ambassador Sondland replied that he's going to do it, adding that President Zelensky will, quote, do anything you ask him to."

What Mr Trump had asked Mr Zelensky to do is not in dispute. On September 25th the White House released a memorandum of the conversation between the two presidents that had taken place the day before that lunchtime call. Mr Trump wanted Mr Zelensky to investigate the far-fetched idea that some faction in Ukraine might have worked to implicate Russia in meddling with America's 2016 presidential election. He also wanted him to announce an investigation into corruption at Burisma, an act which might be expected to harm the reputation of Hunter Biden, an American lawyer who sat on the gas company's board, and his father, Joe Biden, who is quite likely to be Mr Trump's opponent in the 2020 presidential election. There is no evidence

that Mr Trump had any interest in other investigations into corruption in Ukraine, of which there are plenty.

The first of the two draft articles of impeachment against Mr Trump which Jerry Nadler (pictured above), the chair of the House Judiciary Committee, published on December 10th treats the request the president made of Mr Zelensky as an abuse of power made "for corrupt purposes in pursuit of personal political benefit."

Mr Zelensky, the House says, did not simply feel the level of pressure to be expected when a recently invaded supplicant is asked for a favour by the president of the largest military power in the world. The article charges Mr Trump with using both government channels and other means to tell Mr Zelensky's team that two things which they wanted—a meeting at the White House and the release of military aid—were conditional on their granting Mr Trump the favour he had asked for.

Mr Sondland testified that the announcement of investigations was indeed treated as "a quid pro quo for arranging a White House visit for President Zelensky", and that this was on "the president's orders". American officials worked with Mr Zelensky to draft an acceptable announcement of the investigation. According to testimony from Kurt Volker, who was at the time America's special representative to ►►

▶ Ukraine, the president's unofficial envoy, Rudy Giuliani, made clear that this statement had to include references both to Burisma and to the 2016 elections, rejecting a draft that did not. "Everyone was in the loop," says Mr Sondland.

Fiona Hill, until recently a Russia expert on the president's National Security Council, testified to Congress that a week before the July 25th call NSC staff were told that the Office of Management and Budget had placed a hold on \$391m of military aid for Ukraine that Congress had already appropriated. They were told that this had been done on the instructions of the president's acting chief of staff, Mick Mulvaney; they were not given any reason for the delay.

Neither Ms Hill, Mr Sondland nor any other witnesses who testified to the House could say from their own direct knowledge that the delay was designed to press the Ukrainian government to announce investigations. Mr Sondland was merely able to say that he could think of no other explanation for the hold-up. This lack of direct evidence is a point that Mr Trump's defenders have made much of.

But when asked at a press conference on October 17th whether the president's desire for "an investigation into the Democrats" was part of the reason that the money had been held back, Mr Mulvaney replied that "The look back to what happened in 2016 certainly was part of the thing that he was worried about." Making the disbursement of such aid conditional on a foreign government's actions, Mr Mulvaney went on, was quite proper: "We do that all the time ...Get over it."

Mr Mulvaney did not address the question of whether requiring the Ukrainian government to announce investigations of "the Democrats" was a defensible foreign-policy goal or an abuse of power undertaken "for corrupt purposes". The House did not have the opportunity to push him on the question because, like eight other officials named in the second of the articles of impeachment, he failed to comply with its subpoena requiring him to testify. This is part of the second article's claim that the president obstructed Congress. Mr Trump, it says, "directed the unprecedented, categorical and indiscriminate defiance of subpoenas issued by the House of Representatives pursuant to its [constitutional] 'sole Power of Impeachment'."

The House seems very likely to vote in favour of these articles of impeachment within days. They will then form the basis of a trial in the Senate.

A conviction requires two-thirds of the Senate—67 senators—to vote against the president. Given that the Republican Party currently holds 53 Senate seats, this would require 20 members of the president's party to cross the floor.

Some Republican senators dislike and

disapprove of Mr Trump. Some may well believe him guilty of the charges brought against him. But it remains unlikely that many, or perhaps any, of them will vote to convict him. Their calculation will not be based on justice but on politics. As of the first few days of December a plurality of Americans supported impeachment, according to data from YouGov, a pollster. But this support, like support for the Democratic Party, is weighted towards populous states. In the Senate, all states are equal.

A state-by-state analysis of YouGov's data by *The Economist* finds the public opposed to impeachment in 29 of the 50 states. Of the 35 Senate seats in these states which will be contested in 2020, 23 have Republican incumbents, 20 of whom intend to run again (see table: the analysis is presented in fuller form on our Graphic detail page). Those senators know that, unless public opinion shifts dramatically, a vote against the president would invite a damaging primary challenge and slash their chances of re-election. By contrast,

only two Republican senators are standing for re-election in states which support impeachment, and in neither of those states is support for impeachment genuinely strong: indeed, it does not rise above the margin of error. Senators not steadfastly loyal to the president who do not face re-election until 2022 or 2024 will be making similar calculations, if with less of a sense of urgency.

The road less travelled

Those stark electoral numbers are unique to this impeachment, and a level of partisanship as marked as today's is historically unusual. But a Senate highly disposed to acquit a president the House has impeached is not. Twice in the 19th century the House considered impeachment, but held back because it knew the Senate would vote to acquit. Once it went through with the process, impeaching Andrew Johnson in 1868. Acquittal promptly followed. The only 20th-century impeachment, that of Bill Clinton over perjury related to his affair with Monica Lewinsky and related obstruction of justice, ended the same way.

That impeachment should be hard, and conviction of an impeached president yet harder, seems to accord with the wishes of those who drafted the constitution. The impeachment clause was not put there to rid the country of a president who is simply bad at the job, or has made a disastrous mistake, or has fallen out with Congress, or even who has acted unconstitutionally (that is something for the Supreme Court to put right). It was put there to protect against a president who posed a threat to the republic.

One such threat was that he might lose his "capacity" after his appointment. The 25th amendment, ratified in 1967, lessens such worries by providing a separate process for dealing with presidential illness or disability, whether temporary or permanent. The greater threat to the republic was that he might be corrupt.

American statesmen of the late 18th century were obsessed with corruption. It was a term which described a much broader range of bad behaviour than simply taking bribes or receiving pay-offs; it covered all instances where a president might act in his own interests against those of the country. They likened such behaviour to a tumour that, left unchecked, would kill the body politic.

One reason for having it dealt with through impeachment, rather than by trusting that the electorate would be able to discern its presence and act accordingly, was a sense that a corrupt president might be able to rig an election. That worry allows a direct line to be drawn between the favour which Mr Trump asked of Mr Zelensky, which was seen as offering Mr Trump an

Sitting uncomfortably

United States Senate races in 2020

Estimated net support for impeachment*, % points

| Voters support impeachment | | Retiring Incumbent |
|----------------------------|-------------|--------------------|
| Trump/Clinton | Net support | |
| Massachusetts | +22 | Ed Markey |
| Illinois | +18 | Dick Durbin |
| Rhode Island | +16 | Jack Reed |
| New Jersey | +12 | Cory Booker |
| Delaware | +12 | Christopher Coons |
| Oregon | +12 | Jeff Merkley |
| New Mexico | +10 | Tom Udall |
| Colorado | +2 | Cory Gardner |
| Virginia | +2 | Mark Warner |
| Maine | +2 | Susan Collins |
| Michigan | +2 | Gary Peters |

Voters oppose impeachment

| | | |
|----------------|-----|----------------------|
| Texas | -1 | John Cornyn |
| Minnesota | -2 | Tina Smith |
| Arizona | -2 | Martha McSally |
| North Carolina | -4 | Thom Tillis |
| Georgia | -4 | David Perdue |
| Georgia | -4 | Kelly Loeffler |
| Louisiana | -4 | Bill Cassidy |
| Iowa | -6 | Joni Ernst |
| New Hampshire | -8 | Jeanne Shaheen |
| Mississippi | -10 | Cindy Hyde-Smith |
| Alaska | -12 | Dan Sullivan |
| Alabama | -12 | Doug Jones |
| South Carolina | -16 | Lindsey Graham |
| Kansas | -16 | Pat Roberts |
| Tennessee | -18 | Lamar Alexander |
| Arkansas | -20 | Tom Cotton |
| Oklahoma | -20 | Jim Inhofe |
| Kentucky | -22 | Mitch McConnell |
| West Virginia | -22 | Shelley Moore Capito |
| Montana | -24 | Steve Daines |
| Nebraska | -24 | Ben Sasse |
| South Dakota | -28 | Mike Rounds |
| Idaho | -30 | Jim Risch |
| Wyoming | -34 | Mike Enzi |

Sources: United States Census Bureau; YouGov; *The Economist*

*Excludes don't knows

▶ edge in the 2020 race, and the reason the impeachment process exists.

The paucity of impeachments does not mean administrations have been generally well-behaved. In 1974 the counsel to the impeachment inquiry into Richard Nixon commissioned a study of presidential misconduct from George Washington onwards. The study eventually took the form of a collection of essays dealing with the issue administration by administration, and it contained plenty of dodginess. But in his editorial summary C. Vann Woodward, a Yale historian, wrote that “heretofore, no president has been proved to be the chief co-ordinator of the crime and misdemeanour charged against his own administration as a deliberate course of conduct or plan.” On top of that, the “malfeasance and misdemeanour” that had gone on “had no confessed ideological purpose, no constitutionally subversive ends”.

Self-serving venality was hardly unknown. The administration of Ulysses S. Grant saw presidential confidants using their access to information in order to make bets on when the Treasury would intervene in the gold market. Warren Harding’s administration was rife with scams, some perpetrated by people close to the president, though there is little evidence Harding himself knew what was going on.

Abuse of power also has a history. “Given everything I know about the individuals involved,” says David Garrow, a historian of the FBI, “I would assume that LBJ at a minimum read some juicy files on Barry Goldwater.” But if Lyndon Johnson did indeed have such insights into his opponent during the election campaign of 1964, there is no evidence that he made use of them.

Making all the difference

Nixon was not impeached, let alone convicted. He curtailed the process by resigning. But there is no doubt that the Watergate scandal was qualitatively different from the earlier presidential misdeeds which Woodward’s book surveyed. In 1972 an attempt to plant bugs in the offices of the Democratic National Committee for use during that year’s election campaign went awry. The subsequent cover-up of the White House’s involvement was called for and directed by the president himself. There was thus an indefensible political—rather than pecuniary—purpose, as well as direct presidential involvement in the obstruction of justice, a process which extended to doctoring and withholding evidence requested by Congress. The three articles of impeachment adopted by the House Judiciary Committee accused the president of obstruction of justice, abuse of power and contempt of Congress.

At the same time as showing, almost 200 years on, that an impeachment process could actually bring about the result for



It can be tricky

which the founders designed it, the Watergate inquiry also made the case for future impeachments stronger. Lawyers for the Department of Justice determined that a president could not be prosecuted while in office by the bureaucracy that served under him. It does not take much Founding Fatherology to grasp that if such prosecutions are not possible, alternative ways of removing a president became more vital.

These limits on the prosecution of presidents through any means other than impeachment played a crucial role in the inquiry into Mr Trump’s campaign led by Robert Mueller, a former head of the FBI. His report upheld earlier findings by the intelligence community that Russia did indeed help the campaign: the evidence of its hackers’ work was not planted nefariously through Ukraine, as Mr Trump would like people to believe. But it did not find evidence that links between Mr Trump’s campaign and the Russians had been used to co-ordinate the activity. And on the subsequent matter of Mr Trump’s attempts to derail the investigation, it stuck with the post-Watergate position which limits the prosecution of the president to just one body. “Congress may apply the obstruction laws to the president’s corrupt exercise of the powers of office”, it concluded, having provided ample evidence of such obstruction. The Department of Justice could not.

The two most notable White House scandals post-Watergate but pre-Trump illustrate the ways in which its circumstances were special. In the Iran-Contra scandal, Ronald Reagan’s White House illegally sold arms to a regime with which America had no diplomatic ties in order covertly to fund a group of guerrilla fighters it was pretending not to help. At their subsequent trials some officials involved

claimed that Reagan knew about the broad outline of the scheme, if not all its details, but at the time his involvement was entirely deniable. And the scam’s aim was geopolitical, not party political—a continuation of the cold war, not an attempt to do down Democrats.

The impeachment of Bill Clinton differs from Watergate in other ways. Here the fact that the president had perjured himself was irrefutable. However he had not done so as part of a political scheme, but over embarrassing and inappropriate, though consensual, sexual activity. This was not a threat to the republic, any more than the pay-offs Mr Trump paid to porn stars during his election campaign were. For that reason alone those pay-offs did not rise to the level of the impeachable, even though they seem to have been in breach of campaign finance law. They would not have done so even had they taken place while Mr Trump was in office.

The pressure put on Mr Zelensky, on the other hand, has risen to that level; Mr Trump’s main aim was to undermine a political rival. It is true that the aim was not achieved. Ukraine has announced no investigations, and the military aid that was withheld while those announcements were under discussion was in the end mostly released. In the absence of direct testimony as to the motives for the hold, conditionality might have been easier to prove if its release had followed the achievement of Mr Trump’s aims, rather than Congress and the public finding out what was going on.

But just as the Watergate burglary was a crime despite the fact that the burglars did not accomplish their purpose, so an abuse of power in pursuit of personal political benefit is an abuse of power even if the benefit is not, in the end, forthcoming. The House investigation shows that Mr Trump bent American foreign policy to improve his electoral chances. And he has taken extreme measures to stop Congress from investigating how far the bending went, something which the constitution gives it every right to do.

Impeachment will undoubtedly have negative effects, not all of which can be foreseen. But it is the only available check on dire presidential misconduct. To wait for the electorate to respond is to duck the role that Congress was given in the constitution and to risk the integrity of the next election. And future presidents tempted to use the power of their office to nobble a political opponent and nullify congressional oversight will take lessons from the case as to what they can get away with.

If they look back at history, as C. Vann Woodward did, and conclude that whatever they do, a friendly Senate will see them right, America will be a lesser republic than the one its founders wanted. ■



The Democratic primary

How to win in Iowa

COUNCIL BLUFFS

It helps to press plenty of flesh—but also to spend a lot of money

“IT’S A KINDA strange thing to do to your life. I’m trying to pace myself,” says Pete Buttigieg, the mayor of South Bend, Indiana. He has spent much of the past year criss-crossing Iowa, eating his body-weight in corn, shaking hands in coffee shops, spelling out his centre-left ideas.

His bet is that getting a victory in the opening contest of the Democratic primary would propel him to be the party front-runner nationally. Over the past month polls in the state have shown he has emerged as the front-runner there with 25% support, nudging past Elizabeth Warren, although in national polls Joe Biden remains the most popular. That is what underpins the current Buttigieg bounce in political punditry. Of the 17 contested caucuses (in both parties) since Iowa set up its current system in 1976, victors on ten occasions went on to become their party nominee. For Democratic candidates recent odds are even more alluring: not since Bill Clinton, in 1992, has anyone become the nominee without coming first in Iowa.

On February 3rd Democratic caucus-go-

ers will congregate in 1,681 schoolhouses, barns and other forums, one for each precinct in the state. Candidates who receive fewer than 15% of the votes in each caucus will be knocked out and their support redistributed. Caucus-goers are older, whiter and more rural than the electorate as a whole. This tends to work against non-white candidates—with Barack Obama, who won Iowa, the only exception to this pattern. In some ways, then, the system seems rather retrograde. Yet the way votes from less popular candidates are redistributed is similar to a voting system that electoral reformers favour as a way to encour-

age moderation and compromise, making the caucuses rather forward-thinking. The other paradox of Iowa is that though the caucuses are supposedly all about folksy interactions with voters, all that meeting and greeting costs a lot of money.

Cash and caucuses go together better than they may seem to. Steve Forbes, a tycoon, showed in 2000 that by spending \$2m on a lavish campaign in Iowa he could draw plenty of attention and support. He came second to George W. Bush in the Republican caucus that year, a decent result for a political outsider. The cash buys local television ads. An estimate by FiveThirtyEight, a data-journalism site, suggests Mr Buttigieg has already spent \$2.9m on television ads in Iowa, more than anyone else (and far more than he has spent anywhere else). Bernie Sanders is only slightly less lavish a spender. The likes of Mr Biden, Ms Warren and Amy Klobuchar are, for now, far behind on ad buys.

This blitz has helped make Mr Buttigieg famous in Iowa. On a recent wintry weekday night he addressed 2,000 cheering people in a school auditorium in Council Bluffs. On the same night, in more-populous Des Moines, Ms Warren drew barely 700. A day later, in northern Iowa, Amy Klobuchar braved a blizzard to address a couple of dozen in a supporter’s living room. At recent events in western Iowa, a more conservative part of the state, Mr Buttigieg spoke frequently of his faith, marriage (to a man, though few seemed to ▶▶

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care), military service and his wish to appeal to “future former Republicans” as well as Democrats. He emphasises unity and says America needs a return to civility in public life. Several who attended his events said they liked that, along with his caution on expanding Medicare. He proposes government health insurance for all who want to buy it, but not to ban the private sort.

Local journalists and authors serve up supposed rules for caucus success. One holds that victors should avoid getting “hot” before November. Late surges often win out, implying that Iowans wait until late in the race to make up their minds. Ms Warren led in September, but has since drifted. Mr Obama came to lead the polls in Iowa only two months before caucus night in 2008. Ted Cruz did something similar, rising in the last months from third place to win the Republican caucus in 2016.

Other rules mostly come down to a simple point: the winning candidates are usually those who spent plenty of time on the ground, building a strong organisation. At this point Iowa political junkies mention Jimmy Carter in 1976, who spent 17 days in Iowa (considered an eternity then), chatting to hog and corn farmers and leaving handwritten greeting notes on voters’ doors. Higher-flying candidates ignored the state as too small to matter, but Mr Carter’s victory won him such a rush of attention that the momentum carried him through the national race.

Candidates must win as many precincts as possible, not just rack up votes in populated places like Des Moines, so organisers, staff and volunteers must be deployed all around the state. Building such a team takes time. Mr Buttigieg raised more money than other candidates for much of the past year and spent little early on, leaving him with \$23m on hand in November (against Joe Biden’s \$9m, for example). Like the former McKinsey consultant he is, he rather wisely spent on infrastructure. The fact that he has no onerous Senate commitments, unlike some other candidates, and comes from a nearby state also helps.

In September his team said it was opening over 20 field offices (it now claims 30) and employing 100 staff, all in Iowa. Team Buttigieg has also done well at recruiting volunteers (some are excited by the idea of electing the first openly gay president) who pack events, dish out yard signs and bumper-stickers or nag friends to sign a pledge to caucus. The most committed are people like Kevin Halligan, who walked away from his job and left his wife behind in New York to spend five hours a day driving a pale-blue, slogan-covered former food truck—the “Petemobile”—across the state. He sells campaign merchandise to youthful Iowans queuing for photos beside a cartoon image of Mr Buttigieg.

None of this means that Mr Buttigieg is

a dead cert on February 3rd. There are signs in the polls that his bounce has peaked. It may be that Mr Biden, who was on a bus tour for eight days in Iowa, can recover from his fourth place in statewide polls. He or someone else could enjoy the late surge that the caucus is known for. It is possible that Mr Biden or Ms Warren could Hoover up the second preferences of caucus-goers, allowing them to leapfrog Mayor Pete.

For Mr Buttigieg also has to reckon with the final rule of success in Iowa. John Skipper, the author of a history of the caucuses, argues that what really counts is to come near the top while beating expectations. Managing those expectations when you are already the front-runner in the state is hard. Mr Buttigieg looks strong today. That means anything less than outright victory on February 3rd could cut short his moment in the limelight. ■

Training foreign soldiers

Friendly fire

A shooting in Florida puts the spotlight on military training for allies

MOHAMMAD AL-SHAMRANI was at Naval Air Station Pensacola in Florida to hone his flying skills. On December 6th the Saudi Arabian pilot turned his gun on his hosts, shooting 11 people and killing three. That has put a spotlight on the 5,181 foreign students from 153 countries currently receiving military training in America. In fiscal 2017-18 foreign governments splashed out \$462.4m for American security training, and the American government chipped in another \$39.8m. The main exchange programme is the \$115m International Military Education and Training



Angelic hosts

scheme, funded by the State Department. It includes 4,000 courses across 150 American military schools.

Such programmes have two aims. One is to improve foreign armed forces—“ideally in a manner that contributes to the development of a professional, apolitical military that respects civilian authority,” says Walter Ladwig of King’s College London. The other is to cultivate upwardly-mobile officers, who are likely to wind up as generals and admirals. “This might mean co-operation in a future crisis or a willingness to grant the US access to bases or overflight rights,” says Mr Ladwig.

There is no doubt that America gains powerful friends. Between 1957 and 1994, 19% of international graduates from the US Naval Command College ended up leading their service. In April the US Army Command and Staff College inducted three alumni into its hall of fame: the current army or military chiefs of Argentina, India and Jamaica. More than 280 of the college’s 8,000 foreign graduates have gone on to lead their countries’ armed forces, and 15 have become heads of state or government.

It is less clear whether the quality of soldiering goes up. Countries are supposed to send their best and brightest, but are often less exacting. “There were always comedy/horror stories floating around about the African militaries who sent personnel on US-funded diving courses who couldn’t swim,” recalls someone involved with counter-terror training. In May the Pentagon cancelled a training programme for Afghan pilots after 48% of trainees deserted.

Critics also complain that American training simply boosts the repressive capacity of tyrannical governments. Saudi Arabia sent 1,652 students in fiscal 2019, more than any other country. Among other ruling despots, Abdel-Fattah al-Sisi, Egypt’s dictator, attended the US Army War College in 2005-06 (his thesis was aptly titled “Democracy in the Middle East”).

In fact, the long-term political impact may be more positive. A paper by Carol Atkinson in *International Studies Quarterly* in 2006 found that military-to-military contacts with America between 1972 and 2000 were “positively and systematically associated with liberalising trends.” But it may be a dicey journey. In countries with weak civilian institutions, training talented and ambitious officers can skew the balance of power by making armies stronger and more cohesive—but not necessarily apolitical. Another study by Jesse Dillon Savage of Trinity College Dublin and Jonathan Caverley of the US Naval War College shows that American training doubled the risk of a military-backed coup between 1970 and 2009. In other words, America’s military protégés have usually posed more of a threat to those who sent them than those who train them. ■

The FBI

National inquirers

WASHINGTON, DC

The inspector-general's inquiry into an inquiry finds problems, but no bias

FOR THREE years, Donald Trump and his supporters have insisted that the FBI's investigation into links between his campaign and Russia was dishonestly predicated, and rooted in "deep state" contempt and political bias. William Barr, Mr Trump's attorney-general, even condemned the FBI for "spying" on Mr Trump's campaign. They hoped that a report from Michael Horowitz, the Justice Department's inspector-general, would bolster those claims. Released on December 9th, Mr Horowitz's thorough 476-page report showed serious problems with the investigation, particularly regarding the surveillance of Carter Page, an erratic member of Mr Trump's campaign, but no conspiracy and no evidence of systemic bias.

Its most fundamental finding was unequivocal: Crossfire Hurricane, as the investigation was called, was amply justified. It did not begin, as Mr Trump and his defenders claimed, with a dossier created by Christopher Steele, a former British spy. The Crossfire Hurricane team did not even see his work until two months after opening their investigation, on July 31st 2016.

That was three days after the FBI received a tip from "a friendly foreign government" (Australia, though the report does not name it) that George Papadopoulos, a campaign foreign-policy adviser, "suggested the Trump team had received some kind of suggestion from Russia that it could assist." That was the only trigger, Mr Horowitz's report found, and it was both legitimate and carefully considered.

Among Mr Trump's accusations was that Peter Strzok and Lisa Page—respectively an FBI agent and lawyer who were having an affair during the election—were central to the "witch-hunt" against him. The report found that Ms Page played no role, and Mr Strzok just a minor one, in the decision to open the investigation.

More broadly, it found no evidence that "political bias or improper motivation influenced the decisions" to investigate Mr Papadopoulos or the three other campaign members with links to Russia: Mr Page; Michael Flynn, briefly Mr Trump's national-security adviser; and Paul Manafort, Mr Trump's former campaign chairman, now imprisoned for a variety of financial crimes. Crossfire Hurricane might more accurately be considered an investigation of these four men, each of whom had dealings with Russia's government, than of Mr

WHEN "SESAME STREET" first aired on November 10th, 1969, the first indication that this was no ordinary neighbourhood was when the eight-foot-two-inch yellow-feathered Big Bird appeared. At first he was depicted as a country yokel, but by the end of that first season the puppet's operator, Carroll Spinney, had changed tack. Mr Spinney, who was Big Bird for five decades, played him as a six-year-old child, with all the wonder and sweetness that entails. (He once told the *New York Times* that he never got over being a child.) Big Bird would become, if not always the star, the soul of the Street.

"Sesame Street" uses skits and songs to introduce little ones to letters and numbers, and well as to concepts like co-operation—and even death. A 2015 study showed that children who watched the show were better prepared for school and less likely to fall behind once there. Big Bird was a large part of that hidden curriculum. When he lost "my home, my nest, my everything" in a hurricane, for example, he learned to be optimistic.

Kermit the Frog often sang that "It's not easy being green", but it wasn't easy being yellow, either. Big Bird's suit, with its 5,961 feathers, was burdensome. Mr Spinney opened and shut Big Bird's eyelids by moving a 5lb (2.3kg) lever with his little finger. His right arm was fully extended to operate the heavy head and neck. Since he could not see out of the suit, a tiny monitor helped him manoeuvre. His understudy took over as Big Bird's puppeteer in 2015, but Mr Spinney continued to be his voice until last year.

A puppeteer since childhood, he also

Trump's campaign more generally.

The report did find multiple "significant errors or omissions" in the FBI's applications to wiretap Mr Page, however. These errors "made it appear that the information supporting probable cause was stronger than was actually the case." The fact that there was no evidence of "intentional misconduct" provides little comfort. If the process for watching an American citizen was so lax and error-ridden in such a politically sensitive investigation, it may be worse in less prominent cases. The investigators "did not receive satisfactory explanations for the errors or problems we identified." They also referred Bruce Ohr, a Justice Department official whose wife worked for the firm that contracted Mr Steele, to the

Sesame Street

Farewell feathered friend

NEW YORK

Carroll Spinney, puppeteer, died on December 8th



Big legs to fill

operated Oscar the Grouch, the sour to Big Bird's sweet. Oscar, who hoarded junk and lived in a rubbish bin, gave children permission to be cranky once in a while. Mr Spinney's own childhood was tough. His father was exceedingly frugal and sometimes violent. His mother encouraged his love of puppets and art. He spent a decade working in children's television, but wanted to do something "more important". A chance meeting with Jim Henson, the Muppets' creator, gave him that opportunity.

Big Bird became ubiquitous, the man inside remained unknown. In his memoirs Mr Spinney wrote that it was only the bird that was famous. But ensouling him was instructive. Among the chapter headings were "Find your inner bird", and "Don't let your feathers get ruffled".

Office of Professional Responsibility for "errors in judgment".

This verdict will not end the partisan bickering over the Russia investigation's origins. After the report's release, Mr Barr dismissed its findings, arguing that the FBI may have acted in "bad faith", and based its investigation on "the thinnest of suspicions". John Durham, a prosecutor whom Mr Barr has assigned to undertake yet another investigation of the Russia probe's origins, also disagreed with "some of the report's conclusions as to predication." Steve Scalise, one of Mr Trump's staunchest defenders in Congress, said the report "proves Obama officials abused their... power to trigger an investigation," when it reaches the opposite conclusion. ■

The Democratic primary

College free-for-all

WASHINGTON, DC

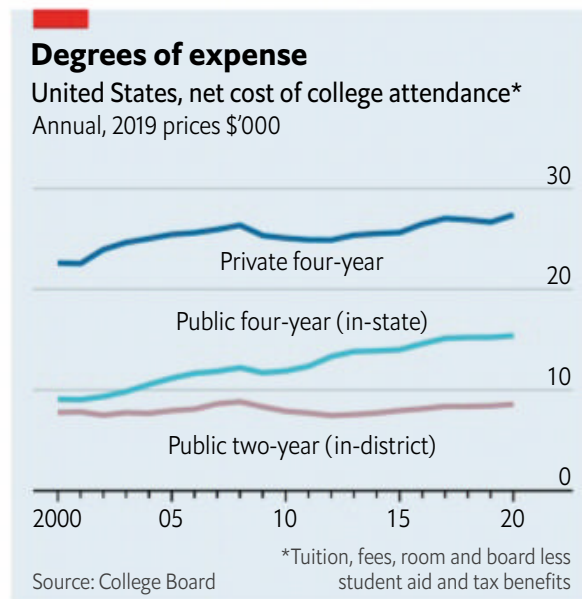
Should the federal government subsidise students, or make college free?

A CURIOUS THING seems to be eternally recurring in the Democratic presidential primary. Policies that not long ago looked like far-reaching progressivism are now deemed moderate milquetoastery by the party's left flank. A public option for health insurance bores when compared with Medicare for All, a proposed single-payer set-up. Comprehensive immigration reform is deeply unfashionable next to decriminalisation of illegal immigration and the abolition of the nation's immigration-enforcement agency.

The same has happened with the debate over higher-education costs. Pete Buttigieg, the moderate mayor of South Bend, Indiana, newly rising in the polls, would like to expand subsidies significantly for public institutions. But he proposes to extend free tuition only to families making less than \$100,000 a year (70% of all households), not to all students. For this, Alexandria Ocasio-Cortez, a popular lefty congresswoman, has accused him of parroting "a GOP talking point used to dismantle public systems". "Just like rich kids can attend public school, they should be able to attend tuition-free public college," she added.

Ms Ocasio-Cortez's preferred candidate, Bernie Sanders, is offering a maximalist solution to the problem. Not only would all tuition fees at public institutions be eliminated, but all \$1.6trn of existing student-loan debt, from both public and private universities, would be cancelled. Elizabeth Warren, another leading progressive candidate, has a similar plan, though with a few more conditions on debt forgiveness. She reckons her plan would cost \$1.25trn over a decade, paid for by her (at this point somewhat overextended) wealth tax, whereas Mr Sanders thinks his would cost \$2.2trn, which he would pay for by hitting "Wall Street speculators" with a 0.5% tax on all trades of stock.

Arrayed against this sort of solution are the ideas of ideologically moderate contenders like Michael Bennet, Joe Biden, Mr Buttigieg and Amy Klobuchar, who would like to subsidise higher education more without making it entirely free. Unlike the debates over Medicare for All and immigration, the agitation of the progressive wing over free college probably does not run the same risk of electoral backlash; few Americans are committed to the current system of university financing. Finding the optimal solution, however, requires a clear un-



derstanding of two matters: the scope of the current problem and the best way to target the benefits of enlarged subsidies.

The stereotypical embodiment of America's high university costs, much loved by journalists, is the part-time barista with a liberal-arts degree and a six-digit debt. Such luckless espresso-pullers undoubtedly exist, but they are far from typical. The average recipient of a bachelor's degree in America graduated with \$16,800 in outstanding debt. Though this is 24% higher than it was in 2003, it seems unlikely to trigger the kind of indentured servitude so often imagined.

One reason that public perception and

reality are so misaligned is the preoccupation with the costs of elite private colleges (which have indeed rocketed). In 2000 tuition at Harvard cost \$31,400 per year without financial aid in current dollars. Today it costs \$46,300. In part because America devotes considerable public dollars to higher education—spending twice as much as a share of GDP than Britain, for example—costs are lower than imagined. After aid and tax benefits are taken into account, private colleges charge an average of \$27,400 each year in tuition and fees. In-state public college costs much less—about \$15,400 on average—whereas local two-year colleges cost just \$8,600.

A universal college benefit would disproportionately help families that are already comfortable. Even among young Americans (those between the ages of 25 and 29), only 37% have a bachelor's degree or a more advanced one. They are disproportionately white and wealthy. There are clear public benefits from higher education, but also considerable private benefits, given the large wage premium college graduates enjoy over less-educated workers. Nor would free college do much to advance racial minorities. Racial inequalities in educational attainment, which persist in the present cohort of young Americans, probably owe more to the quality of earlier schooling than the anticipated cost of college. For that reason, universal pre-kindergarten may be a more effective use of resources than universal free college.

Few countries in the world guarantee free college, but in most countries college is cheaper than in America. One outlier is Denmark, where colleges are not only free, but international students also receive a monthly stipend of 6,166 kroner (\$914). That could make for a nice Democratic presidential platform in 2024. ■



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OPERATING WORLDWIDE

Lexington | In praise of high-school football

Best known for gargantuan stadiums and other excesses, high-school football in Texas is sport distilled



AN HOUR BEFORE game-time, the vast parking lot outside the McKinney Independent School district stadium was almost full. But there was no end to the cars and trucks queuing outside it. They were backed up along the three-lane highway from Dallas—with the green flag of the Southlake Carroll Dragons hanging limply from the windows of many of the bigger, plusher ones. A smaller number displayed the purple of the Duncanville Panthers.

Representing one of the richest towns in the Dallas-Forth Worth area, the Dragons were reckoned to be one of the best high-school football teams in Texas. The Panthers, representing one of the poorest towns, might be the best in America. Both had ended the regular season unbeaten, 13-0. The quarter-final of the Texas State Championship, a high-school contest followed as avidly as almost any professional league, promised to be an epic encounter.

It was a pity, tailgaters in the parking lot agreed, that the game had been shunted from the Dallas Cowboys' 100,000-seat stadium. Not that the McKinney facility was too shabby for schoolboys. A spanking new 12,000-seater, with a verdant turf pitch and 55-foot jumbotron, it had cost the local school board \$70m. That was slightly more than the 18,000-seat palace in neighbouring Allen district had cost—which was no coincidence. Whereas the most athletic Texan youths pour their competitive spirit into football, Texan school administrators put theirs into building big stadiums. Local media call this the "schools' stadium arms race". The McKinney one, though bigger and more opulent than almost any high school facility outside America, is the 32nd-biggest in Texas. Together the state's high-school stadiums can seat over 4.3m people.

Sure enough, when the game began there was standing room only on the Dragons' side of the stadium, and few empty seats on the Panthers' side. This promised match-day revenue of around \$130,000 (not counting advertising). It also made for a lot of noise. As the Dragons' 60-strong squad ran out in their jade green shirts and black breeches, their half of the stadium erupted, egged on by over 400 cavorting cheerleaders and marching bandsmen. What the Panthers' supporters lacked in numbers by comparison, they made up for with raucous confidence. Their best players, such as quarterback Ja'Quinden Jackson, are already household names in Texas. Even fans with little connection to the school shouted their

names. Compared with the National Football League, said some amid the clamour, a big high-school game like this "was so much better", "more enjoyable", "more important".

Nothing in American sport is quirrier than this fervour for high-school football. Even an average Texan school team draws a couple of thousand spectators, and the best—such as Permian High School, subject of H.G. Bissinger's bestselling "Friday Night Lights"—are fabled. "It's just a Texas thing, how it's bred here," said a man wearing a green Santa hat from the Dragons' online store.

Yet the occasion also offered clues to what sustains this tradition. Above all, a yearning for local communion and champions that America's hyper-commercialised franchises cannot satisfy. The Dallas Cowboys, perhaps the most popular team in the country, are godlike in their remoteness. For a poor town like Duncanville, by contrast, the school team is the main repository of youthful hope, parental pride and a general fear of anonymity. "You gotta support your neighbourhood, that's what makes this better than the NFL," said a Panthers' fan gripped by his team's strong start, including two touchdowns—one thrown, one run—for Jackson.

Such passions are matched by the quasi-professional intensity of the Duncanville school's football programme. Its 270 players practise for a couple of hours a day, year-round. Weightlifting and fitness work consume additional hours—and calories. The school provides its footballers, almost half of whom are from poor families, with nutritious food, rides to school and extra tutoring. (When Lexington asked Jackson how much of each day he spent on football—to the young star's surprise, as TV crews and sports reporters crowded around him—he said: "Most of it, actually...")

Such intensity encourages more dubious practices than out-sized stadiums. Illicit recruitment of athletes from neighbouring school districts is said to be rife. Yet the resulting excellence is astonishing. Teams like the Dragons and Panthers rarely drop a routine pass. And to see players such as Jackson run with the ball is alone worth the ticket money. One of the fastest athletes in America, he completed a thrilling 49-35 victory for the Panthers with a total of 312 yards and five touchdowns. In all, around a quarter of the Duncanville team can expect to win a college football scholarship.

That represents a potentially life-changing opportunity. "Their future is really structured around how well they do in sport," said the Panthers' revered coach, Reginald Samples. "We don't shoot for pro football, we shoot for careers—you know, being good people who are able to get a professional job and look after their families."

The Friday-night plight

Among Panthers fans, an appreciation of how high the stakes are for the players is part of the drama. "They're trying to make it," said one, when asked to explain his enthusiasm. Inevitably, too, an awareness that their opponents at the McKinney stadium had a wider array of options was another element. The Panthers were mostly black with a few Hispanics; the Dragons were whiter than a Republican-rally crowd. Accentuating the contrast, they had also dyed their hair blonde for the play-offs—they looked like a Viking horde. Asked during the game whether such a stark racial division added spice to the contest, one Panther nodded: "It surely does."

How could it not? For all its great unifying power—the shared hopes and sorrows that flow through it—popular sport always reflects a society's frictions and imbalances. And the more engrossing the sporting spectacle, the more powerful is that sociopolitical one. Top high-school football, a relentless quest for excellence mottled by local circumstances, is in this sense sport at its best. ■



Argentina

The Peronist predicament

BUENOS AIRES

The new president wants to boost growth while pushing down inflation. That will be hard

ALBERTO FERNÁNDEZ drove himself and his girlfriend, Fabiola Yáñez, to congress for his inauguration as Argentina's president in their Toyota. That gesture, as much as anything he said in his hour-long speech, signalled that he intends to swiftly help ordinary Argentines who are suffering from recession, high inflation and rising poverty. But some wondered, as the Peronist accepted the presidential sash and baton from Mauricio Macri, his centre-right predecessor, whether he would drive the country forwards or backwards.

The question was provoked in part by the presence of Cristina Fernández de Kirchner, the new vice-president, who preceded Mr Macri as president. Ms Fernández, a populist who governed from 2007 to 2015, created the economic mess whose clean-up Mr Macri botched. She has been indicted in nine separate court cases for acts of corruption and other misdeeds. In the new administration she has already amassed unprecedented influence for a vice-president. The new president (no rela-

tion to Ms Fernández) wants to be a crowd-pleaser as she was, at least for poor Argentines, but without repeating her mistakes. That will be tricky.

The "social catastrophe" that Mr Fernández promises to end is real. Two-fifths of Argentina's citizens cannot afford a monthly basket of staple goods. The year-on-year inflation rate exceeds 50%. Argentina's \$57bn bail-out from the IMF is the largest in the fund's history. Mr Fernández promises to put the economy "back on its feet". But an adviser to the new president admits: "There are no easy answers on the economy, and no good options."

Mr Macri's bet was that he could restore the confidence that Ms Fernández had battered, which would lead to growth. On taking office in 2015 he lifted exchange con-

trols brought in by Ms Fernández, reached an agreement with foreign creditors (with whom she had fought) and lowered her punishing taxes on exporters. That approach failed, largely because Mr Macri did not cut the budget deficit fast enough to keep investors calm when global interest rates rose. The peso slumped and inflation soared (see chart on next page). The IMF agreement in 2018 was a second stab at reviving confidence. But the austerity it demanded hit just as Argentina's political season was getting under way, weakening the economy and driving voters to Mr Fernández. That knocked the peso again.

The new president's big idea is to reverse Mr Macri's sequence: growth will lead to a revival of confidence rather than the other way round, he argues. To boost growth, he intends to bring back tools employed by Ms Fernández's administration—but to wield them more deftly.

The centrepiece of the economic programme is likely to be a restructuring of Argentina's \$105bn debt to foreign bondholders (which does not include debt to the IMF). This is to be carried out by the new economy minister, Martín Guzmán, an academic with little political experience who specialises in debt negotiation. He has proposed that Argentina defer payment of both interest and principal for the next two years. Analysts assume he will end up demanding bigger concessions from creditors. Bond prices suggest the markets are ▶▶

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▶ expecting an implicit haircut—a discount on the bonds' face value—of nearly 50%. “Every dollar we don't use for debt will go to consumer-led recovery at home,” Mr Guzmán has told his new colleagues.

The idea of paying foreign creditors less than they are owed is bound to be popular. So, too, will be Mr Fernández's plans to boost wages for public-sector and low-paid workers and raise pensions.

Ideas for reining in inflation are unorthodox. The new government may keep a cap on utility prices that was due to expire at the end of 2019. It is expected to keep capital controls introduced by Mr Macri as an emergency measure to curb the depreciation of the peso, and to reach a pact with employers and trade unions to hold down prices and wages. (This may mean that salaries will rise by less than Mr Fernández has implied.)

The big question is whether such a package can exclude the growth-clobbering stuff that the Peronists campaigned against. That is unlikely. The new government does not want to draw down the remaining \$1bn of its IMF loan, but will still have to deal with the fund. The IMF is likely to welcome a cut in the private-sector debt burden (making it easier for Argentina to repay the fund). Both sorts of creditor are likely to insist on a primary fiscal surplus, ie, before interest payments, which means more austerity than Mr Fernández has in mind. There is worried speculation that the central bank will pay for promises such as higher pensions by printing money, even though its new president, Miguel Pesce, is thought to be a safe choice. If either fiscal or monetary policy is too loose, that will push up inflation in spite of the bodes being planned to contain it.

Although Mr Fernández is bringing back into use some of the techniques used by his Peronist predecessor, he is keen to signal that he will not repeat her excesses. “This is Alberto's economic team, and he will be in charge on this front,” says an adviser. Yet the new president has not laid to rest fears that Ms Fernández will have undue influence. Mr Guzmán got the economy ministry after she vetoed two other candidates, says the presidential adviser.

She had a hand in the choice of the ministers of interior, defence and security. Her supporters will be in charge of the agencies that handle taxation, pensions and care of old people, which have big budgets and jobs to offer political allies. Her clout in these areas suggests that reforming the state will not be a priority. As vice-president, Ms Fernández is the senate's leader and commands the Peronist bloc in the chamber, where it has a majority. Her son, Máximo, leads the Peronists in the lower house of congress.

Ms Fernández also helped arrange the appointment of Carlos Zannini, one of her



closest associates, as attorney-general. Mr Zannini was held in preventive detention for his alleged role in covering up a deal that Ms Fernández had made with Iran to absolve it of blame for the bombing of a Jewish centre in Buenos Aires in 1994 in which 86 people, including the bomber, died. His trial has been delayed indefinitely. Alberto Nisman, a prosecutor who was murdered in 2015, had indicted Mr Zannini. As attorney-general Mr Zannini, who was released from jail in 2018 and denies all charges, will lead the government's anti-corruption unit and its team of lawyers.

Mr Fernández has already made clear that he is not concerned about the alleged misdeeds of his senior officials. He contends that Ms Fernández and jailed members of her government are victims of “political persecution”. He has pronounced Mr Zannini innocent. “We vindicate you,” he told the new attorney-general.

Mr Fernández will revive aspects of his Peronist predecessor's foreign policy. The incoming foreign minister, Felipe Solá, has signalled “re-engagement” with Nicolás Maduro, Venezuela's leftist dictator, who will now be less of a regional pariah. Argentina's new government will not accept in its current form a trade deal negotiated by Mercosur, a four-country trade bloc, with the European Union. This will dampen Argentina's growth prospects in the long run and increase tension with Brazil, the bloc's biggest member. Mr Fernández and Jair Bolsonaro, Brazil's populist president, speak of having “pragmatic relations”. But there is no hiding the frostiness. Mr Bolsonaro did not attend Mr Fernández's inauguration, sending his vice-president instead.

The Macri government is proud of having ended the economic isolation that Ms Fernández imposed on Argentina. “We've spent four years taking Argentina out of the deep freeze,” says Jorge Faurie, the outgoing foreign minister. “The fear is we're going back.” Optimists think that the leftward shift in diplomacy will make it easier for Mr Fernández to adopt a moderate economic policy. Argentines must hope so. ■

Canada

Welcome to Toxic Town

OTTAWA

When your name is poison, do you change it?

OLDER RESIDENTS of Asbestos, Quebec remember when the substance for which their town is named was thought to be a miracle material. The furry silicate mineral was woven into textiles and incorporated into building materials so that they would not burn. Kaiser Wilhelm sheltered in a portable asbestos hut during the first world war. During the next one the American armed forces used the stuff to insulate ships, tanks and aircraft and to make fireproof uniforms. Asbestos found its way into cement, pipes, tiles and shingles. The Canadian navy launched a corvette in 1943 called the *HCMS Asbestos*. “It [would be] a fantastic material if it didn't kill people,” says Jessica van Horssen, author of “A Town Called Asbestos”, a book about the town and its place in the global industry.

Now it is known to cause a deadly form of lung cancer. The 2km (1.2-mile) open-pit Jeffrey Mine, once the largest asbestos mine in the world, shut down in 2012. It remains the most visible feature of the landscape near Asbestos. The town's 5,000 inhabitants are now considering whether to change its name. That might make it easier to attract investment.

Hugues Grimard, the mayor, says prospective investors treat councillors as if they had a contagious disease. Some even refuse to take their business cards. He believes that a new name is a matter of life and death for the town, which has lost half ▶▶



its population since the peak of asbestos production. The town council voted in favour in late November.

Yet Mr Grimard expects resistance at a town-hall meeting with residents scheduled for January 9th. His predecessor suggested a couple of new names in 2006 (Trois-Lacs, which means Three Lakes, and Phoenix). Instead, residents changed the mayor. "It's an emotional subject," says Mr Grimard. "People are attached to the name because of our heritage and history."

Canada is more attached to asbestos than most countries. The Canadian Cancer

Society did not call for a ban on the carcinogen until 2007, when a third of workplace deaths were caused by asbestos. Canada itself promoted the export of "safe" Quebec asbestos until the early 2010s, when it finally admitted that any use of the material is hazardous. The federal government did not ban asbestos products until 2018. Now the world's biggest asbestos mine is Asbest, in Russia's Ural mountains.

It may help Mr Grimard's cause that townspeople's memories of work in the mine are less vivid, says Ms van Horssen. Other Canadian towns have changed their

names to improve their image. The inhabitants of Berlin, Ontario, whose heritage is largely German, decided during the first world war to call the town Kitchener, after Lord Kitchener, the British field-marshal and secretary of war whose face appeared on recruiting posters. By contrast the 500 residents of Swastika, Ontario held fast to the name despite Adolf Hitler's appropriation of the Hindu symbol of good luck. They had it first, the locals reasoned. It may have helped that the Swastika mine, after which the town was named, produced gold, not asbestos. ■

Bello A decade with no heroes



The 2010s have seen stagnation in Latin America, but not all is gloom

THINK BACK to the start of 2010, when Latin America was awash with optimism. The region rode out the global financial crisis with only a brief economic dip and no damage to its banks. In Brazil Luiz Inácio Lula da Silva, preparing to step down after eight years as president with an approval rating of 75%, proclaimed that his country had shed its inferiority complex. The commodity boom had lifted tens of millions of people out of poverty. The 2010s, declared Luis Alberto Moreno of the Inter-American Development Bank, would be "the Latin American decade".

As these years come to an end, Latin Americans might think that they turned out to be a "low dishonest decade", to echo W.H. Auden's description of the 1930s. It started with a bang, with economic growth of 5.9% for the region in 2010, which quickly became a long whimper. Since 2013 growth has averaged 0.8%, meaning that income per person has fallen slightly. The UN estimates that 31% of Latin Americans are poor, the same share as in 2010. Income inequality is continuing to fall, but much more slowly than it did before 2014. Then there are political discontents. Polls show that Latin Americans see their politicians as corrupt and cynical. More than a quarter would like to emigrate, according to Gallup, a polling firm. Popular anger has exploded in street protests in half a dozen countries.

No wonder that the 2010s are starting to be dubbed a "second lost decade" for Latin America. Yet a comparison with the 1980s, the original lost decade, is instructive. In 1982-83 debt defaults ricocheted around the region. This led to years of hyperinflation and austerity. By 1990 income per person was still 5% smaller than in 1981, the poverty rate had

risen from 35% to 41% and in real terms the minimum wage was only two-thirds of its previous level. Politically, the 1980s were traumatic. Guerrilla wars raged in Central America, Colombia and Peru, while dictators were still in charge and human-rights abuses the norm in many places for much of the decade.

Out of the woes of the 1980s, a better Latin America was born. Out went statism and protectionism and in came the market-oriented Washington Consensus. With all its faults (a certain dogmatism, privatisation without competition policy and a tendency for countries to have overvalued exchange rates) and omissions (an initial neglect of social safety-nets) it put the region on a more viable course. The pro-market shift coincided with a democratic wave that swept away the dictators, all except the Castros in Cuba. Social spending went on to rise, as did people's access to education.

In the 1980s almost all countries suffered slumps. In the 2010s the pain has been concentrated in Venezuela, Brazil and Argentina, where governments made

macroeconomic mistakes. Elsewhere, policies are much sounder than in the 1980s. Except in Argentina and Venezuela debt is manageable. Despite the aberrations of Venezuela and Nicaragua (as well as Cuba), democracy has shown resilience. Amid recession, Argentina this week saw an exemplary transfer of power between political adversaries.

In sum, the 2010s have seen stagnation, rather than a repeat of the cataclysm of the 1980s. None of this is to minimise Latin America's plight. It has to find ways to return to growth in a world where the economy is expanding more slowly, while taking bolder steps to reduce the inequality that has scarred it since long before the 1980s. In the decade that is starting, it must deal with a demographic shift in which the workforce will grow more slowly than the population. In countries where farming and fishing are still important, it will have to cope with climate change. It must strengthen the rule of law and rebuild trust in democratic politics.

Perhaps the biggest losses in the 2010s were intangible. Latin American politics no longer has heroes. In the 1980s, to take two examples, Raúl Alfonsín in Argentina put military dictators on trial and Luis Carlos Galán in Colombia defied drug barons, paying with his life. It is hard to think of any equivalents today. Lula, who might have been one, is tarnished by corruption cases. And there is a yawning deficit of new ideas. The brain-dead antagonism between "neoliberalism" (usually undefined) and leftist populism still looms far too large in academic debate about the region. Latin America needs both competitive markets and more effective states that redistribute better. In other words, it needs a new social contract for a new decade.



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India

A slap for Muslims

NEW DELHI

A new citizenship law flouts the constitution and triggers communal strife

WHEN AMIT SHAH, India's home minister, proposed his bill in parliament on December 9th, he framed it as an act of mercy. Henceforth, he promised, people who have fled persecution in neighbouring countries and taken refuge in India would be granted quicker access to citizenship. His Citizenship (Amendment) Bill would right the historic wrong of India's Partition in 1947, when—as he disingenuously put it—the rival Congress party had agreed to split the country along religious lines.

The bill passed handily in the Lok Sabha or lower house of parliament, where Mr Shah's Bharatiya Janata Party (BJP) holds absolute sway. But India did not greet his tweaks to citizenship rules with joy. In the northeastern states of Assam and Tripura, violent protests prompted curfews, suspension of internet and train services and deployment of army units. Hundreds of prominent intellectuals signed an angry petition, while in parliament's upper

house speaker after speaker rose to lambast the bill, calling it an attack on India's constitution, or on its national soul, that would make the country like Nazi Germany or, worse, Pakistan. When the bill did pass into law on December 11th, it was by only a 21-vote majority in the 245-seat house.

For most of the participants, the cause of all this passion was not the few words that Mr Shah has added to India's 1955 citizenship law. It was the ones he left out. The new law applies solely to immigrants from

three countries, Afghanistan, Bangladesh and Pakistan. And while it specifically accepts adherents of six religions, it does not include Muslims.

That is problematic for several reasons. By injecting religious credentials into considerations of citizenship, it subtly challenges the secularism enshrined in India's constitution. Opponents of the BJP see this as a deliberate tactic towards the Hindu-nationalist goal of redefining India as a Hindu state, reducing the 200m-strong, 14-centuries-old Muslim community to a tenuous and dependent status. By rejecting proposed amendments that would have widened the bill's scope to include people of all religions, from more neighbouring countries, Mr Shah made clear that the intention is indeed to make India a refuge principally for Hindus (the other religions mentioned in the law together make up just 5% of India's population), even as it rejects Rohingyas from Myanmar, Uighurs from China or members of the Ahmadi sect that is branded heretical in Pakistan.

In parliament, Mr Shah vigorously denied that his bill was discriminatory. On the campaign trail, however, he has sounded a different tune. Speaking this month in Jharkhand, a rural state where voting for the local assembly is under way, he ridiculed the concerns expressed by the Congress party's leader, Rahul Gandhi. "Ra- ▶▶

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► *hul baba* says don't expel them [Muslim migrants]," he sneered. "What are they, your *chachere bhai*, your cousins? I assure you that before the national election in 2024 I will throw them all out."

Like the changes to the citizenship law, this promise has formed part of the BJP's election manifesto since Mr Shah's boss, Narendra Modi, became India's prime minister in 2014. Before illegal immigrants are expelled, however, they must first be identified. One Indian state, Assam, has over the past four years undertaken just such an exercise. Responding to decades of agitation by native Assamese, who fear being swamped by Bengali-speaking intruders, the state forced its 33m residents to produce documents establishing their long-term residency in India.

Completed in August, this National Citizens Register excluded some 1.9m inhabitants as "non-Indians", who must submit to special tribunals to appeal against their status. To the chagrin of Hindu chauvinists, it turned out that two-thirds of these ostensible illegals were in fact Hindus; the claim that millions of Bangladeshi Muslim migrants had "invaded" Assam proved to be a myth.

Despite this shortcoming, and despite the fact that compiling Assam's list proved costly and time-consuming for the government—not to mention a bureaucratic, legal and logistical nightmare for citizens—Mr Shah wants to extend the project nationwide. Assuming a cost proportional to what Assam has spent, this would require at least \$7bn. That does not include the expense of building detention centres such as Assam's growing archipelago of prison camps, to house thousands of people judged stateless and stripped of rights.

The Citizenship (Amendment) Act may save some of this money. Since the new law fast-tracks the route to Indian citizenship for everyone else, it is primarily Muslims who are left to be sorted by the National Citizens Register. Word of this danger is already spreading. Mosque sermons are warning the faithful to gather as many official documents as they can to serve up to Mr Shah's expected bloodhounds.

If, that is, the count goes ahead. Constitutional lawyers believe that inserting a faith criterion for citizenship contradicts as many as three articles of the country's eloquently secular constitution. The Indian Union Muslim League has already appealed against the law to the Supreme Court. Many lawyers also contend that forcing people to produce documentary evidence of their right to be called citizens tramples on the principle of presumption of innocence.

It could be, too, that popular resistance fails to die down. Secular activists, as well as Muslims, talk of refusing *en masse* to comply with any demand to present citi-

zenship documents. In Assam and other states of India's remote, ethnically complex and historically violence-prone north-east, the citizenship rules are unpopular because native Assamese-speakers and numerous tribal groups harbour a deep fear of being outnumbered in their own state by other Indians of any religion. To assuage such worries, Mr Shah exempted much of the region from the new rules, even granting one state, Manipur, an archaic status, dating from the time of the Raj, that obliges visitors from other parts of India to obtain permits to visit.

Ironically, this sort of exclusionary arrangement is precisely what Mr Modi proclaimed he was ending, when in August his government stripped India's only Muslim-

majority state, Jammu and Kashmir, of its semi-autonomous status. Four months later the restive Kashmir Valley, the most populous part of the erstwhile state, remains locked under an internet ban, with its political leaders under arrest.

In parliament, Mr Shah described the situation in Kashmir in glowing terms as peaceful and normal. Perhaps he failed to notice that by turning citizenship into a matter of which religion you happen to be born into, his government has undermined India's strongest claim to legitimate rule over the disputed territory: that at the time of Partition its people preferred India's broad secular democracy to the constricting Muslim uniformity of Kashmir's other claimant, Pakistan. ■

Defamation in Australia

Publish and be slammed

SYDNEY

The government proposes to water down ferocious libel laws

IT WAS THE sort of story that was bound to cause a sensation. In 2017 the *Daily Telegraph*, one of Australia's best-selling newspapers, reported that Geoffrey Rush, an Oscar-winning actor, had harassed a female co-star. Mr Rush sued the tabloid's parent company, Nationwide News, saying it had painted him as a "pervert" and "a sexual predator". The woman in question, Eryn Jean Norvill, testified that Mr Rush had made "groping" and "hour-glass" gestures at her, and claimed he deliberately touched her breast during a production of

"King Lear". Mr Rush denied the allegations and won the case. In May a judge ordered the company to pay him damages of A\$2.9m (\$2m). It has filed an appeal.

Australia's press is forced to pay eye-watering sums with surprising regularity. Last month a wealthy Queensland family, the Wagners, won A\$3.6m from a commercial television channel, after it alleged that the collapse of a wall at a quarry which they own caused flooding which killed 12 people. The Wagners were awarded A\$3.8m in a separate dispute with a radio station last ►►



Rebel with a reputation

▶ year. In another case, Bauer Media, a magazine publisher, was told to pay A\$4.7m to the actor Rebel Wilson, after a judge found she had lost work because a series of articles had portrayed her as a liar. The sum was later slashed by an appeals court.

Lawyers note that workers who lose limbs on building sites are not compensated nearly as handsomely. Huge payouts tempt Aussies to sue when they are slighted, argues Matthew Collins, a barrister who represented Ms Wilson. The courts are packed with petty claims over insults posted on the internet. Sydney is the “defamation capital” of the world, says Mark Speakman, the attorney-general of New South Wales, the state of which Sydney is the capital. Relative to its population, its superior courts considered ten times more defamation lawsuits between 2014 and 2018 than those in London, says Mr Collins.

Australia has no bill of rights nor any other constitutional protection for free speech. Media companies complain that this stacks the odds against them. Powerful people “use threats of legal action to shut down legitimate inquiry”, says Peter Greste, an Australian journalist who was imprisoned in Egypt.

Even the government, which is not always seen as a friend to whistle-blowers or to investigative journalists, seems to agree. In late November all Australia’s states and territories agreed to approve draft amendments to the libel laws which are supposed to help the media do their job properly. The hope is to pass these amendments into law in 2020.

The changes would provide several new protections for journalists. Reporters would be able to defend themselves on the ground of “responsible communication in the public interest”. Plaintiffs would have to prove that “serious harm” was caused in order to prevail in court. New caps would be imposed on exorbitant damages. The laws would also shrink the window during which a publisher can be sued for allegations made online.

Some say the reforms need further clarification. The legislation leaves courts to decide what counts as “responsible journalism”, notes Arthur Moses, president of the Law Council of Australia. In the past they have disagreed with reporters on that definition. Australian law assumes that any disputed statements are false unless the publisher can prove otherwise. Showing beyond doubt that, say, a politician harassed his colleague can be hard. Critics argue that this has prevented victims of sexual assault from speaking out.

America and many European countries, notes Mr Collins, put the burden of proof on plaintiffs, who must prove that allegations made about them are false. The same presumption should be introduced in Australia, he says. ■



Dissent in Vietnam

Red card

HANOI

The football club that defies China

IT IS JUST a practice match, but the footballers are wearing their full kit anyway. As the shadows stretch across the pitch in inner-city Hanoi, the words emblazoned on their bright yellow jerseys catch the eye. “No-U FC” is not so much a name as a *cri de coeur*. U refers to the U-shaped “nine-dash line”, a curve on a map delimiting China’s sweeping claims to the South China Sea. These include a wide area that international law recognises as belonging to Vietnam. Depending on whom you ask, FC either stands for what you would expect or for “Fuck China”. This is not your average football club.

Though all the players agree that the game is beautiful, it is China, not beauty, that has brought them together every Sunday for the past nine years. No-U FC was formed in 2011 to protest against Chinese incursions into what Vietnam calls the East Sea. China has occupied islands and atolls claimed by Vietnam and incorporated them into a new administrative district. Chinese vessels have attacked and killed Vietnamese fishermen plying the contested waters.

The belief that China is encroaching on Vietnam’s maritime space has inspired a number of demonstrations by fledgling civil-society groups. In 2018 thousands protested against a law on special economic zones that was viewed “as selling out the country to the Chinese”, says Tuong Vu of the University of Oregon. Most demonstrations were swiftly shut down by nervous authorities. But one group of activists came up with a way to make their point without being arrested. “Vietnamese people are

very fond of playing football,” Anh Chí, a member of the team, recalls thinking back in 2011. And so No-U FC was born.

The police were not deceived for long. Officers have disrupted matches, instructed managers of pitches to bar the group from playing, and beaten and jailed members. After being branded an “enemy of the people”, Mr Anh claims he was hounded out of his job by his boss, at the behest of the police. Undaunted, the team continues to play every Sunday.

The authorities’ harsh treatment of No-U FC is surprising, considering it was founded to express pro-Vietnamese sentiments. But there are two reasons for the reaction. First, the club may be too patriotic for the regime’s taste. Though the government objects to China’s claims and actions in the South China Sea, in practice its response has often been meek. Mr Tuong, the academic, argues that a conservative faction within the ruling Communist Party does not wish to offend its Chinese counterpart.

Second, a connection is growing between the club and democratic activism. Because of the government’s caution in the contested waters, many activists think the party is feeble in defence of Vietnam’s sovereignty. Some have “concluded that, in order to save the Vietnamese nation, the political system must be replaced with a robust democracy,” writes Ben Kerkvliet in “Speaking Out in Vietnam”, a study of political activism. When he is not playing football, Mr Anh, now a democracy activist, produces a vlog in which he tells his followers that the people are the referees of the government—not the other way round.

Crammers in North Korea

Reading not weeding

SEOUL

Private tutors are illegal but thriving

SOUTH KOREA'S overworked children are well-known for finishing the school day and heading straight to *hagwon* (cram-school) classes to become musical virtuosos or to gain an edge over their peers in mathematics or English. In North Korea, by contrast, school is typically followed by compulsory labour in the fields.

In recent years, however, school days in the North have come to resemble those in the South—at least for a select few. Of 116 recent North Korean defectors interviewed by researchers at Seoul National University this year, a third said they had received some form of private education while in the North. Some had worked as private tutors themselves. Cho Jeong-ah of South Korea's Institute of National Unification thinks the survey shows that views about education are changing among North Korean parents: it is increasingly seen as an investment they can make in their children's future, rather than something to be accepted from their all-wise rulers.

In theory, paying for education is illegal in North Korea. One of the main purposes of universal schooling is to batter into young minds the godlike virtues of the Kim dynasty and the infallibility of the communist regime. Only the state can be trusted to do this properly, of course. But in practice North Koreans have had to pay even for state-provided education since the famine of the 1990s, which devastated the provision of all sorts of public goods—not just food distribution but free textbooks, heat-

ed classrooms and wages for teachers.

Accounts abound of pupils compelled to pay teachers to show up to work. If they could not pay, they were forced to help the teachers harvest crops or, in winter, bring firewood to class. The first private tutors were state-school teachers trying to make ends meet. Since then, tutoring seems to have evolved into a profession in the state's grey economy, with an average monthly cost per subject of around 200 Chinese yuan (the most widely used currency, worth \$30). The regime is apparently willing to turn a blind eye to the informal *hagwon* classes, so long as parents are not too ostentatious about using them.

It probably helps that the biggest beneficiaries of private tutoring are the children of the elite. According to Thae Yong-ho, a former North Korean diplomat who defected to the South, parents in Pyongyang and provincial capitals use it to get their children into the best secondary schools. One of the perks of such schools is that pupils are exempt from compulsory labour, allowing them to study to get into universities. Music and foreign-language lessons are popular at the *hagwon*, because these might help children get jobs as diplomats or professional musicians, and therefore travel abroad. Chinese lessons are prized in areas near China because the language helps with cross-border business.

The accounts of defectors are probably not representative. They are, after all, an unusual group and private tutoring may be much rarer than they suggest. Still, among some parents, educational competition may be nearly as all-consuming as it is in the capitalist South. One North Korean recently told a South Korean talk-show host that she had made her daughter study with a headlamp during power outages. Another said that she used to wake up her nephew at 4.30 every morning in order to memorise English words. ■

Educating migrant children in Japan

Muddled masses

TOYOHASHI

Schools are struggling to integrate foreign pupils

WHEN HIROKO TSUKIHI instructs her pupils to write down “water” in *kanji*, the ideograms derived from Chinese that are used alongside Japan's home-grown syllabic scripts, they groan. Even for native pupils steeped in the language, *kanji* take hours to memorise. But Ms Tsukihi teaches immigrant children who have recently arrived in Toyohashi, a city in central Japan, as part of a programme called Mirai (“the future” in Japanese), which provides ten weeks of intensive language classes for middle-school pupils before integrating them into local public schools. The city launched the Mirai programme in 2018. “The schools couldn't support all the foreign students coming in,” says Ms Tsukihi.

In many parts of the country schools are becoming a bit less homogenous. There are currently 124,000 registered foreign-born children of school age in Japan. Although that is only just over 1% of pupils in the school system, it marks a 30% rise from 2014. A new visa scheme that went into effect in April, meant to lure blue-collar workers into industries facing labour shortages, is expected to bring more immigrants and their children. In the manufacturing hub of Toyohashi, labour-brokers recruit thousands of Brazilians and Filipinos to work in factories every year. Such workers have 1,976 children in the local schools, up from 1,352 five years ago.

The number who require remedial Japanese lessons is rising fast. A government survey found that there were about 51,000 in 2018, a 16% increase from 2016. Schools are struggling. Japanese-language teachers are in short supply. Volunteers help (they make up more than half of all those teaching Japanese to foreign pupils), but many are elderly, and unlikely to keep working for long.

Whether the immigrant children can receive the education they need also depends on where they live. In Toyohashi, which has had a sizeable Brazilian community since the early 1990s, officials help families fill out documents and offer guidance on the school system. In addition to Mirai, Iwata Elementary School, where a quarter of the pupils are foreign, provides interpreters and 200-hour crash courses in Japanese. “We have a long history of welcoming immigrant children. The system already exists,” says Yasue Matsui, who teaches foreign pupils there.

But in places with fewer immigrants, ►►



Korea opportunities

▶ foreign families are often left to fend for themselves. Almost 40% of local governments do not tell foreigners how to enroll their children in school. Even those municipalities that do usually send notices only in Japanese. Pupils sit at their desks without language support and watch the day go by, “as if an electrical circuit to their brain was cut off”, Ms Tsukihi says.

Many pupils in municipalities without academic support end up dropping out of school. “When they go to these public schools, they struggle to learn. And they lose confidence,” says Yoshimi Kojima of

Aichi Shukutoku University. Nearly a fifth of immigrant children may not be attending school at all. Under Japanese law, the children of foreign residents can attend state schools free of charge, but are not obliged to go to school, unlike their Japanese counterparts.

The government has been slow to tackle the problem, leaving it to municipalities to make their own arrangements for foreign children. But in June it passed a bill laying out the responsibilities of the national and local governments in promoting language education. Companies are also required to

provide foreign employees and their families with Japanese lessons.

Ms Kojima doubts this will change much. “Japan only sees foreigners as a source of labour” and not as valued members of society, she says. Shinzo Abe, the prime minister, has repeatedly insisted that the new visa programme bringing more foreigners to the country should not be seen as a source of permanent immigrants, but simply as a means of attracting transient workers. That will come as news to the children in Toyohashi, labouring over their *kanji*. ■

Banyan The lady has two faces

Aung San Suu Kyi has gone from heroine to villain without changing much

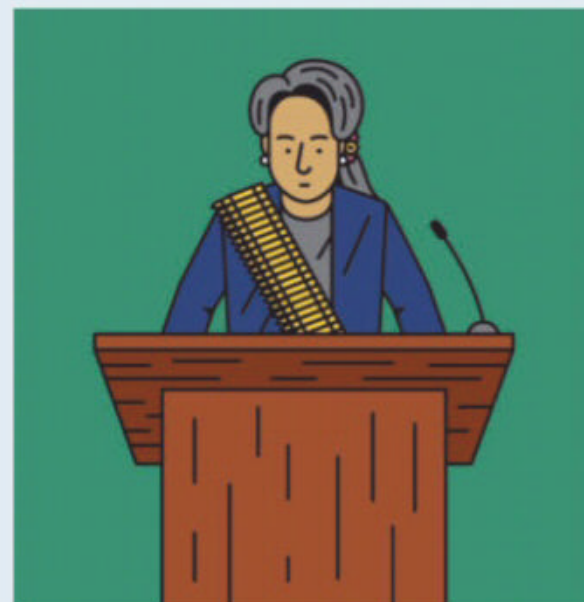
THE COMMITTEE that awarded the Nobel peace prize to Aung San Suu Kyi in 1991 described her as “an important symbol in the struggle against oppression” and an inspiration to those “striving to attain democracy, human rights and ethnic conciliation by peaceful means”. But to the crowd of protesters who gathered outside the International Court of Justice (ICJ) in The Hague this week, she is just the opposite: an apologist for military brutality, an oppressor of ethnic minorities and an abettor of genocide. “Aung San Suu Kyi, shame on you!” they chanted. As her motorcade glided past, windows tinted, the jeers and boos rose in a crescendo.

Ms Suu Kyi, who since 2016 has been Myanmar’s president in all but name, was at the ICJ to defend her country against charges of genocide in a complaint brought by Gambia on behalf of the Organisation of Islamic Co-operation, a group of Muslim countries. The case concerns the Rohingyas, a Muslim minority group that has suffered varying degrees of persecution since Myanmar’s independence in 1948. In 2017 the Burmese army went on the rampage in Rohingya areas in the far west of the country, in response to attacks on military outposts by a small Rohingya guerrilla group. The court heard horrifying descriptions of mass shootings and throat-slittings, with babies tossed into burning houses and women gang-raped or stabbed in the vagina. Listening to the accounts, Ms Suu Kyi sat, poised and calm, with fresh flowers in her hair, just as there always had been during her decades doggedly opposing military rule.

That a woman who was herself locked up by the Burmese army for 15 years would travel halfway around the world to defend it has astonished many. In a

certain sense, her battle with the generals continues. Despite heading the civilian government, she is not in charge of them. The constitution they put in place before allowing democratic elections to be held in 2015 makes the army a law unto itself, and awards it a quarter of the seats in parliament—enough to veto any constitutional amendments. Many of Ms Suu Kyi’s admirers had attempted to exonerate her of the pogrom against the Rohingyas, saying she was powerless to prevent it and would only have made herself look weak by railing helplessly against it.

Ms Suu Kyi’s trip to The Hague has put paid to that argument. It is one thing to maintain a pragmatic, if reprehensible, silence, quite another to come showily to the army’s defence. Ms Suu Kyi could, after all, have sent a drab functionary to present Myanmar’s case. Instead, she loudly advertised her trip, knowing full well that few Burmese have any sympathy for Rohingyas, whom they see, wrongly, as illegal immigrants from Bangladesh who threaten the Buddhist character of the nation. Rallies have been held across Myanmar,



hailing her as a dauntless defender of national pride. It is hard to escape the conclusion that she is exploiting the Rohingyas’ misery to boost her party’s prospects in elections due in 2020.

When the moment came for Ms Suu Kyi to make her case, she was oddly muted. She disappointed those who had hoped she would reveal herself, once and for all, to be an unapologetic villain by denying that the Rohingyas had suffered any abuses, as some in her government have claimed. But she also failed to admit the scale of the atrocities or the army’s leading role in them. Instead, she argued that the burning of villages and the flight of almost 1m Rohingyas to neighbouring Bangladesh should be seen as unfortunate side-effects of the army’s ongoing war with various guerrilla groups. Where there was clear evidence of wrongdoing by soldiers, she claimed, the authorities were attempting to bring those responsible to book—although she also hinted at her government’s lack of influence over military justice. Nonetheless, the fact that any courts martial were being held at all, she argued, proved that her government did not intend to commit genocide.

It was neither a ringing defence of the army, nor any sort of admission of guilt. This ambiguity probably reflects the true Ms Suu Kyi. She is clearly a nationalist, unhappy to see her country excoriated. She obviously wishes its institutions worked better, but is not ready to countenance outside interference to compensate for their deficiencies. She is not a full-throated apologist for the army, but does not trust anyone else to take on the top brass. The same stubborn self-belief that helped deliver Myanmar from military rule, in other words, is now standing in the way of justice for some of its most vulnerable inhabitants.





Diabetes

Sugar high

BEIJING

As China puts on weight, type-2 diabetes is soaring

MORE THAN 30 years ago, doctors in the northern city of Daqing began a pioneering long-term study into the prevention of type-2 diabetes, a disease which was then thought to affect about 1% of Chinese. When doctors, academics and officials convened there this autumn to discuss the conclusions and promote prevention work, they faced a very different reality. About 11% of Chinese adults now have the condition, nearly the proportion in America and twice the level in Britain. Type-2 diabetes is becoming more common globally, but in recent years its prevalence has been growing fastest in China.

Diabetes is a dysfunction in the body's regulation of blood-sugar levels. Type 1 is rare and usually shows up early in life, triggered by factors that are not yet well understood. It can kill swiftly unless managed with daily injections of insulin. Type 2 is far more common, accounting for more than 90% of cases worldwide. It tends to develop in adults, especially if they are overweight or do not exercise much. It can usually be controlled with pills and lifestyle changes, and can sometimes be re-

versed. Both types, if not well-treated, can cause complications such as organ damage, blindness, strokes and heart attacks.

China has an estimated 116m diabetics, by far the highest number of any country. Twenty years ago it had fewer than 25m. The dramatic increase, almost entirely involving type 2s, worries the government. The study in Daqing showed how lifestyle changes can prevent type 2 among people with impaired glucose tolerance, which is sometimes a prelude to the condition. But the country's health-care system is ill-equipped to ensure symptoms are detected, let alone help people with them.

A big reason for the increase is that as people get richer they often consume more processed foods and sugary drinks. One in seven Chinese adults is obese, including a quarter of adults in Beijing, China's fattest city. The urban share of the population has

grown from less than 20% to about 60% since 1980. City dwellers tend to be less physically active than people in rural areas.

There may be a genetic link, too. Research finds that ethnic-Han Chinese are acquiring type 2 diabetes while younger and thinner than Caucasians. Smoking is another factor. China has one-fifth of the world's population but consumes one-third of its cigarettes. About half the country's men smoke daily. The speed of China's recovery from Mao-era destitution may also be relevant. Chinese experts have found that people underfed as children are more likely to acquire diabetes in later life.

China's health system is not coping well. The most recent national survey, in 2013, found that nearly 65% of China's diabetics were unaware of their condition (in America it is about 25%). Only about one-third were getting treatment. Among those receiving it, only about half were keeping their blood-sugar levels within a healthy range. Another study showed that the proportion of diabetics who were managing not only to control their blood sugar, but also their blood pressure and cholesterol—measures that also help avoid complications—was lower still. Some of them turn to quack remedies.

Despite the prevalence of type 2, public understanding of the condition is woeful. There is little appreciation of how modern medicine can control it. Poorly educated people in remote communities sometimes worry that it is infectious, says Yang Lijun, the manager of a website for diabetics. ▶▶

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Such views lead to discrimination. The civil service refuses to hire people with diabetes. Official guidelines allow universities to do so, too. This is more likely to affect type-1 diabetics, because their form of the condition is more common in the age group applying for university places or junior government jobs. But the rules make no distinction between the types.

Managing patients with diabetes requires a health-care system that can help them understand their condition, adhere to prescribed treatments and encourage regular check-ups. This is costly. In recent years the number of people with state health-insurance has grown hugely. This has reduced out-of-pocket spending on health from 60% of the total in 2001 to around 30% today. It has made it more affordable for many diabetics to get the treatment they need. But the government's insurance still does not cover some essentials, such as blood-sugar test strips and injection devices.

In July the government published a list of priorities for health-care reform in the coming decade. They include a pledge to improve support for diabetics. The plan says officials must nudge Chinese into leading healthier lives.

The single best medicine for type-2 diabetes would be more investment in primary health care. Many people do not have easy access to family doctors or specialist nurses, who are best able to provide the kind of regular advice and check-ups that type-2 patients need. Even if they do, Chinese patients often prefer to use big-city hospitals, believing that specialists there will do a better job because of their greater expertise. Such hospitals account for nearly 55% of health-care spending in China, compared with less than 40% in rich countries. But in China they are neither equipped nor inclined to co-ordinate the education, screening and monitoring required to deal with chronic conditions such as diabetes. Building a primary-care structure that patients trust will require enormous effort, including finding doctors willing to work as general practitioners (who have fewer money-making opportunities than hospital doctors) and devising better incentives for GPs to promote preventive measures, such as healthy diets and physical exercise.

Without an overhaul, China's health-care system will be crushed by the burden of coping with the chronic diseases that will burgeon as the population ages. In recent years annual increases in total health-care spending have been 5-10 percentage points higher than GDP growth. About 13% of China's health spending goes toward treating diabetes, and perhaps four-fifths of that is spent treating complications that could be avoided. China has an opportunity to save both money and lives. ■

Xinjiang and Tibet

Missing their vocations

BEIJING

Xinjiang's detainees "graduate"

CHINA USUALLY marks the UN's human-rights day on December 10th with angry rebuttals of foreign criticism rather than announcements of improvements in its record. So it was perhaps coincidental that an official this week updated the world on the most egregious of China's current abuses: the incarceration of hundreds of thousands of Uighurs and other mostly Muslim minorities in the vast western region of Xinjiang. Shohrat Zakir, chairman of the regional government, told a press conference in Beijing that the "trainees" in detention had all "graduated". Since then, he said, they "have achieved stable employment, improved their quality of life and have been living a happy life."

Mr Zakir said foreign reports that trainees numbered 1m-2m were groundless, but did not give his own total. China describes what outsiders see as vast prison camps (one is pictured, near the city of Hotan) as "vocational training" centres, teaching Chinese, occupational skills and "deradicalisation". The camps were set up in response to sporadic outbreaks of Islamist and anti-Chinese violence. The mass detentions amount to a preventive internal-security operation of almost unimaginable—and unmeasurable—proportions.

Divided families fear to speak about disappeared members. A Uighur activist based in Canada says his grandfather died this year soon after being freed from one of



A stunning campus with excellent security

the camps, where his diabetes and heart condition had been untreated. The activist is loth to contact his family. A phone call to his bereaved grandmother prompted a warning text to her from the authorities.

So the fate of the detainees remains unclear. Mr Zakir did not say they had been freed. The activist thinks a mass release "pretty unlikely". But some observers think that China might be moving to a more subtle form of repression: in the community. They point to Tibet, a neighbouring region with its own history of protest, where a resentful local population has been subdued without mass incarceration (though plenty of malcontents remain locked up). The Communist Party chief in Xinjiang, Chen Quanguo, served in the same post in Tibet. His skills in containing unrest have been bolstered by extensive deployment of surveillance technology.

For Tibetans, December 10th did mark an important and poignant anniversary: 30 years to the day since their exiled spiritual leader, the 14th Dalai Lama, was in Oslo to receive the Nobel peace prize. Tibetans enjoy no more freedom than they did then. But few mass protests have been reported since an outbreak of anti-Chinese violence in Lhasa and protests across the Tibetan plateau in 2008.

The "Tibet model" of repression relies on four tactics. The first is to deflect any international pressure. In Tibet's case this has meant curtailing the influence of the Dalai Lama. At 84, he is not the tireless globe-trotter he once was. And China is itself tireless in browbeating (and even imposing sanctions on) any country whose leaders dare to meet him.

Second is to limit foreign contact. Tibet remains cut off. Individual foreign tourists—never mind journalists or human-rights investigators—are banned, and the stream of exiles escaping to India has been cut to a trickle. Third is to swamp the territory's native majority by promoting economic development that encourages migration from elsewhere in China. Thanks to tourism and investment in infrastructure, Tibet's economy last year grew by 9%, faster than all but one Chinese province. The growth brings both jobs and an influx of Han Chinese, whose presence sparked the resentment that exploded in 2008.

Last, blanket the region with security mechanisms and personnel. This includes stationing "work teams" in villages and sensitive spots such as monasteries, and dividing cities into "grids" in which residents have to spy on each other.

Tibet shows how effective and sustainable mass repression can be. But China still has to weather the eventual passing and reincarnation of the Dalai Lama, a powerful and moderate restraining figure. Where the Tibet model fails is in offering a future of reconciliation and harmony. ■

Chaguan | Caught in the middle

An obsession with social control is hindering efforts to turn Beijing into a high-tech hub



TWO CHINAS collided on a summer night in Beijing this year when “Little Zhang”, a high-flying young businessman, was summoned for questioning by an elderly neighbour at his housing complex, and asked to prove that he is a legal resident of the city. In the new China where Mr Zhang spends most of his days—a swaggering country rushing to become a high-tech superpower—the 31-year-old is a model citizen. He recently secured a job with a prestigious technology company, buoyed by a master’s degree from a Western university and a stint with a foreign consultancy. In an older China, a bossy place which issues old men and women with red armbands and tasks them to sit outside apartment blocks, snooping on all who pass, he is an object of suspicion.

Despite Mr Zhang’s enviable job, he is legally an outsider in his new home of Haidian, a district in Beijing’s north-west where technology firms have sprung up near elite universities. Born in the neighbouring province of Hebei, Mr Zhang belongs to a tribe of white-collar migrants who call themselves, with mock-defiant pride, *Beipiao*, or Beijing drifters. Its members are hard to spot, but know who they are. They are well-educated and hail from an urban area in another part of China. To build secure lives in the capital they must pull off something hard by changing their *hukou*, or household registration, to make Beijing their official home, or, failing that, by obtaining an employment-related residency permit. Mr Zhang’s interrogation was brief. He showed his national and company identity-cards to the “old granny” questioning him, and insisted that he was “definitely an honest citizen”, merely prevented by red tape from obtaining the right documents. Hurry up and get those papers, she commanded. He did not demur, having heard the same demand from local police not long before.

Educated urban-born outsiders like Mr Zhang are better off than working-class migrants from the countryside, many of whom have been summarily expelled from Beijing in recent years. Still, when people like him want to start a family, their children are at the back of the queue for school places in Beijing. They are barred altogether from sitting university entrance examinations in the capital. For *Beipiao*, to buy a home or even a car in Beijing is to plunge into a briar patch of regulations.

Chinese rulers have long restricted migration between rural

and urban areas, and between big cities. As the capital of the People’s Republic of China, Beijing has endured 70 years of unusually strict controls. Yet political disciplines are now in tension with another side to the city. Beyond its grey, hulking ministries and Communist Party offices, it has become an innovation hub, with an unrivalled range of universities, venture-capital funds, technology firms and cultural enterprises. But at private dinners, drinks parties and off-the-record coffees, Chaguan has heard from bosses of multi-billion-dollar firms and the founders of scrappy startups that it is hard to retain middle-ranking staff in Beijing. Many report that employees, especially those with children, want to move to cities with easier *hukou* rules, cheaper housing and a better quality of life, such as the southern boomtown of Shenzhen or the lake-side city of Hangzhou.

Beijing’s trouble retaining talent raises a question that applies to China more generally: namely, are there limits to the flourishing of innovation and creativity in an autocratic, controlling one-party state? Speak to Beijing drifters, and it is not hard to conclude that the answer is yes. The limits of the current system are felt most sharply by the middle tiers of urban society, they say. The rich need not care about *hukou* because they can secure foreign passports for their children and send them to private international schools in Beijing or overseas. As for low-income migrant workers, they typically leave their children with grandparents back home in villages and townships. It is the aspirational middle that suffers, interviewees say. There are other ways in which such folk are left out. Risk-taking hipsters are still drawn to Beijing, as well as those who do not care about having children or making much money—the so-called “Buddha-style young” drawn to Beijing’s surprisingly irreverent, gritty-yet-arty subculture. The city also attracts conservative-minded graduates willing to work for state-owned firms that pay badly, but offer easy access to *hukou* and work permits. The losers are those who fall between those extremes: people who want to work for the private sector and build families.

Beijing drifters are masters at hustling around bureaucratic obstacles. A former journalist from central China, now working for a big technology company, describes friends who took low-paid jobs with a party newspaper, then a year’s sabbatical to pursue a master’s degree overseas—a double-manoeuvre that earned them *hukou* in Beijing on their return. Another friend worked as a village official in the rural outskirts of Beijing after graduating. A *hukou* was his reward. The journalist’s child, if she has one, will live with her mother-in-law and be educated in the port city of Tianjin, her husband’s home town, which has good schools and is a less competitive place than Beijing for aspirants to university.

A place to find good jobs, more than a good life

Politics stops some firms moving. A film producer notes that internet and entertainment companies must stay close to government regulators and censors. But he adds: “If conditions allowed, all companies would consider moving out of Beijing.” Other cities have widely discussed limitations. Shenzhen is called a cultural desert. Shanghai is plagued by snobbish cliques. Beijing may be a glorious “hodgepodge” of clever people from all over China, as a financier describes it. Nowhere is as exciting for a first job. Still, every Beijing drifter has friends planning an escape, especially those who lack *hukou* in the capital. “Beijing is not a good place to fulfil their dreams,” explains one citizen of the new, innovative China. The old China had little time for individual dreamers. In Beijing those two worlds of creativity and control increasingly collide. ■



Escaping state capture

Batohi's battle

PRETORIA

The wheels of justice are turning in South Africa at last, though too slowly

SO BAD WAS corruption under Jacob Zuma, South Africa's president from 2009 to 2018, that people referred to it as "state capture". Cyril Ramaphosa, Mr Zuma's successor, thinks it cost the country 1trn rand (\$95bn) in looted funds and lost GDP. And that is just the tangible expense. State capture also deepened a pervasive sense that, 25 years after apartheid, South Africans are dangerously short of trust in each other and hope for the future.

The person charged with restoring some of both is Shamila Batohi, who left the International Criminal Court to take charge of South Africa's National Prosecuting Authority (NPA) in February. Her appointment is central to Mr Ramaphosa's efforts to clean house. "Everyone says there is a lot on my shoulders," says Ms Batohi. "The people of South Africa are impatient, understandably so."

Few doubt her ability, but her success is far from assured. Christopher Stone, an expert in criminal justice at Oxford University, says she labours under a "triple burden".

The first is that the NPA, like other anti-crime institutions, was eviscerated during Mr Zuma's time in office. The crooks did not simply loot state-owned companies but "systematically dismantled" the organisations meant to fight crime, says Anton du Plessis of the Institute for Security Studies, a think-tank. Heads of the NPA under Mr Zuma face serious questions about their integrity. Mokotedi Mpshe, the acting director when the former president took office, dropped corruption charges against Mr Zuma (which have since been reinstated ahead of a trial due next year). Mr Mpshe's successor, Menzi Simelane, was found unfit for the job by the country's highest court, which said his appointment was "irrational" and "unconstitutional".

Then came Nomgcobo Jiba, whose husband's criminal record had been expunged by Mr Zuma. An official inquiry found in April that Ms Jiba had lied under oath, failed to follow court orders and compromised the independence of the NPA. The verdict cited, for example, how she

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dropped charges against Richard Mdluli, a Zuma ally and intelligence official who has since been convicted of kidnapping and assaulting a former lover's husband.

Ms Jiba's successor, Mxolisi Nxasana, proved less convenient for Mr Zuma, and left after a golden handshake. In 2018 the highest court found that President Zuma "was bent on getting rid of Mr Nxasana by whatever means he could muster", and declared the move "constitutionally invalid".

Such shenanigans led to an exodus of honest lawyers. From 2015 to 2018 more than 700 prosecutors left and were not replaced. Ms Batohi estimates that the NPA is functioning at 70% capacity. She has wrangled a bigger budget to recruit good people, and in February Mr Ramaphosa announced a dedicated unit to investigate serious cases of state capture.

An Augean task

This has exacerbated the second burden on Ms Batohi. "Expectations are far greater than what any prosecution service can reasonably deliver," notes Mr Stone. There are potentially hundreds of cases related to state capture, many of them fiendishly complex. Ms Batohi is fond of telling allies: "when you shoot at the king, make sure you don't miss." In other words, she wants to ensure cases are solid before making arrests. However, she sounds confident that arrests are coming. "If there are no [state capture] prosecutions next year then—my ▶▶

word—I should retire or resign.”

There are signs of progress. On November 21st investigators arrested Bongani Bongo, a security minister under Mr Zuma. He was charged with attempting to bribe an official to obstruct investigations into the looting of Eskom, a state-owned electricity provider. Mr Bongo, who remains an MP (chair of the home-affairs committee, no less), is the first politician to be arrested in relation to state capture. A few days later the NPA won another victory when a court froze the assets of Regiments Capital, a company accused of orchestrating corrupt deals linked to the Gupta brothers, businessmen with close links to Mr Zuma.

Yet even as cases are built, Ms Batohi believes that the NPA is serving as a deterrent

to graft. Previously there was little chance that corruption would be investigated, “so it was a risk worth taking”, she says. “Those days are gone.”

The third challenge facing the NPA, though, is that reclaiming a captured state means more than putting crooks in jail. It will require Mr Ramaphosa to make good on his promises to reform failing state-owned companies such as Eskom (see next article). It also requires him to ensure that prosecutions are not seen as political.

Under Thabo Mbeki (president from 1999 to 2008) and Mr Zuma the NPA was used as a political tool. By contrast, Mr Ramaphosa appointed Ms Batohi after a meritocratic, transparent process. The president “unwaveringly gave me his word that

there will be absolutely no interference” in the work of the NPA, says Ms Batohi. “Since my appointment, that has been absolutely the case.”

Yet opponents of Mr Ramaphosa—many of whom want him out so they can keep stealing and stay out of jail—will almost certainly cry foul if senior figures in the ruling African National Congress are prosecuted. For now, all the NPA head can do is get on with her job. Success will not be clear-cut, but if she can help convict the crooks it will inspire not just South Africans but reformers in other venal regimes, such as Angola, Pakistan and Ukraine. “It’s not going to be easy. It’s not gonna be quick,” she says. But, adds Ms Batohi, “failure is not an option.” ■

South Africa’s electricity crisis

A failure of power

JOHANNESBURG

Cyril Ramaphosa is cleaning house, but he cannot keep the lights on

IN RECENT DAYS the only thing darker than South Africans’ homes has been their humour. On December 9th Eskom, the state-owned power utility, announced its biggest-ever blackouts, turning off the lights across Africa’s most industrialised country. Some wags used the remaining battery on their phones to vent on social media. “The E in South Africa stands for electricity,” read one post. Another suggested that “Eskom’s been bad all year...in the hope they’ll get coal for Christmas.”

Many South Africans have stopped seeing the funny side. The failure of Eskom’s coal-fired power stations meant the loss of almost a third of its 44,000MW capacity (14,000MW, roughly the potential output of Denmark). The blackouts may tip the country into recession for the second time in two years.

Eskom was quick to blame inclement weather. It has indeed been very rainy. But the root causes are gross mismanagement and rampant corruption. Two huge new power stations—Medupi and Kusile—are years behind schedule and billions of dollars over budget. Under Jacob Zuma, South Africa’s former president, Eskom was systematically looted. Today it is broke, with debts of 450bn rand (\$30bn) that are crippling the public finances (see Buttonwood).

Cyril Ramaphosa, Mr Zuma’s successor, has promised better management and the “unbundling” of Eskom’s three main parts: generation, transmission and distribution. Yet there has been little urgency. Andre de Ruyter, the incoming chief executive, does not start until January. Worse still, Mr Ramaphosa



What they used before candles

seems not to grasp the scale of the crisis. On the day the huge blackouts were announced he described Medupi as “a fitting symbol of the importance of our state-owned enterprises”.

The tragedy is that the crisis is avoidable. Unbundling could be accelerated and assets could be sold to more efficient operators. The government could allow cities and companies to buy their own power and expand its auction scheme that allows private renewable-energy providers to sell to the grid. Mr Ramaphosa may fear the political consequences of such steps, if his party and its allies in the trade unions complain. But the alternative is surely worse. South African voters are already tiring of a well-meaning president who cannot keep the lights on.

Africa’s sharing economy

Brothers in alms

KAMPALA

In much of Africa the family is bank, business partner and welfare state

AGAGGLE OF children play outside Dorothy Nabitaka’s front door on the outskirts of Kampala, the Ugandan capital. She shares her home with 17 people: her mother, child, sisters, nephews, nieces, cousins, and several children she has taken in simply because they had nowhere else to stay. She helps others pay school fees with the money she earns selling animal feed. In all she gives away around four-fifths of her income, she reckons, though she is not really counting. “I don’t like seeing people suffering,” she explains.

Sharing within social networks is central to economic life in much of Africa. Although kinship systems vary, obligations typically extend beyond the nuclear family to include the children of siblings as well as cousins, or sometimes larger units such as clans. People turn to friends and relations for help with school fees, hospital bills, or for a place to stay. Where formal institutions are weak, the family is bank, business partner and welfare state.

At times the pressure to share can be stifling. “People make you feel guilty when they see you with a house, car or even a good dress,” says one Ugandan journalist. Black South Africans talk about paying a “black tax” to support a web of dependents. In Ethiopia, Pentecostal Christianity has taken off, in part because it offers an escape from traditional kinship obligations.

One way to keep hold of your money is to hide it. Zainab Lamin, a housekeeper in Sierra Leone, tells her sisters she is unemployed. “If they know I have a job,” she says, “they will be sending their children to ▶▶

me—to pay for school fees” In experiments, recipients of a cash windfall, such as a raffle prize, will often take less to keep their winnings under wraps. In Cameroon people take out loans they do not need so that relatives think they are hard-up.

Kinship networks can grease the wheels of commerce with loans or by creating trust when contracts are hard to enforce. But they also come with an “extra bill” that can “slow down the growth of a business”, says Ronald Mukasa, who trains Ugandan entrepreneurs. Cash flows are diverted into weddings and funerals. Managers hire relatives, who are not always up to the job.

Yet family life is far more than an accounting exercise. In South Africa under apartheid, racist residence restrictions forced black workers to leave children in the care of others while they migrated to towns for work. Habits of sharing are now a bulwark against inequality. The term “black tax” is a misnomer, says Niq Mhlongo, the editor of a new book on the subject. He grew up in Soweto, a township, sharing a room with seven others. After the death of his father, his brother’s salary put him through school. As an adult, it was his turn to pay university fees for the same brother’s son. “It means that I had to postpone marriage,” he says, just as his brother had once done for him. “But is that a tax? No, it’s a family responsibility.”

Mutual help acts as insurance against sudden shocks, such as illness or the loss of a job. One study in Kenya found that contributions from friends and family made up a quarter of income for poor rural households, mitigating swings in other earnings.

Kinship cannot replace the welfare state. Sharing breaks down in the face of big shocks, such as drought, which hit everybody at once. And the neediest people often have the weakest networks. But informal groups, such as savings circles, can connect to larger institutions.

As horizons expand, social networks do too. Nigerians encourage their relatives to go abroad to support the family, says Olayinka Akanle of the University of Ibadan. Emigrants sometimes invest in schools or businesses back home, and ask kin to oversee them in their absence. Remittances to Nigeria now exceed oil revenues: last year they brought in about \$24bn, 11 times more than all foreign direct investment.

Urbanisation, consumerism and rising inequality may strain kinship ties, but they have not yet broken them. In a trendy café in Kampala, two sisters discuss the middle-class dilemma. “How do you save up when your salary doesn’t just look after you?” asks one. She cannot afford to go travelling as much as she would like. Yet sharing is her culture, and she would have it no other way. “Your savings are in people,” her sister elaborates. “So when I have a bad day I cannot starve.” ■

Libya’s civil war

Magnet for mayhem

ALGIERS

Russia and other foreign powers are piling into Libya

THE WOUNDS of Libyan militiamen defending the UN-backed “government of national accord” (GNA) in Tripoli are changing, along with the battle they are fighting. Shrapnel used to be the cause of most of the casualties around the Libyan capital. But lately the fallen have been shot through the head, says a foreign diplomat. On the other side of the fight, Russian snipers have teamed up with the self-styled Libyan National Army led by General Khalifa Haftar, who laid siege to Tripoli in April hoping to dislodge the government. The front lines are moving for the first time in months.

Countries such as Egypt and the United Arab Emirates have long supported Mr Haftar with guns and money. But Russia’s backing is a game-changer, say Western diplomats. It has helped Mr Haftar consolidate his hold on the east and south, home to most of the country’s oilfields (see map), and may tip the balance in Tripoli. But Russia’s presence may also be drawing in other foreign powers. America accused Russia or its local allies of shooting down one of its drones last month. President Recep Tayyip Erdogan of Turkey says he might send troops to defend the GNA, if invited.

Russia’s intervention has come in the form of mercenaries from the Wagner Group, a private security firm with connections to the Kremlin. Officials in Moscow deny any involvement in Libya, but Western officials say the Wagner Group has been flying arms, tanks and drones into Libya for almost a year. There are thought to be 1,400 Russian mercenaries in the country. “It’s like a world-class coach taking over a B team,” says a diplomat in Tripoli, who considers the firm an unofficial

arm of the Russian government.

President Vladimir Putin is trying to build on his success in Syria, where he rescued the regime of Bashar al-Assad and won a foothold in the eastern Mediterranean. Libya’s coastline runs for 1,770km and sits directly across from Europe. The Wagner Group already protects most of the oil installations under Mr Haftar’s control. That gives it leverage over Europe, which guzzles Libyan crude oil.

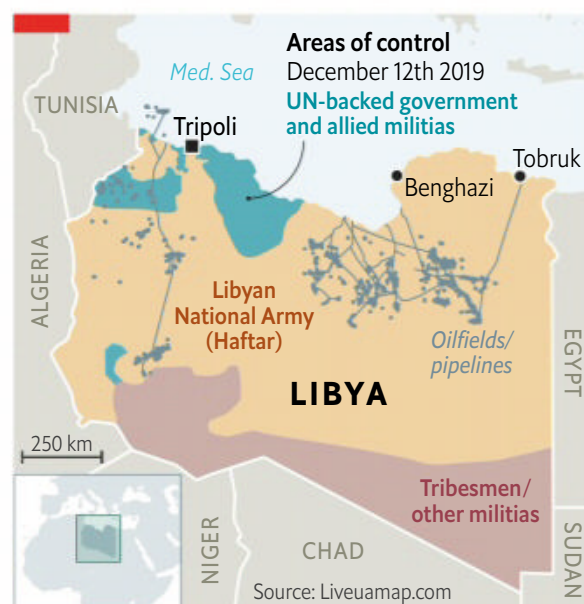
Turkey has commercial ties to the GNA and is opposed to the anti-Islamist agenda of Mr Haftar and his foreign backers. But its interest in Libya also stems from concerns over energy. Last month it signed a contentious deal with the GNA that demarcated the maritime boundaries between the countries’ exclusive economic zones. Greece, Cyprus and Egypt see the move as an attempt by Turkey to gain control of contested gas-rich waters. The energy agreement was accompanied by one aimed at strengthening the defences of the GNA, which Turkey has already armed.

Mr Haftar’s foreign allies say they will boost their support for him if Turkey gets more involved. In an effort to lower tensions, Mr Erdogan said he wants to speak to Mr Putin before the Russian president visits Turkey early next month. “On the Haftar issue, I don’t want it to give birth to a new Syria in relations with Russia. I believe Russia will also review its existing stance over Haftar,” said Mr Erdogan. “He is an outlaw, and by that same token, any support he’s given is rendered illegally.”

The foreign meddling makes a mockery of the arms embargo imposed by the UN in 2011, as well as its efforts to broker a peace deal. Plans for an international conference in Berlin have been postponed time and again. The GNA is increasingly seen as a hostage to its allied militias. The central bank in Tripoli maintains control over Libya’s oil revenues. But Mr Haftar could renew his bid for international recognition and start selling oil himself.

Observers do not believe Tripoli’s fall is imminent. In a recent offensive Mr Haftar’s forces advanced about a kilometre, then ground to a halt. Still, the city’s defenders would welcome Turkish troops and air power (Mr Haftar currently controls the skies). “A lot of people on the front are getting tired,” says a militiaman in Tripoli. “It’s been eight months of fighting and they want to go home.”

Meanwhile, residents of the capital feel the noose tightening around them. Civilian deaths because of the war, which had averaged less than 50 a month, are climbing. The streets have become crowded with people fleeing the fighting. Mr Haftar, who controls the city’s supply of power and water, could make matters worse. Whether he does or not may depend on the calculations of his foreign backers. ■



Lebanon and Syria

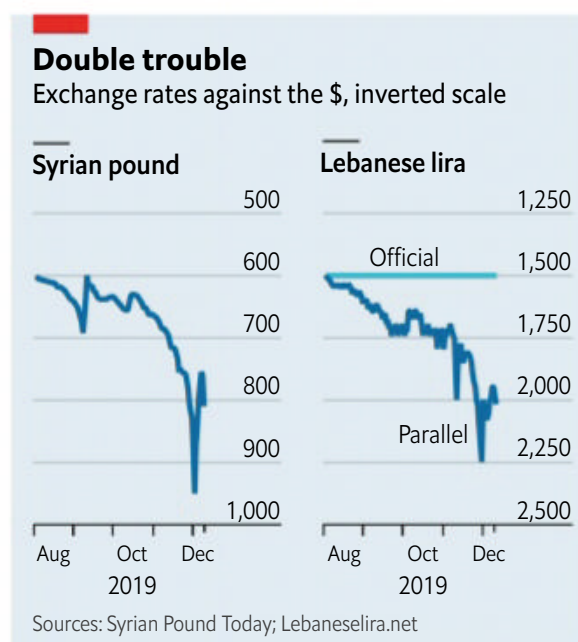
Reverse contagion

BEIRUT

As Lebanon's economy drowns in debt, Syria's begins to sink as well

OVER THE past two months everyone in Lebanon has become an economist. Walk down the street and you will probably hear snippets of conversation about dollars and exchange rates—and vitriol aimed at bankers. The country is in the third month of a political and economic crisis caused by a drop in remittances and bank deposits that has left everyone short of hard currency. Customers queue in banks for hours only to face arbitrary limits on dollar withdrawals. Credit has dried up, leaving firms unable to finance imports. Though the Lebanese pound is still officially pegged at 1,500 to the dollar, in practice the peg no longer exists: traders charge 2,000 pounds or more.

Now Lebanon's crisis is rippling across the border into Syria. Their economies have long been linked. Syrian labourers rebuilt Lebanon after its civil war, which ended in 1990. Banks in Beirut were a safe place for wealthy Syrians to park their cash. Since the Syrian conflict began in 2011, businessmen have used Lebanon to skirt sanctions and do deals abroad. But Lebanon is no use as a financial hub if its financial sector is frozen. With dollars scarce, the Syrian pound has followed its Lebanese counterpart and crashed to record lows, from 500 to the dollar at the beginning of 2019 to 950 in early December (see chart). Though it has stabilised a bit, Syrians expect it to fall further in 2020.



As winter sets in, Syrians worry about how they will afford fuel, often sourced through Lebanese ports. Shortages of cooking and heating gas last winter, caused by a mix of international sanctions and corruption, led to widespread anger. The queues and scarcity will probably be worse this winter. Petrol stations in Lebanon are already struggling to keep the pumps filled; they briefly shut down last month to protest at the shortage of dollars at the official exchange rate.

The Syrian government is trying to reduce imports, but the country's shattered factories cannot provide basic goods. Many

firms rely on raw materials from abroad, bought with dollars, then sell their finished goods on an impoverished domestic market. In some industries prices are fixed by the government: drug firms, for example, find it all but impossible to break even. Last month Bashar al-Assad, Syria's dictator, decreed a pay rise of 20,000 pounds (\$24) for civil servants. That is a 50% increase for many—but it is barely enough to allow them to pay for a winter coat.

Lebanon is Syria's biggest foreign market: it bought \$132m of Syrian goods in 2017, 21% of total exports. A drop in purchasing power may hurt trade. It will also dent the value of remittances. Though many of the 1.5m Syrians in Lebanon are refugees barred from formal employment, aid groups estimate that their remittances still account for perhaps one-sixth of the total sent back to Syria from abroad. A pro-government newspaper in Syria has suggested that Mr Assad tax the diaspora. That might be tricky. It was his brutality that sent millions into exile in the first place.

Mr Assad has shrugged off concerns about the economy. "Syrians have a lot of money," he says. Meanwhile, Lebanon's leaders are fighting over berths on a sinking ship. The prime minister, Saad Hariri, resigned on October 29th after weeks of protests. In November politicians seemed to agree on Samir Khatib, a businessman, as his replacement. But on December 8th Mr Khatib abruptly withdrew from consideration. Talks about a new cabinet were again postponed. His nomination seems to have been a stunt intended to make Mr Hariri look like the only viable option. "It's a game. He still wants the job," says an aide.

Lebanese protesters want a cabinet stocked with technocrats to rescue the economy. Mr Hariri and his allies also back this arrangement, not least because the government must make painful choices about whether to restructure debt and devalue the currency. Few politicians want to be blamed for such decisions. But Hizbullah, the Shia militia-cum-political party, and its partners are reluctant to give up their foothold in the cabinet.

While its leaders squabble, Lebanon is literally and figuratively underwater. Winter storms flooded parts of the country this month, a reminder of how the government has squandered money meant for infrastructure. One-third of Lebanese are poor, according to the World Bank, a figure that could rise to 50% as the crisis worsens.

In April 2018 donors pledged \$11bn to help Lebanon; it has yet to make needed reforms to unlock that money. Before a follow-up meeting on December 11th the French foreign minister, Jean-Yves Le Drian, said he hoped to "encourage the Lebanese authorities to realise the seriousness of the situation". It may take much more than a reminder to convince them to act. ■



That sinking feeling



The EU's Green Deal

The way the wind is blowing

Europe's climate change plans are big and bold, but the details are still to come

THE WORLD'S climate experts, activists and officials were gathered in Madrid this week for the 25th annual UN climate talks. But the big news was unfolding far away in Brussels, where the European Commission's new president, Ursula von der Leyen, barely 11 days in office, announced her eagerly awaited Green Deal. The 24-page document reads like a list of vows to transform Europe into a living demonstration of how a vast economy can both prosper and prioritise the health of the planet. It covers everything from housing and food to biodiversity, batteries, decarbonised steel, air pollution and, crucially, how the EU will spread its vision beyond its borders to the wider world. "Our goal," declared Mrs von der Leyen, "is to reconcile the economy with the planet." Her plan is large on ambition, but in many places frustratingly vague on detail.

Top billing goes to a pledge to make Europe carbon-neutral by 2050. That is no surprise. The goal was endorsed by the EU Parliament in November, a strategy for reaching it was published in 2018 and EU heads of state began debating it at this

week's summit meeting, which was getting under way as *The Economist* went to press. Mrs von der Leyen's green opus promises to draft legislation that would enshrine the 2050 target by March 2020.

That would make the EU the world's largest economic bloc (and biggest green-

house-gas emitter) to adopt the recommendations of climate scientists that all emissions must cease or be offset by mid-century in order for global temperatures to rise by no more than 1.5-2°C above pre-industrial levels. It is also a considerable increase in ambition: existing policies put the EU on track to reduce emissions by a mere 60% from 1990 levels by mid-century. But long-term goals like this are easy to set, and hard to make binding.

That last point makes the Green Deal's second headline statement, regarding a nearer-term 2030 target, rather more significant. By summer 2020 the commission intends to present a plan to reduce emissions in 2030 by 50-55% from 1990 levels. This represents a step up from its existing target of cutting emissions by 40% within the same time frame (see chart), but independent analyses suggest that the 50% end of the range will not represent much of a stretch. Current policies on renewable energy and energy efficiency, for instance, should already help to achieve 45-48% cuts by 2030. Green NGOs would like to see the EU sweat a bit more and strive for 65% cuts by 2030, which is what models suggest is needed if the bloc is to do its share to limit global warming to 1.5-2°C.

All this green ambition comes at a price. The commission estimates that an additional €175bn-€290bn (\$192bn-\$320bn) of investment will be needed each year to meet its net-zero goals. Much of this will come from private investors. One way they will be encouraged to pitch in is with new

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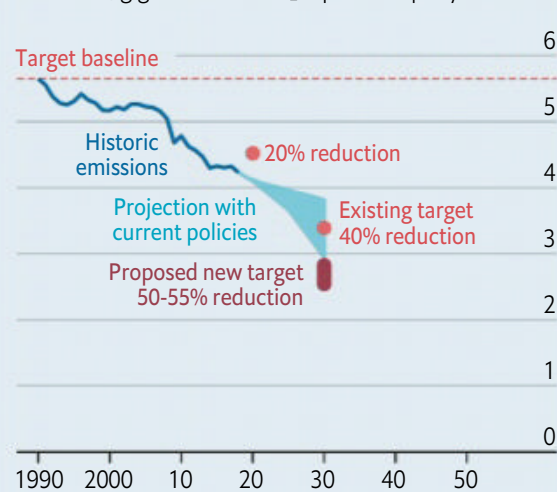
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Cooling it

EU, progress on greenhouse gas targets
Emissions, gigatonnes of CO₂ equivalent per year*



Source: Climate Action Tracker *Excluding land use and forestry

► financial regulations. On December 5th EU negotiators struck a provisional agreement on what financial products are deemed “green”. Next year large European companies will be forced to disclose more information about their impacts on the environment, including carbon emissions. These measures, the thinking goes, will give clearer signals to markets and help money flow into worthy investments.

Another lever is the European Investment Bank, a development bank with about €550bn on its balance-sheet, which is to be transformed into a climate bank. Already it has pledged to phase out financing fossil fuels by 2021. By 2025 Werner Hoyer, its boss, wants 50% of its lending to go to green projects, up from 28% today, and the rest to go to investments aligned with climate-change goals. Some of that money will flow into a “just transition” fund, worth €100bn over seven years. Job losses are an unavoidable consequence of decarbonising Europe’s economy; the coal industry alone employs around 250,000 people, mainly in eastern Europe. The fund will try to ease some of this pain, and the political opposition it provokes.

The Green Deal goes beyond the scope of previous climate policies. One area it enters with gusto is trade. Under the commission’s proposals, the EU will simply refuse to strike new trade deals with countries that fail to comply with the Paris agreement’s requirement that signatories must increase the scale of their decarbonisation pledges, known as “nationally determined contributions” or NDCs, every five years. That would mean no new deals with America while Donald Trump is president; it is set to drop out of the Paris agreement late in 2020. And, because the first round of enhanced NDCs is due next year, it would put pressure on countries that are dragging their feet on these, of which there are dozens—including China and India.

The deal also sketches out plans for a carbon border-adjustment levy. Under the EU’s emission-trading scheme, large industries pay a fee of about €25 for every tonne of carbon dioxide they emit. Other regions have similar schemes with different carbon prices. A border-adjustment mechanism would level the playing field.

The Green Deal’s proponents are the first to say this is only a road map for climate action. Many, many new policies and associated technical details will need to be ironed out and approved. Mrs von der Leyen declared the Green Deal “Europe’s man-on-the-Moon moment”. In reality, the landing is some way off yet. A more fitting analogy for this week’s announcement would be President Kennedy’s promise in 1961 that America would, by the end of the decade, reach that celestial body. It remains to be seen whether Mrs von der Leyen’s word is as good as Kennedy’s. ■

Pensions and strikes in France

OK boomer

PARIS

A long-promised pension reform defers new rules to future generations

AFTER MONTHS of talks, endless delays and a week of disruptive strikes, the French government finally unveiled on December 11th its long-promised pension reform. The good news is that it has decided to press ahead with its plans, including the abolition of regimes with special privileges, despite the biggest show of union force on the streets since President Emmanuel Macron took office in May 2017. The bad news is that the new system will push the full burden of the changes on to France’s younger generations.

In a speech that leaned studiously to the left, Edouard Philippe, the centre-right prime minister, described the new universal points-based system as a “fairer” system that will guarantee “social justice”. It will replace the current sprawl of 42 regimes, most of which have different rules. For those beginning their working life, the new rules will apply from 2022, and from 2025 for those already in work but currently under the age of 45. Older generations will keep the existing rules. Sliding transition rules will bring the new system fully into effect by 2037.

Under the new system the special regimes, which today allow train drivers to

retire at the age of 50, will be abolished. Pensions for public-sector workers will be calculated according to the same (less favourable) rules as those in the private sector. The new points-based system will allow those with patchy careers, including many women, to accumulate credit for every hour worked. A minimum monthly pension of €1,000 (\$1,100) will be brought in from 2022, to help farmers and others currently surviving on less. High earners will pay extra contributions for the pensions of others. And, although the minimum legal retirement age will remain 62, a new “equilibrium age” of 64 will build in incentives to work beyond that. Medef, the bosses’ federation, described the package as a “good balance”.

Will this moderate approach help to calm the streets? Mr Philippe made it clear that he will not shelve the project altogether, as the unions want. Since December 5th SNCF, the national railway, as well as regional trains, the Paris metro and airport ground staff, have been on a rolling strike that looks likely to continue. Teachers are staging walkouts every few days. The unions know full well that past French governments have backed down in the face of paralysing strikes. Alain Juppé, prime minister in 1995, famously insisted that he would hold firm in the face of industrial action, only to cave in and shelve his own pension reform a few weeks later.

Mr Macron is keen to prove that he is different. He has long argued that France needs to be “transformed” rather than merely “reformed”. This is why he promised during his election campaign in 2017 ►►



Finland’s new government

Finland now has the world’s youngest serving prime minister. On December 10th Sanna Marin (pictured, second from right), who is 34, was sworn in at the head of a coalition whose four other component parties are also led by women. Three of them are also in their 30s. Strikes toppled the previous prime minister last week.



Let the young support us

▶ not to raise the retirement age but to redesign the entire system. At stake therefore is not just France's ability to create a fairer and more flexible pension regime, but also Mr Macron's reputation as a reformer who does what he promises.

This week, the hard-line unions dug in and vowed to stay on strike. Even the Confédération Française Démocratique du Travail, a more moderate union which supports a points-based system, is now furious because of the "equilibrium age". If he is to get his reform through, the unpopular Mr Macron will have to rely on public opinion. For now a majority of the French continue to support the strikers, just as they did in 1995. The longer the disruption goes on, however, the more this support could ebb. On day one, a massive 800,000 people, according to official figures, took to the streets countrywide. By December 10th only 339,000 turned out. The share of teachers on strike dropped to 16% from 47%. By mid-week only 16% of all SNCF workers had downed tools, down from 56% on the first day. Most metro lines in Paris and most fast trains across the country, though, continue to be shut down. The strike could last a while yet.

A year after the *gilets jaunes* (yellow jackets) protests, France remains restless and suspicious. To this has now been added a further division, between the generations. "The baby-boomer generation benefits from the current system, and wants to avoid any pension reform at all costs," says Maxime Sbaihi of Génération Libre, a liberal think-tank. Those who have already gained the most from France's generous welfare state look set to keep their rights to enjoy one of the world's most generous pension systems. ■

Russia and Ukraine

Mr Putin's awful week

Reverses on all fronts

THE OPENING ceremony of the Sochi Winter Olympics in 2014 was meant to be the defining moment of Vladimir Putin's presidency, showing off a resurgent Russia to the world and turbocharging his popularity at home. With a price tag of \$50bn, he left nothing to chance. Russia doped its athletes and trumpeted their gold medals as though they were the spoils of war. Whipped up by the state propaganda machine, the celebration morphed into anti-Western hysteria; and the Sochi Olympics gave way, within days, to the annexation of Crimea and the invasion of Donbas, in eastern Ukraine.

Six years on, the after-effects are catching up with the Kremlin. On December 9th the World Anti-Doping Agency (WADA) banned Russia from major international sport events for four years (see next article). In a country where symbols matter more than substance this ban, despite its loopholes, comes as a huge humiliation. It came on the day that Mr Putin sat down with Ukraine's president Volodymyr Zelensky, and the leaders of France and Germany, to negotiate a settlement to the Russia-sponsored war in Donbas that has claimed 13,000 lives.

The first "Normandy format" meeting for three years was shrouded in apprehension, partly caused by Emmanuel Macron's new eagerness to build bridges with Russia. Would Mr Putin achieve his goal of pushing Donbas back into Ukraine without giving the government full sovereignty over it, seen as a ploy to destabilise the whole country? Would the French president put pressure on Ukraine for the sake of his own grand vision for a new European security architecture? And would the neophyte Ukrainian president cave in? These fears drove thousands of people onto the streets of the Ukrainian capital, Kyiv, urging Mr Zelensky not to give ground.

The summit did not yield much, which was in a way a relief: an agreement to exchange all prisoners, to disengage in three additional areas along the conflict line, and to meet again in four months' time. But Mr Zelensky also publicly drew some red lines. There must be no sacrifice of Ukraine's territorial integrity, including Crimea, and crucially, there must be no local elections in Donbas until Ukraine has full access to the occupied territory and regains control over its border with Russia. That way, the election might be fair, which it certainly

would not be if held now.

The contrast between the presidents was striking. Mr Putin arrived in his monstrous armoured limousine, accompanied by a suite of security men, some in balaclavas. Mr Zelensky rode in a Renault minivan. At the late-night press conference, Mr Zelensky appeared young, nervous and sincere. Mr Putin looked like an ageing autocrat, vengeful, arrogant and bored. Having set out to normalise his relationship with Europe and isolate Ukraine, he achieved neither. On the very same day, EU foreign ministers agreed to start work on a European version of America's Magnitsky Act—legislation that originally hit Russian violators of human rights with sanctions.

In what was a terrible week for him, Mr Putin also encountered resistance from Belarus, a fellow Slavic country which is already part of an economic union with Russia. Tightening that union (and so, effectively, taking over Belarus) might allow Mr Putin to declare the creation of a new country that he could preside over after his presidential term—the last the Russian constitution permits him—expires in 2024.

But talks at Mr Putin's Sochi residence on December 7th produced nothing from the Belarusian leader, Alexander Lukashenko. "We never intended and never will become part of any other state—even the brotherly Russia," he said, before they began. The five-hour conversation ended with nothing, other than an agreement to meet again in two weeks' time. And as soon as Mr Lukashenko returned home, his army's top brass said that Belarus is willing to take part in NATO war games—to be called "Defender Europe"—next year. That will not have filled Mr Putin with Christmas cheer. ■



When Volod met Vlad

A lion dance is held in front of the iconic Ruins of the St. Paul's in Macao, a 17th-century Catholic complex, in celebration of World Tourism Day on September 27



Rightful Return

Macao transforms itself since rejoining the motherland 20 years ago

By Ji Jing

When Kou Kam Fai was a university student in Macao, he had to work part-time to pay for his tuition as his family couldn't afford his education. That was before 1999 when the island in south China was a Portuguese colony, wrested away in the 16th century. But since the return of Macao to the motherland in 1999 and extensive reforms, a different story has been unfolding.

Today, Macao Special Administrative Region (SAR), a 32.9-square-km island in the Pearl River Delta facing Hong Kong across the sea, has the government shouldering 90 percent of the tuition fees of Macao university students. Students need to pay only 25,000 patacas (\$3,100) a year.

Kou's status has also changed. Before the return, he was a teacher and the average salary of teachers was about \$800-900 a month. Today, it is nearly \$5,000. Besides being the principal of a middle school, Kou is also chairman of the Board of Supervisors of the Chinese Educators Association of Macao, which has given him a deep insight into the changes blowing through the education sector.

"When Macao was under Portuguese rule, the Portuguese Government didn't care about education," he said. But in 2019, the government's education budget is 8.6 billion patacas (\$1.07 billion), over eight times the allocation in 1999.

Winds of change

Education is a small part of the extensive changes over the past 20 years that have transformed the economy and improved livelihoods.

Ho Hau Wah, who was the first chief executive of Macao SAR from 1999 to 2009, recalled the sluggish economic growth prior to the return, aggravated by the 1997 Asian financial crisis, and weak public security.

"My generation has witnessed what Macao was like before

the return and what it is like after the return and there's a sharp contrast," he said. "In 2000, the fiscal budget was only 13 billion patacas (\$1.61 billion) and this year it's 103.3 billion patacas (\$12.8 billion). Over 30 percent of this year's fiscal budget is earmarked for social welfare."

From 1999 to 2018, Macao's GDP increased from over \$6 billion to \$55 billion. As of the end of 2018, foreign exchange reserves had reached \$20 billion, jumping six fold over the 1999 reserves.

With the rapid economic growth, social welfare has improved. Before the return, students enjoyed free education for 10 years. In 2007, it was increased to 15 years. Over 90 percent of high school graduates go to university.

Residents get cash bonuses, their share of the city's development dividend. A Macao resident above 65 years gets more than \$756 a month. The improved healthcare system enables pregnant women, children, and seniors above 65 to enjoy free medical services. People diagnosed with major illnesses such as cancer are fully covered by medical insurance.

The unemployment rate has decreased from 6.3 percent in 1999 to 1.8 percent in 2018, while the average income has jumped from nearly \$600 per month in 1999 to nearly \$2,000 in 2018.

One country, two systems

"This wouldn't have happened without the 'one country, two systems' mechanism, cooperation with the Chinese mainland and regional cooperation," Ho said.

"One country, two systems" was put forward by the Chinese leadership in the 1980s to address the relationship with Hong Kong and Macao. The principle is that while there is only one China, the SARs will retain their own economic and administrative systems.

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They will also continue to have their own governmental system, running their legal, economic and financial affairs independently.

In 1987, the Chinese Government signed a joint declaration on Macao with the Portuguese Government based on the principle. The declaration said Macao is Chinese territory and China would resume sovereignty over it on December 20, 1999. The Chinese Government agreed to implement the “one country, two systems” mechanism, allowing Macao people to govern the island with a high degree of autonomy.

In 1993, the National People’s Congress, China’s top legislature, promulgated the Basic Law of Macao SAR for its governance.

Ho said Macao residents follow the Chinese Constitution and the Basic Law. These are taught in schools to explain Macao’s special relationship with the Chinese mainland. Another factor for the success of “one country, two systems,” according to him, is Macao’s alignment with national strategies such as the Guangdong-Hong Kong-Macao Greater Bay Area, which have presented it with opportunities to be part of China’s national development. With its small population of 676,100 and limited area, Macao’s economy cannot be diversified without the huge mainland market.

cooperation agreements with the industrially developed Guangdong are boosting Macao’s economy. One fruit of the cooperation is the Guangdong-Macao Industrial Cooperation Park in Zhuhai, a special economic zone.

“The proportion of Macao’s young people who work elsewhere is relatively small. So we encourage them to go to the Greater Bay Area. We also welcome friends from the Greater Bay Area to come to Macao to study and work,” Chui said. Hong Kong, Macao and Guangdong have different legal systems, which need be synchronized for the development of the Greater Bay Area, he said.

“The Greater Bay Area is also an opportunity for Macao to go beyond its limitations. Macao has a small area, a small population and few resources, which greatly restricted the development of a diversified economy. However, under the Greater Bay Area, the Central Government can provide favorable policies for Macao, which can help address limitations and enable Macao to participate in the country’s overall development,” Ho said.

Economic diversification

For a long time, Macao’s economy was dominated by its gambling industry. Then in 2003, the government began to promote diversification of the economy by developing its tourism, cultural, finance and conference and exhibition industries.

It signed an agreement with the Central Government the same year, which opened individual trips by mainland tourists. In 2005, the Historic Center of Macao, a cluster of 20 sites with a unique fusion of Chinese and Portuguese cultures, made it to the UNESCO World Heritage List, becoming a matter of national pride and tourists’ interest. Three years later, Macao was positioned as a world tourism and leisure center. In 2017, it was designated a UNESCO Creative City of Gastronomy.

Before the return, Hong Kong tourists accounted for over half the tourists to Macao but after the return, visitors from the mainland have become

the majority, accounting for around 70 percent of all tourists in recent years.

Tourism and related industries have brought economic benefits and created jobs. Of the 380,000 people with employment in Macao in 2017, over half were employed in tourism-related industries.

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Entrepreneur Lei Zhen (center) in the lab of his tech company in Zhuhai, south China. Lei, a resident of Macao since 2014, set up the company in Zhuhai in 2015, drawn by the policies offered by the Greater Bay Area authorities

The Guangdong-Hong Kong-Macao Greater Bay Area development plan, unveiled in February, provides new opportunities for Macao’s development. The Greater Bay Area comprises Hong Kong, Macao and nine cities in Guangdong Province in south China.

To develop the connectivity of the area, the Hong Kong-Zhuhai-Macao Bridge was opened last year. The longest sea bridge in the world, it has slashed travel time between Hong Kong, Macao and Zhuhai in Guangdong to within 1 hour, greatly facilitating transportation.

Macao, positioned as one of the four central cities in the Greater Bay Area along with Hong Kong, Guangzhou and Shenzhen, is embracing the opportunities brought about by the development plan.

Chui Sai On, Chief Executive of Macao SAR, said



Moldova and Russia

A quiet takeover

CHISINAU

A pro-Western government has been pushed out

HAS RUSSIA quietly taken back control of Moldova? Many observers reckon that is what, in effect, happened in the tiny former Soviet republic in November, when a pro-Western government abruptly collapsed, to be replaced by a new one that leans firmly towards Moscow. There is even a rumour running round Chisinau, Moldova's sleepy capital, that Aureliu Ciocoi, the new foreign minister, is planning to remove all the European flags from his ministry. Mr Ciocoi looks shocked when asked. The flags are going nowhere, he says, and there is to be "no change at all" in Moldova's relations with the EU. However, since 2013 Russia has embargoed almost all Moldova's wine and agricultural produce, and so his country wants "pragmatic relations" with Moscow.

Poverty makes it hard for Moldova to stand up for itself, and its economy has been looted for years, especially at times when governments claiming to be pro-European were in charge. Now, Mr Ciocoi says, Moldova's problems are so dire that unless his government succeeds, in a decade the country could end up as a lot at Sotheby's, a London auction house, "with a starting price of €1."

Mr Ciocoi is not wrong to paint his country's problems as existential. Emigration is now at such high levels, thanks to endemic corruption, a miserable economy and the lure of better-paid jobs in the EU, that one study predicts that by 2035 there will be only 2.1m people left in a country which had 4.3m in 1989.

Russian doping

Cheat, cover up, repeat

A four-year ban on Russian athletes is less than it seems

ON DECEMBER 9TH the World Anti-Doping Agency (WADA) banned Russia from major sporting events for four years. The ban will apply to next year's Olympics in Tokyo, the 2022 winter Olympics in Beijing and that year's football World Cup, to be held in Qatar. It follows the discovery that Russian officials are still covering up widespread cheating. Russia handed over computer files in January that were supposed to be a full account of past doping, which WADA thinks involved more than 1,000 athletes and was directed by government ministers. But WADA found the files had been doctored.

A four-year ban sounds like a stiff penalty. But it is full of loopholes. It applies only to "major" tournaments, which do not include such mega-events as next year's European Championship in men's football.

Even at competitions that WADA classifies as "major", such as the World Cup, the ban could allow Russians to compete under a neutral flag. The fine print of the agency's ruling specifies that athletes may take part as long as they have neither been named in the documents that the Russian officials handed over nor failed any drug tests. FIFA will probably allow Russians to play their qualification matches for the 2022 competition in their national colours. Only at the finals in Qatar will the team have to give up its flag and anthem.

This arrangement has already been used at the Olympics, and will probably

continue at next year's games in Tokyo. The International Olympic Committee (IOC) suspended Russia's team from the winter games in Pyeongchang last year, but in name only. It still allowed 168 competitors to appear as "Olympic athletes from Russia", collecting 17 medals in all. The men's ice hockey squad won gold while wearing a distinctly familiar red kit (albeit without emblems or flags) and defiantly sang the national anthem at the medal ceremony, against official orders. Few spectators could have doubted who they were representing.

The message to any such cheats is clear. If you get caught, you may lose some of the medals your country has won, and your teams will briefly compete without your flag. But many of your stars will slip through the net. Cheaters sometimes prosper, it seems.



Russian aspirations in this corner of Europe are nothing new. In 1918 the fledgling Moldovan Republic united with Romania for a brief interlude. In 1940 the Soviet Union reclaimed the former Russian imperial possession, and kept it until the Soviet Union disintegrated in 1990. Igor Dodon, Moldova's pro-Russian president, uses pictures of himself with Vladimir Putin to win elections. In a leaked recording he talks of getting (illegal) party finance from Russia, though he says his words were taken out of context. Last June, though, Mr Dodon teamed up with a pro-European, Maia Sandu (pictured), to rid Moldova of Vlad Plahotniuc, an oligarch who had long dominated the country as chairman of the then ruling party. Mr Plahotniuc is now widely believed to have fled to Miami.

In November the hopeful coalition collapsed. Ms Sandu claims that the new gov-

ernment, voted in by Mr Dodon's Socialists and by MPs from Mr Plahotniuc's old party, is pro-Russian, but that it will say whatever it needs to to keep Western countries happy, so that, while Russia calls the shots, the West keeps critical loans flowing. The government fell over a dispute about a new prosecutor-general. Ms Sandu says Mr Dodon told her that he did not want it to create an independent anti-corruption force which would arrest dirty politicians.

Ms Sandu is down, but far from out. Vadim Pistrinciuc, an analyst and supporter, thinks she needs fewer "nice and smart" people around her and "more fighters". Russia is flooding the country with fake news and money. Western governments run sessions on democracy and human rights. "It is like one side gives boxing classes while the other side does ballet ones," he says. ■

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Charlemagne | Spain's strange bedfellows

Pedro Sánchez's route to office passes through an agreement with Catalan separatists



THE STREETS of Barcelona twinkle with Christmas lights. The city council has quietly re-asphalted bits of roadway that were damaged by the nightly fires and barricades that lasted for a week in October, after nine Catalan separatist leaders were sentenced to long jail terms for their failed independence bid of 2017. The most unusual thing in Barcelona this week was a discreet meeting on December 10th between leaders from the Socialist party of Pedro Sánchez, Spain's acting prime minister, and Esquerra, the strongest Catalan separatist party. Mr Sánchez is seeking the abstention of Esquerra's 13 deputies in the national Congress. That would mean he could win the vote he needs to form a coalition government with Podemos, a party politically to the left of the Socialists.

It would, however, involve a double climb-down for the prime minister, and it highlights how Spain's political deadlock has become intertwined with the stand-off over independence in Catalonia. Mr Sánchez won a plurality of seats in Congress at an election in April, but not a big one: only 123 of the 350. Over the summer he broke off desultory coalition talks with Podemos's leader, Pablo Iglesias. Against the instincts of wiser heads in his party, he called a fresh election for November 10th to seek "a strong progressive government that doesn't depend on separatists", as a government official put it.

His gambit backfired: the fourth election in four years, held in the shadow of the Barcelona protests, served only to show that Spain is becoming ever more fragmented politically. The main winner was Vox, a new hard-right party, which grabbed 15% of the vote. Until 2015 the country had essentially a two-party system pitting the Socialists against the conservative People's Party (PP). The new Congress contains 16 parties.

The PP is reluctant to join Mr Sánchez and leave Vox to monopolise the opposition. A broad left government seems to be the prime minister's preference, but he also has little alternative. Whatever happens, Spain looks set for its first coalition since democracy was restored in 1977. The prospect alarms many business types, who fear that Podemos would raise taxes and repeal a labour reform that speeded Spain's recovery from the slump of 2008-13. The fact that its price includes a political dialogue with Catalan separatists has right-wing newspapers outraged.

Some taxes will go up, and eliminating the fiscal deficit may take longer, if the coalition is formed. But the panic looks overdone. Podemos is already in office in six regional governments. In this year's campaigns, Mr Iglesias stressed his support for the constitution. He is likely to be one of three vice-presidents, in charge of social affairs. Podemos will not manage economic policy or foreign policy in the proposed future administration, says the government official.

The critics have a stronger point when it comes to the talks with Esquerra. "The prime minister is negotiating with a party whose support for legality is dubious," says Carlos Aragonés, a PP deputy. In 2017 Esquerra's elected officials in Catalonia helped to stage an illegal referendum and declaration of independence in what many Spaniards saw as an attempted coup against the constitution. Oriol Junqueras, the party's leader, received a 13-year jail sentence for it. Esquerra wants government-to-government talks—"a meeting of equals" in which the Catalan administration can propose a referendum on self-determination, as Pere Aragonès (no relation), Mr Junqueras's deputy, puts it. The critics say there can be no equality between the central government and a region.

The prime minister has said that any agreement will be "within the framework of the constitution", which does not recognise a right to self-determination by a region. Mr Sánchez hoped for a government by Christmas. But Esquerra is taking its time. Analysts of separatism believe prison has persuaded Mr Junqueras to abandon the unilateral strategy of 2017 for the kind of pragmatism practised by the Scottish National Party. But as long as leaders remain in jail, emotion will run high in separatist Catalonia. The division of the independence movement into three parties generates a logic of competitive radicalisation. Mr Junqueras is said to fear that any sign of moderation will be exploited by the party of Carles Puigdemont, the former Catalan president who is a fugitive in Belgium.

Neither side has much room for manoeuvre, but both have much to gain. The separatists touched a void in 2017. No European government is prepared to embrace them, and elections have repeatedly refuted their claim to speak for a majority in Catalonia. "Many separatists now realise there's no way forward without an agreement," says Miquel Iceta, the leader of the Socialists in Catalonia. For their part, political leaders in Madrid have reasons to try to defuse the Catalan conflict. Although the Catalan economy, which accounts for a fifth of Spain's GDP, has proved resilient, the conflict carries a rising opportunity cost. And Spain's failure to persuade more than 2m people that they have a future in the country is bad for its image.

Lancing the boil

There is a third reason. "To hope that there won't be Spanish nationalism when there is Catalan ultranationalism is impossible," says the PP's Mr Aragonés. Although Vox has tapped into worries about illegal immigration, it has mainly been fuelled by fear and anger over separatism. In a survey of how Spaniards voted in November, the Centre for Sociological Research concluded that 69% of those who backed Vox said that Catalonia had influenced their vote. Many of them had previously voted PP.

This means that a return to normality in Catalonia, which would reduce its salience as an electoral issue, should be in the interests of the PP as well as the Socialists. It will take time, and many small steps. The current talks may falter, and Spain could face yet another election. But it is more likely that they will come to mark the end of the Catalan conflict in its recent, acute, form. ■



→ Also in this section

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53 Grime music up north

Bagehot is covering the election online

Trust in politics

The sweet hereafter

The revolving door between public life and big business spins ever faster

MANY A POLITICAL career will end in failure this week as voters have their say at the polling booth. But at least losers can look forward to a comfortable afterlife. General elections, and the upheaval they entail, send waves of public servants into the welcoming arms of companies, banks, consulting firms and other outfits.

The biggest exodus on record was of senior Tories after Labour's 1997 triumph. Departing ministers and civil servants snapped up 175 jobs between them in 1996-98, according to a report by the Advisory Committee on Business Appointments (ACOPA), a Cabinet Office body. ACOPA was founded in 1975 to vet moves of political and civil-service big beasts into the private sector. It cannot stop people taking jobs, but attaches conditions. Another epic spin of the "revolving door" came after Labour's defeat in 2010, when scores of ex-MPs landed in corporate jobs. After 2015 dozens more Liberal Democrat and other losing MPs moved on.

Fast-forward to 2020, and ACOPA's workload is likely to hit another peak. Given the erratic polls, big-name politicians have probably been scoping out possibilities just in case. But this year's cohort will

be seeking jobs when private-sector paydays for top public servants face particular scrutiny. ACOPA is under attack for being toothless. The body is also looking for a new boss, who may tighten its procedures.

Corporate jobs are by now a normal late chapter of a civil-service or political career. Before the 1990s it was Tory grandees who went off to plum posts in the City, says Richard Brooks of *Private Eye*, a muck-raking magazine, but after Labour got close to business everyone started doing it. ACOPA examines the post-retirement jobs of only top people—ministers, permanent secretaries and directors-general. Between 150 and 200 cases come up a year. More private-sector jobs are taken by MPs, chiefs of staff and less-senior civil servants, which

are signed off by government departments.

Beneficiaries argue that having public-service-minded people in companies is a good thing. The private sector is in effect subsidising public-sector pay, they say, helping recruit the best talent into public life. Salaries are higher in the corporate world by a factor of between three and 25.

Yet the likes of the *Eye* keep highlighting controversial cases. A series of official reports, including by the parliamentary Public Administration and Constitutional Affairs Committee (PACAC) that oversees ACOPA, has examined potential abuses and recommended reform. Ministers increasingly seek employment in areas where they used to run policy. ACOPA's main condition is to require former public servants not to lobby their old department on behalf of their new employer, for two years. But the real worry is that jobs may be rewards for decisions taken while in office.

A few notorious cases have poisoned the well for others, complains one PR executive, whose firm has hired many a politico. Tony Blair's post-office earning spree was embarrassing. A few years ago Sir Ed Davey, a former energy minister and now ▶▶



Britain's general election

→ This week's issue of *The Economist* goes to press before the results of the general election will be known. Subscribers with digital access will be able to read a special election edition on our apps on December 13th. And all subscribers will be able to read our analysis of the results, free, online at [economist.com/UKelection2019](https://www.economist.com/UKelection2019)

▶ deputy leader of the Lib Dems, took a job with a PR firm that worked for EDF Energy. As minister he had negotiated an £18bn (\$24bn) deal with the French nuclear firm. There has been no suggestion of wrongdoing, but the appointment raised eyebrows. Sir Ed says he did not work on the EDF account while at the PR firm.

The job portfolio of George Osborne also draws flak. Since 2017 the former chancellor, who edits the *Evening Standard*, has had a one-day-a-week role at the BlackRock Investment Institute, a unit of the world's biggest asset manager, for a salary of £650,000 (in 2017). Mr Osborne and his then chief of staff, Rupert Harrison (who also works for BlackRock), brought in pensions deregulation in 2014 that benefited the firm. Critics doubt if Mr Osborne helped it with an eye to a future job. But Sir Bernard Jenkin, a Tory MP who chairs PACAC, informally warned him that ACOBA's

approval would not protect his reputation. Mr Osborne argued the new job was nothing different from what previous Treasury ministers had done, Sir Bernard says.

Oft-used revolving doors between certain departments and business are particularly worrisome. Officials from HMRC, the tax agency, often go to the tax-advisory arms of Big Four accounting firms. There are two types of appointment, says a retired Big Four partner: first, of civil servants with deep technical expertise and, second, of people who have been decision-makers at HMRC on tax-dispute resolutions and other matters. For some Big Four bosses it is a point of honour to reward civil servants who have been helpful, he says. Meanwhile, ACOBA has described the number of moves from the Ministry of Defence to arms firms as amounting to "traffic".

One risk of all this is that taxpayers get worse value for money. Another is that

such appointments contribute to regulatory capture. But the most important consequence is for trust in government. "The big cases feed the public's perception that money buys access and influence in a cosy process from which voters are excluded," says Alexandra Runswick, director of Unlock Democracy, a campaigning group.

The problem is not going away. Civil servants are told that theirs is not a job for life. Tax rules on pensions mean senior people cannot retire and do nothing, notes a former intelligence chief now in the private sector. Since the Brexit referendum, MPs and ministers are leaving politics earlier because of parliamentary turbulence.

ACOBA "represents a failure of governance in public life—it inspires no public confidence, nor does it protect the reputations of those it is intended to protect," says Sir Bernard. Its main failing is that it has no power to check or enforce the conduct of public servants. In its defence, it points out that the Cabinet Office sets its rules.

Fans of public-private interchange argue that ACOBA's reports on senior moves serve only to stoke outrage. Mr Blair tried to get rid of it and nearly succeeded, notes David Hine of Oxford University. Successive governments have ignored calls to beef it up. A new chief might toughen its processes. But some wonder whether Boris Johnson, whom ACOBA scolded last year when he went back to his *Daily Telegraph* column before receiving its approval, might try to curb its clout if he wins the election. ■

Life after Parliament

Rock, razors and real ale

The ex-MPs pursuing alternative careers

"THROWN OUT of the frying pan, now looking for a fire," croons the singer. "Walking around my old haunts but I'm feeling like a ghost." The song is "Silver Lining" and the band is Summercross, a Yorkshire six-piece. Greg Mulholland, on vocals, is used to fame—but not as a rock star so much as in his former life as a Liberal Democrat MP. "When you're an MP, everywhere you go you're the MP. Even when you go to the pub you're still the MP," he reminisces. "'Silver Lining' is about that profound loss of identity I felt when I lost my seat."

After the people of Leeds North West voted him off stage in 2017, juicy work in the private sector was not forthcoming.

"I knew that there would be no jobs for me, due to my crossing swords with corporate groups," he says, before quoting his own lyrics: "Looking for a new life, but I see the bridges burning." Instead, he believes there is a market for a centrist answer to left-wing singers like Billy Bragg. "There's a misconception that political songwriters come from the left. It's just about not being so preachy."

Mr Mulholland isn't alone in pursuing alternative ambitions after Parliament. Corri Wilson, an MP for the Scottish National Party (SNP) from 2015 to 2017, is now a freelance celebrant, officiating at humanist weddings and funerals in the Ayrshire area. Aidan Burley, who stepped down as a Tory MP in 2015 after it emerged that he had attended a Nazi-themed stag party, runs a "friction-free" razor-subscription service.

In 2015 the SNP's Stuart Donaldson became the youngest male MP, aged 23. Two years later he was the youngest ex-MP. "I just took some time out to enjoy being 25," he says, over a pint. "I went on holiday, and then started applying for jobs. It was really quite hard to quantify what I was good at." Tabloids painted him as a binge-drinker, he says. Somewhat ironically, he has ended up working at the Campaign for Real Ale. A quarter of MPs who got the boot in 2017 sought re-election this week, but Mr Donaldson declined. "I could have hung around like a bad smell," he says, "but I made the decision to be in control of my life."



Mulholland's encore

Overseas nationals

Out of sight, out of mind

HONG KONG

Hong Kongers with British passports demand the right to live in Britain

IN IMPERIAL TIMES Britain governed a quarter of the world's population. Until the 1960s those people shared a common British nationality and, in theory at least, the right to move within the empire, regardless of where they were born. Later, to control immigration, the government in London limited colonial and Commonwealth subjects' rights to live and work in the mother country. Now one far-flung group of British nationals, in Hong Kong, is asking that those rights be restored.

Britain ruled Hong Kong from 1842 until 1997, when it passed the tiny territory, and its 6.5m inhabitants, to China. Before the handover Britain declined to turn all British nationals in Hong Kong into full British citizens, a legal distinction which would have given them more rights. Instead, after 1997 Hong Kongers of Chinese descent were ▶▶



Empire state of mind

► offered Chinese citizenship and a new Hong Kong passport, while those who had been born in Hong Kong were also given the chance to apply for “British National (Overseas)” status. BNO passports, whose burgundy cover and golden coat of arms make them look like the ordinary British sort, give holders the right to British consular assistance abroad (though not in China), as well as the right to apply for certain restricted jobs in the British civil service and armed forces. But they provide no automatic right to live or work in Britain.

After six months of increasingly violent anti-government protests, and amid fears of a crackdown by the Chinese authorities, many in Hong Kong are considering their escape routes. More people are renewing their BNO passports. The number of holders rose from about 180,000 in December 2018 to 250,000 the following October. Yet without the right of abode, the document gives less protection than would, say, an Australian or Canadian passport.

BNO passport holders are therefore urging Britain to extend their rights. Craig Choy, a lawyer and campaigner on BNO matters, says that letting in these British nationals would be a good way for the country to demonstrate its vaunted global openness after Brexit. Yet the government insists that to offer the right of abode to BNOS would breach the Sino-British Joint Declaration, the treaty which outlines how Hong Kong should be run. (BNO campaigners retort that citizenship is mentioned only in a memorandum tacked on to the end, not in the main document.)

Unsurprisingly, the issue did not feature much in Britain’s election—except in Esher and Walton, the foreign secretary’s constituency, where Hong Kong activists urged voters to back the Liberal Democrats, who promise more BNO rights. Polls suggest Britons would be open to the idea of admitting their fellow nationals. Yet for now, Hong Kongers joke that BNO really stands for “Britain says No”. ■

Music

It’s grime, up north

BRADFORD

How rap is helping the left-behind

“SO RIGHT NOW just let me talk / And tell you lot it’s grim up north,” raps Blazer Boccle in his thick Bradford burr. The window of his makeshift bedroom recording studio looks out over the Holme Wood estate. Horses—which belong to the “Charvas”, Bradford’s settled traveller community—roam the streets like dogs. “This is our culture. It’s like London rappers showing high-rise flats in their videos,” says Blazer. “We don’t have that. Round here it’s like kids driving around with shotguns on flip-pin’ horses.”

Grime, a genre of hip-hop known for its rapid breakbeats, emerged in east London in the early 2000s. Its biggest stars, including Stormzy, still hail from the capital. Yet grime is now a national soundtrack. Online commenters poke fun at white youths in Blackpool or Wigan for appropriating the culture of black Londoners, but these rappers are a source of intense local pride.

The scenes have much in common, sharing roots in deprivation. Since the decline of its woollen industry, Bradford has lacked jobs. West Yorkshire has the highest rate of violent crime in England. Grime is something to latch onto. Teenagers congregate in the city’s bus terminal, says Blazer. “Everybody sits at the back and spits bars and shares them on Bluetooth.” Without grime, “we have two options: break our backs for ever in a warehouse, or sell drugs and go to jail. We want to make music an option for other Bradford people, like it is in London.”

As in London, critics argue that grime

means crime. Grime lyrics, with their bleak social realism, sometimes spill into outright provocation. In September Asco, a rapper from Gillingham, was jailed for 12 years for drug-dealing. Other provincial rappers argue they are merely reflecting society back to itself.

Yet northern grime is distinctively northern. One of Blazer’s tracks, “Local”, translates London slang into its northern equivalent. “Everybody says they trap, but here up north yeah we do rounds,” he raps, referring to drug-dealing. Many grime artists want to defend their home towns. “People just have a made-up image of Derby,” says MC Eyez. “They think it’s just farms and trees. I have to let the music speak, so they hear it and say, ‘Okay, there’s a lot of crime and multiculturalism up there.’” MCS see themselves as representatives. As Eyez raps: “Man know that I put Darbz on the atlas.”

Others emphasise their city’s diversity, hoping to debunk stereotypes about the anti-immigrant attitudes of northern Brexiteers. “I want people to respect Leicester’s identity as an example of how multiculturalism can work,” says Kamakaze, a white rapper from one of Britain’s most diverse cities. “White man will never know what the underhand is / I mean look what our country was built on,” he raps. In Bradford, which experienced race riots in 2001, Blazer argues that grime is bringing people together. “What overrides race is the class system. We’re all lower class.”

Many have ambitions that reach far beyond their bedroom recording studios. Stormzy’s vocal support for Jeremy Corbyn helped push young voters towards Labour in 2017. Some of his northern peers are just as political. “I’m not saying I’m going to be the MP for Leicester,” Kamakaze admits, “but politics is definitely a future for certain rappers.” Haze de Martian, another Bradford MC, laughs: “I don’t think Stormzy would do a bad job.” ■



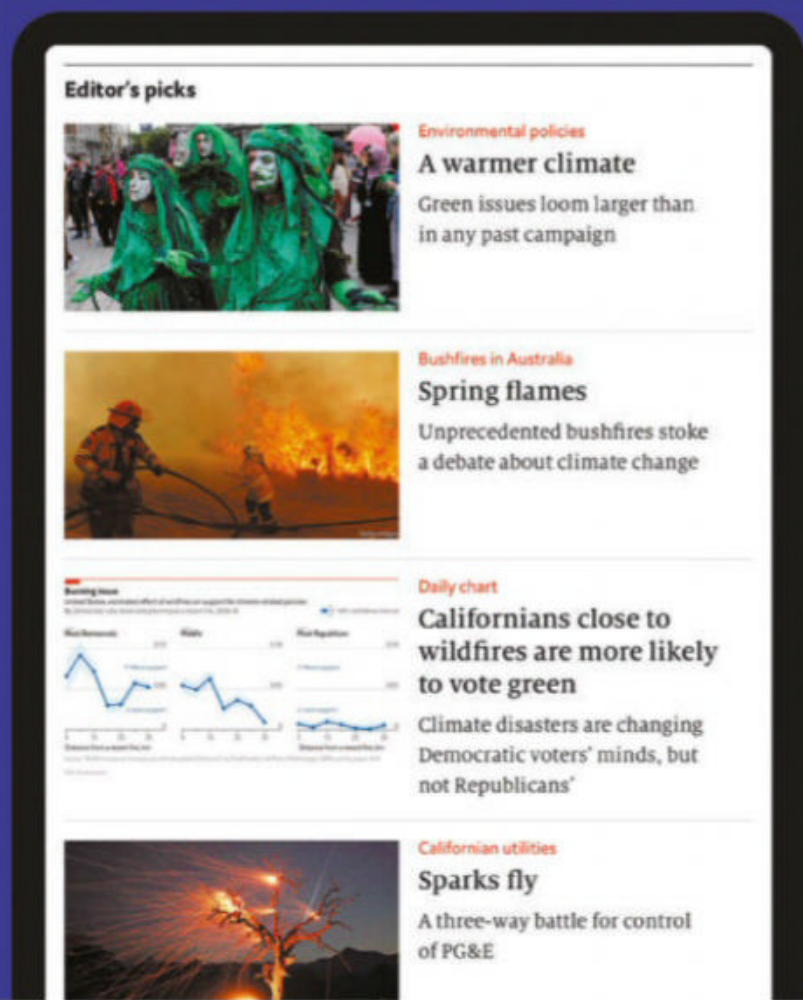
Pony and t’ rap



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Menopause

The time of her life

Millions of menopausal women are missing out on the benefits of hormone-replacement therapy

IT WAS A combination of things. An unusual feeling of depression. Constant forgetfulness. An irregular menstrual cycle. Lucy, a British woman in her early 40s, knew that something was wrong. Two years before she had been training at the gym five times a week. Now she could barely find the energy to exercise at all thanks to chronic insomnia, a new affliction. Her demeanour had shifted from one of cheeriness to constant anxiety. Her work and her home life were suffering as a result.

Unsure what was causing these changes, she visited her doctor. The physician blamed stress. She suggested Lucy return in a year. Frustrated, Lucy turned to the internet. Her research led her to believe that she was entering the transition into menopause. Menopause is the time in the middle of a woman's life—which can begin in the early 40s—when her levels of hormones such as oestrogen, progesterone and testosterone plummet. This eventually causes her ovaries to stop producing eggs and her periods to cease. After a year without periods, a woman is considered to

be menopausal. The symptoms of menopause can include hot flashes, depression, aches and pains, insomnia, anxiety and transient memory loss.

Lucy's experience is unremarkable in two ways. First, every woman experiences menopause. Second, doctors all over the world often fail to provide them with treatment that could alleviate their symptoms. Research suggests that 70-80% of women experience symptoms and for just over a quarter they are debilitating. On average they last for seven and a half years.

And yet doctors often encourage women to grin and bear it. Some suggest eating well and exercising more, which may ease the symptoms. Some prescribe antidepressants or anti-epileptics, which do not treat the cause of the problem. A cheap, effective alternative exists: hormone-replacement therapy (HRT). But as a result of misinformation and scaremongering, millions of women are missing out on it.

Menopause harms women's bones, brains, hearts and immune systems. It is associated with a higher risk of osteoporosis

and fragility fractures, increased abdominal fat, and a heightened risk of contracting diabetes, explains Susan Davis, a professor of women's health at Monash University in Australia.

The hormonal changes of menopause also seem to make women age faster. They speed up cellular ageing by about 6%, when age is measured by the genetic changes in the blood. It is suspected that the insomnia associated with menopause could be causing this. Oestrogen is particularly important in maintaining the health of women's hearts. Before menopause women have fewer heart attacks than men. After menopause the risk increases as the elasticity of the coronary arteries decreases along with their oestrogen levels.

By pill or by patch

In 1966 Robert Wilson, a doctor, wrote a book called "Feminine Forever". In it, he argued that women's loss of hormones after menopause give rise to a serious, painful and often crippling illness, known as oestrogen-deficiency disease. A regular course of oestrogen supplements was the solution, he suggested. They would preserve women's youth, sex appeal and marriages.

The book was divisive. Some women embraced taking oestrogen as a way to defeat the ravages of time. Others resisted what they saw as an attempt to pathologise a natural stage in a woman's life. Nonetheless, by the turn of the millennium hormone-replacement therapy was extremely

popular. In America before 2001 some 20% of post-menopausal women used it at some point. By then a synthetic form of progesterone was being administered alongside oestrogen; it had been shown to protect women from an increased risk of uterine cancer caused by giving oestrogen on its own.

The benefits of HRT seemed clear. Most immediately, it offered relief from the miserable symptoms of menopause. In the longer term it reduced the risk of osteoporosis (which rises after menopause) and therefore the risk of bone fractures. Women liked that it seemed to stop their skin thinning (probably because it boosts the levels of collagen, a protein). It was thought to reduce the risk of cognitive decline. But most importantly, studies suggested that it prevented the onset of cardiovascular disease—one of the biggest killers of women.

The great hormone scare

By 1997 a report in the *Journal of the American Medical Association* concluded that HRT extended life expectancy for post-menopausal women by as much as three years. It had become a standard treatment. But then a bombshell dropped.

In 2002 the results of a large randomised trial conducted by America's National Institutes of Health, known as the Women's Health Initiative (WHI), were rushed into publication. It concluded that taking oestrogen with synthetic progesterone increased women's risk of breast cancer, heart attacks, strokes and blood clots. Women were told that the dangers of HRT mostly outweighed any benefits.

This finding overturned decades of medical practice. As a final kicker, it emerged that Mr Wilson had received money from Wyeth-Ayerst, a company that made oestrogen, while writing his pro-hormone book. HRT went from wonder-drug to killer pill peddled by profit-hungry pharmaceutical firms. Within six years fewer than 5% of American post-menopausal women were taking it. In Western countries use of HRT increased rapidly during the 1990s but halved in the early 2000s. To this day doctors are reluctant to prescribe hormones to their patients.

But the first conclusions of the WHI study, on which so much antipathy to HRT is still based, were almost entirely wrong. The study had hoped to look at strategies for preventing heart disease, cancer and osteoporosis in post-menopausal women. Avrum Bluming, an oncologist and co-author of a recent book, "Oestrogen Matters", says that instead of recruiting healthy women in their late 40s and early 50s, who were entering menopause, the median age was 63. These older recruits were already unhealthy. Half were obese. Nearly 50% were current or past smokers and more than a third had been treated for high blood

pressure. The women included in the study probably suffered from atherosclerosis—where plaque builds up inside arteries and makes heart disease more likely—when it began, says Mr Bluming. What the analysis in 2002 actually showed was that offering older and more unhealthy women HRT was a bad idea. It said nothing about the women at whom the treatment was aimed.

There were other problems. The WHI study almost completely excluded from the trial women who were experiencing menopausal symptoms, fearing that those given the placebo would abandon the trial when their symptoms were not relieved. But these are the women who would be expected to benefit most from the preventive effects of HRT. Recent research suggests that hot flushes and night sweats are associated with an increased risk of heart attack and stroke.

It is now clear that the long-term benefits of HRT for women given it as they enter menopause are significant. A careful re-analysis of the studies showed that women in their 50s were actually 31% less likely to die in the five to seven years that they were taking hormones. For women who have had their uterus removed or who start menopause before the age of 45, it is life-saving, preventing osteoporosis and heart disease for as long as 18 years. There is a tiny increase in the rates of breast cancer among HRT-users after five years of the treatment. This was lower than the risk from working as a flight attendant.

A study published in the *Lancet*, a British medical journal, earlier this year has reignited controversy over the level of risk of breast cancer that comes with hormone therapy. But Ms Davis and others worry that its conclusions are not reliable. Moreover any increase in risk must be weighed against that of developing other diseases.

Taking HRT reduces the mortality of women aged 50-59 by at least 20% and as

much as 40%, mostly because they suffer fewer heart attacks. One in 25 of all women will die of breast cancer; one in three will die of coronary heart disease; and one in six will die of a stroke. Around 90% of women with breast cancer survive it in rich countries. If women are on HRT at the time of their breast-cancer diagnosis they are less likely to die from the disease. Weighing such risks is part of the decision about whether to embark on a course of HRT.

In addition to the flaws in the structure of the WHI study, a change in the versions of hormones used in HRT explains the shifting scientific consensus on the treatment's effects. The synthetic form of progesterone used in the WHI probably triggered cardiovascular problems. The progesterone that many women now take with an oestrogen supplement is thought less likely to do so.

No long-term clinical trials of this specific combination of hormones have been carried out. But, in theory, it should bring all the benefits of oestrogen found in the WHI trial, with none of the risks of taking synthetic progesterone.

In the absence of such studies, HRT remains in medical limbo. And so women in their late 40s and early 50s are losing out. The window of opportunity to begin HRT in order to capture its full benefits—including resisting the effects of cognitive decline—may be as little as two or three years.

Lucy's symptoms worsened after her doctor brushed her off. Convinced by her online research that she was transitioning into menopause, she paid to have blood tested. The results confirmed her suspicions that her hormone levels were the problem. She was prescribed personalised amounts of three hormones: an oestrogen patch, micronised progesterone and testosterone. Within three days her hot flushes had stopped, she was sleeping peacefully and her mood had returned to a happy equilibrium. She felt "superhuman".

But her happy ending is less common than it should be. In Britain more than 1m women are thought to be missing out on treatment. Elsewhere, the prevalence of HRT is even lower. In Hungary and Russia just 3% of menopausal women receive it. In the absence of prescribed hormone therapy, some women turn to natural potions which may alleviate the symptoms of menopause but will not reduce a woman's future risk of a heart attack. Some types of black cohosh, a popular herbal supplement, have been associated with liver poisoning. In countries such as China, Japan and Singapore, Chinese traditional medicines are used. A diet rich in phytoestrogens, such as soya, may reduce the symptoms of menopause. This may explain why East Asian women suffer less. But nothing works as well as HRT. By shunning it, some women are harming themselves. ■





India's digital revolution

So much rests on so few making so little

MUMBAI

Half a billion netizens, a score of tech unicorns, a pile of venture capital and the prospects of Silicon Valley's giants—all rely on India's collapsing telecoms firms

NARENDRA MODI often waxes poetic about “Digital India”: a country where clogged, dangerous roads are replaced by fast, ubiquitous cyber-motorways. The prime minister can be forgiven a touch of political hyperbole. In a world transformed by telecommunications technology, India has stood out. In the 1990s merely getting a fixed phone line required a deposit (and maybe a bribe), then waiting six months, or six years. Now it takes minutes. India has 1.2bn phone accounts, second only to China. Prices are among the lowest in the world. In 2001 one in 30 Indians had a phone. Now just two in 30 do not. India has more than 500m internet users, who shop online with Amazon or Flipkart (owned by Walmart), book rides with Uber and its homespun rival, Ola, and order takeaway with Zomato. Measured by users India is the biggest market for WhatsApp (400m), Facebook (300m) and YouTube (265m). At night the darkness of poorer streets is pierced by Bollywood films or cricket matches flickering on mobile screens.

Look more closely, though, and the physical foundation of this buzzing digital marketplace looks shaky. Many of the companies that built the underlying telecommunications infrastructure are in trouble: unprofitable, indebted, overtaxed and exposed to political whims. In November Vodafone Idea (in which Britain's Vodafone Group owns a 45% stake) and Bharti Airtel, two of the three big providers, and RCOM, which filed for bankruptcy in February, dis-

closed respectively the biggest, second-biggest and fourth-biggest quarterly loss ever reported in India—\$14.5bn, all told. On December 6th Vodafone Idea's chairman, Kumar Mangalam Birla, told a conference that without government support, “We will shut shop.” Whether or not Mr Modi hears Mr Birla's plea, the contours of a massive industry critical to India's development are about to be redrawn.

The causes of the telecoms firms' woes are not mysterious. In 2016 Mukesh Ambani, India's richest man, launched Jio, which took on Vodafone Idea, Bharti and RCOM. His aim was to create a mobile network and a broad digital platform on top of it, offering services from e-commerce to video-streaming. To that end, Jio's parent conglomerate, Reliance Industries, has increased its gross debt to \$42bn. Lenders were happy to bankroll Mr Ambani's project, given his group's lucrative petrochemicals business. It helped that the government had awarded the company that would become Jio rights to spectrum for what many observers thought was a song. Spectrum accounts for only 18% of Reliance Industries' capital invested in its telecoms business, compared with 37% for Bharti and 47% for Vodafone Idea, according to Morgan Stanley, an investment bank.

In its first months Jio charged customers nothing, then next to nothing. Rivals had no choice but to slash rates. In the past three years average monthly revenue per ▶▶

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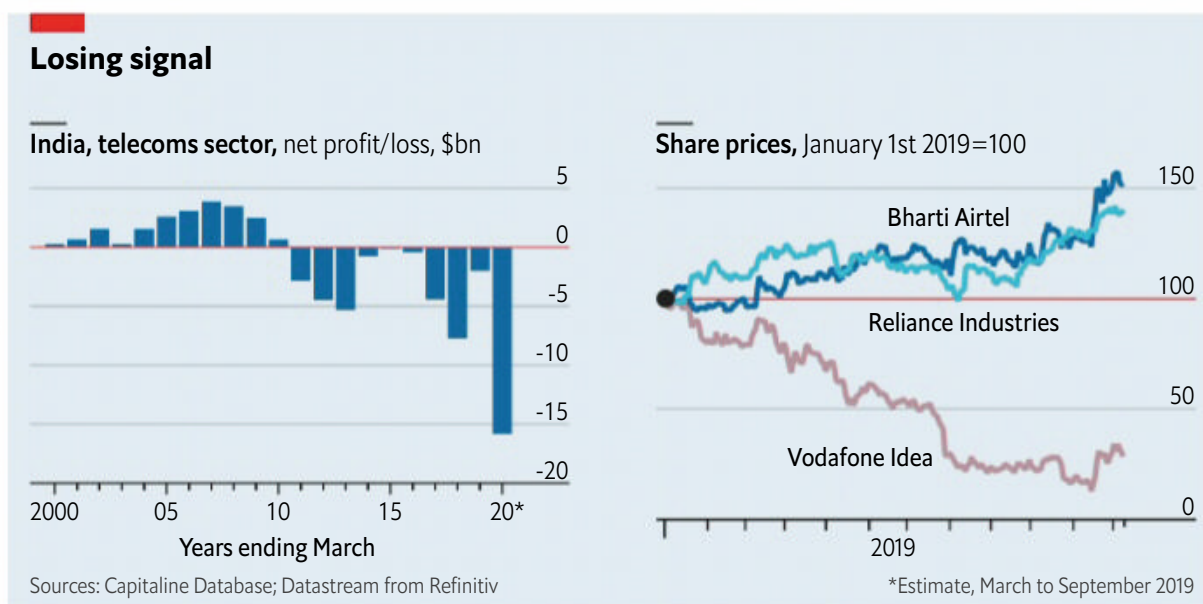
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▶ user has fallen by a third, to 102 rupees (\$1.4). Even so, Vodafone Idea has lost 100m customers in the past year. Jio has seized a third of the market—334m customers.

The relentless price war combined with surging consumer demand has made India's digital highway—on which the three big firms have spent \$128bn—feel as clogged as its roads. Calls often drop and downloads stall. As telecoms troubles mount, network quality could slip further. Morgan Stanley expects Vodafone Idea, Bharti and Jio to spend just \$7bn on capital investment and spectrum this fiscal year, down from \$15.6bn in the previous one.

Surviving this sort of brutal competition would be perilous at the best of times. And for Indian telecoms firms, these times aren't. In October India's Supreme Court ordered Bharti and Vodafone Idea to pay more than \$10bn in charges for operations dating back to 2003. These stem from India's mangrove swamp of formulas which tie licensing charges to revenues. The government defined revenue broadly, to include money made from rentals of office space or foreign exchange. Even money that the firms never actually collected—for example unpaid late fees or the difference between full and discounted plan prices—were included by the government.

Fine, not dandy

The judges dismissed the companies' arguments that licence fees should be levied on licensed activity alone. It also ordered them to pay interest and penalties—and interest on penalties—which accrued over the years as they fought their way through India's Kafkaesque legal system. These surcharges account for 88% owed by Bharti and 75% owed by Vodafone Idea. Dozens of other companies are caught up in the case, many of which have long since fled from the industry, either because they concluded it was unprofitable, rigged in Jio's favour, or both.

Of the 15 operators active in 2010, only four still operate independently today. Tata, India's biggest conglomerate, ran out

of patience with its money-losing telecoms arm and gave it away to Bharti in 2017. The court still slapped Tata with a \$2bn bill.

Reliance has shored up its balance-sheet with the proposed sale of a 20% stake in its petrochemicals arm to Aramco, the Saudi Arabian oil giant, for about \$15bn. The other two mobile firms' balance-sheets are vulnerable. The cost of the legal saga could push Bharti's gross debts up to \$16.7bn, according to Morgan Stanley, 4.3 times its earnings before interest, taxes, and depreciation. On December 5th the company indicated it may need to raise \$3bn through a new share issue to help pay the tax liability. Vodafone Idea, whose \$19.5bn in gross debt is a terrifying 33 times earnings, has neither the cash nor the appetite to pay. As Mr Birla put it, "It does not make sense to put good money after bad."

If either firm collapsed, India's fragile banks would be stuck with a Ghats-worth of non-performing loans. Its embryonic bankruptcy courts could face untold perinatal complications. The government, too, would suffer. It had hoped to replenish its coffers, emptied by a slowing economy, with proceeds from an upcoming auction of 5G spectrum. With no one left to bid but Jio, too young to be ensnared in the tax debacle, the pickings may be slim. Large investments, which Mr Modi wants more of to boost growth, look ever more remote.

Having helped create the mess with its heavy-handed treatment of some companies and coddling of others, the government is now trying to salvage a viable industry from the wreckage. An expensive bail-out of two mid-sized, state-controlled telecoms companies has been announced. With the government's blessing, Vodafone Idea, Bharti and Jio all recently announced price increases of up to 50%. Spectrum charges have been partially waived.

All this has buoyed Vodafone Idea's and Bharti's share prices. How long the rally lasts is another matter. Analysts are hastily redoing their spreadsheets to work out the impact of higher prices on revenues. The results are mixed. Morgan Stanley reckons

that the announced tariff increases would boost revenue per user by 24–37%. Jefferies, another investment bank, thinks the figure is closer to 11–23%, as some customers downgrade plans or ditch them.

That may be enough to save Bharti but not Vodafone Idea, which may need prices to rise by another third, licensing fees to be slashed and tax liabilities waived. Although the finance minister, Nirmala Sitharaman, insists she wants Bharti and Vodafone Idea to survive, markets appear to be pricing in a Bharti-Jio duopoly. Bharti's shares have gained steadily in value as Vodafone Idea's condition has grown sicker. A committee of bureaucrats convened to come up with a fix appears to have been disbanded without providing one. And the clock is ticking—the court has set January 24th as the deadline for the companies to pay their tax obligations.

The telecoms mess comes at an awkward time for Mr Modi. He plans to privatise national champions such as Air India and Bharat Petroleum next year. Airlines and energy are, like telecoms, industries with the ability to raise living standards. But, also like telecoms, they are capital intensive, highly regulated and politically sensitive. This time the world's capitalists will study the telecoms tale carefully before piling in—as will, with trepidation, those who have already bet big on India's digital transformation. ■

Corporate governance

Skirting the issue

AMSTERDAM

How to deal with board gender quotas

"IT'S LIKE smoking; ultimately only a hard intervention made people change," says Jochem Overbosch, an executive recruiter in Amsterdam. As with bans on lighting up indoors, he says, so too with mandatory quotas for women on company boards, which the Dutch Parliament voted for this month after softer targets failed to move the needle much. Employers say they approve. Assuming all goes to plan, the Netherlands will join seven European countries (and California) in replacing the carrot of "please" with the stick of "or else" to increase gender diversity.

Will it make a difference? Quotas with consequences for firms—such as fines in Italy or delisting in Norway—have increased women's boardroom presence. Firms with more women seem to work better, with higher attendance and tougher monitoring of management. But no discernible impact on company performance ▶▶

► has been identified. And the hoped-for trickle-down effect—whereby more female board members would swell the ranks of female executives—has yet to materialise.

Still, quotas are here to stay. No country has lifted those put in place so far (though the Dutch insist theirs are temporary). Best practice is a work in progress, but some dos and don'ts are becoming clear. Formalising selection processes to avoid a shortlist of chairman's chums, for example by hiring an external search firm, as most British firms but only two-fifths of those in America do, is a good idea; it helps avoid inadvertent double standards. So is broadening selection criteria away from a multitude of narrow ones, such as years of executive experience or industry expertise. Ensuring that more than one woman makes it onto the shortlist also helps; research has shown that a lonely shortlisted woman (or representative of a minority) has little chance of getting the job.

Firms should avoid seeking a “pink unicorn” who ticks all conceivable boxes, recommends Laura Sanderson of Russell Reynolds, an executive-search firm. Spreading the desired skills over a number of future appointments makes it easier to find female candidates with at least some of them (or male ones, for that matter). Short, fixed terms for board members make renewal easier. This helps explain why in Britain, which has espoused them, boards are 30% female whereas in America, which has not, progress has flagged, despite corporate professions of gender equality.

Critics say boards are the wrong thing to focus on—a symptom of workplace gender inequality, not its cause. A study just published by Zoë Cullen of Harvard and Ricardo Perez-Truglia of the University of California, Los Angeles, highlights this. The authors studied promotion at a large Asian bank and found that men with male superiors rose up the hierarchy faster than those with female ones. Women managers do not appear to be similarly partial to female underlings, which may help explain why female board quotas have no effect on management's gender mix.

The Dutch quota requires 30% of seats at large listed firms to be occupied by women. This translates to an extra 66 female board members, on top of the 122 who occupy such positions already, estimates Mijntje Lückerath from Tilburg University. Annet Aris, herself a member of several boards, admits the new law is “a lot of noise for a small group of women”. But, she adds, it is “still a very important signal”.

And signals matter, not least to ESG investors, who care about firms' environmental, social and governance performance as well as their bottom-line. Helpfully, gender diversity on boards is easier to pin down than most ESG metrics. It is becoming ever harder to skirt. ■

Japan's hoteliers

Room to grow

TOKYO

As tourist numbers shoot up, Japan faces a chronic shortage of posh hotels. Property developers spot a five-star opportunity

WITH ITS cool modernist interiors and views of Tokyo's Imperial Palace, Hotel Okura has been the choice of the well-heeled since its gilded lobby was unveiled in 1962 as a symbol of Japan's emergence from post-war austerity. Taro Aso, the deputy prime minister, enjoys a late-night tiple at the bar. Yoko Ono takes a suite on her trips to the city. Every American president from Gerald Ford on, has graced its rooms. Donald Trump may well have done, too, had the Okura not been shut for refurbishment when he visited Japan in May.

One reason for the Okura's popularity is the lack of alternatives. Japan has roughly the same number of five-star hotels as Vietnam, and fewer than London or Paris. The Okura has stopped taking bookings for next summer's Olympics for want of rooms, many of which have been earmarked for organisers. The dearth of high-end accommodation has the government considering tax breaks and cheap loans to help build 50 “world-class” hotels—though not in time for the Tokyo games.

Japan came late to mass tourism, points out Koki Hara, a real-estate lawyer. For decades the government pushed industrial growth, so the country's cities filled up with drab business hotels that catered to armies of salarymen. Property developers dominated the real-estate market and clung to most of the prime city-centre spots. High inheritance taxes mean Japan has fewer moguls than other rich places,

hence fewer people who might be keen to build and run posh hotels.

A leap in tourist numbers has exposed the problem. Lured by the cheaper yen, 31m people visited Japan last year, a fivefold rise since 2011. Next year 40m foreign visitors are expected, including 10m just for the Olympics. By 2030 demand for accommodation from foreigners will roughly double, estimates CBRE, a consultancy. A lot of them will be well-off.

Hotels used to be a bad business, but not any more, says Yutaka Kawamura of Mitsui Fudosan, Japan's biggest property developer. Hotels in central Tokyo are well-performing assets in the property market, with annual yields of around 3%, according to CBRE. Prices at posh hotels have shot up. Some have enjoyed unimaginably luxurious margins, says Sam Sakamura, vice-president of Hyatt Hotels in Japan.

This has drawn in more developers. Property companies are erecting hotels on the sites of old office buildings, fewer of which will be needed as Japan's workforce ages and shrinks. Franchise agreements with foreign brands, once rare, are becoming common. Mitsui Fudosan is expanding its portfolio in collaborations with Four Seasons, Bulgari and Mandarin Oriental. Hyatt will open four luxury hotels by next year. And in September the Okura completed its \$1bn renovation, including an elegant new 41-storey building with views of distant Mount Fuji. ■



Going up

Intellectual property

The trouble with troll-hunting

NEW YORK

Rules to curb frivolous patent claims may encourage infringement

NUCURRENT, A STARTUP in Chicago, has come up with a way to charge electronic gizmos wirelessly—a nifty trick for devices such as smartphones. So nifty, in fact, that Samsung, a giant South Korean device-maker, uses it in its mobile phones—or so NuCurrent claims. In 2018 NuCurrent sued Samsung in America for using its technology without paying royalties. In February Samsung denied NuCurrent's allegations in a court filing. Then, between March and June, it filed seven legal challenges against NuCurrent's patents. Navigating each will cost NuCurrent between \$500,000 and \$1m, says its boss, Jacob Babcock—a lot of money for a firm with 35 employees and no in-house lawyers.

Predicaments like Mr Babcock's are increasingly common. Paul Michel, a former top judge on America's patent court, attributes them to an "unco-ordinated overcorrection" to the plague of patent trolls, who accumulate patent rights with an eye to extorting payments from supposed infringers. To fight them, America's government has weakened some intellectual-property protections, notably by reducing the threat of an injunction to block sales of the technology in question. In 2012 it created the Patent Trial and Appeal Board (PTAB) to hear retrospective challenges to a patent's validity. And Supreme Court rulings have made it easier to prove patents invalid by narrowing the criteria for what constitutes an eligible patent.

The well-meaning rules appear to have beaten back the trolls; the number of patent disputes this year is down 37% from 2015, according to Unified Patents, a research firm. The PTAB has invalidated thousands of patents. But the reforms have strengthened the position of big firms in relation to the little guy, say entrepreneurs and venture capitalists. Christopher Coons, a Democratic senator critical of the rule changes, has spoken of a "steady erosion of patent rights". Worse, Mr Coons has argued, they create perverse incentives for big companies to flout patents. Boris Tekler, Apple's former patent chief, observes that "efficient infringement", where the benefits outweigh the legal costs of defending against a suit, could almost be viewed as a "fiduciary responsibility", at least for cash-rich firms that can afford to litigate without end.

Samsung's fellow tech giants, including Apple, Google and Intel, have filed numer-

WHEN COSTCO, an American discount retailer, opened its first store in Shanghai this August, huge crowds of shoppers forced managers to shut it down. The world's 250 biggest retail chains are present in ten countries on average and get about a quarter of revenues from international operations. Expansion into foreign markets looks like a no-brainer for retailers, then?

Not so fast. Many firms' foreign revenues have been tepid (see chart). This week Tesco was reported to be considering the sale of its 2,000 stores in Thailand and Malaysia. Since 2013 the British supermarket chain has folded its unprofitable Chinese operations into a state-run firm, unwound a \$2bn foray into America and exited South Korea and Turkey. Germany's MediaMarkt and America's Best Buy, big electronics retailers, and Home Depot, an American home-

improvement giant, all flopped in China. In June Carrefour, a French supermarket chain, said it would sell 80% of its Chinese business. Even Walmart, the world's largest company by revenue, has found foreign expansion tough. It retreated from South Korea and Germany in 2006, and in 2016 said it would close 269 stores worldwide.

Foreign revenues help insulate firms from downturns in domestic markets. But global retailers face nimble local rivals overseas, who often understand consumer preferences better than foreigners do. Foreign ventures do not always offer refuge from domestic competitors, either. Walmart paid \$16bn in 2018 for a majority stake in Flipkart, a loss-making Indian e-merchant, hoping to profit from serving India's rising middle class. Instead, it is battling Amazon for their custom.

Global retail

Aisle and hopper

NEW YORK

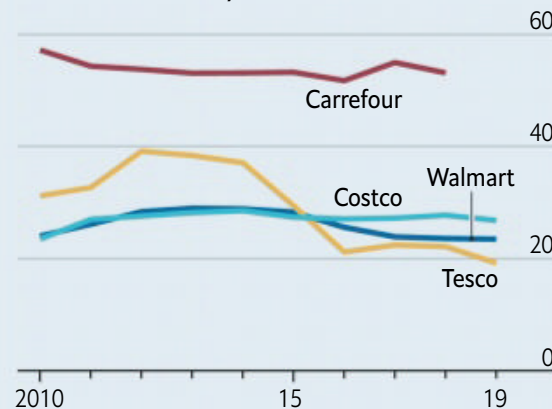
International expansion is a mixed bag for big retailers

Bringing home the groceries

Market capitalisation, December 11th 2019

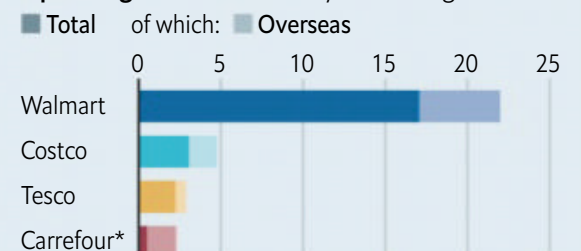


Overseas revenues, % of total revenues



Sources: Bloomberg; company reports; Datastream from Refinitiv

Operating income, financial years ending 2019, \$bn



Share prices, January 1st 2010=100



*Year ending December 31st 2018

ous patent-validity reviews. Big Tech is, predictably, firmly opposed to tougher rules, which Mr Coons and other have proposed. Supporters of strengthening note that weakened patent protection has coincided with a decline in the share of American venture capital going to patent-heavy fields like advanced manufacturing or medical technology, from 21% to 3% between 2004 and 2017, according to a study

commissioned by the National Venture Capital Association, an industry body. Richardson Oliver Insights, a research firm, reckons the average value of an American patent traded in the secondary market fell by 58% from 2013 to 2018. Feebler intellectual-property rights may not be the sole explanation. But having long harranged China for its disrespect of such rights, America now finds itself badgered, too. ■



Computer security

Spooky

Offering software for snooping to governments is a booming business

ON OCTOBER 2ND 2018 Jamal Khashoggi, a Saudi journalist and critic of the kingdom's government, visited its consulate in Istanbul in order to secure documents needed for his upcoming marriage. He did not come out alive. After initially denying responsibility, the Saudi government admitted that Mr Khashoggi was killed in a "rogue operation".

Two months later Omar Abdulaziz, another Saudi dissident, filed a lawsuit in Israel against NSO Group, an Israeli software company. Mr Abdulaziz alleges that the NSO Group had licensed Pegasus, a piece of spyware that snoops on smartphones, to the Saudi government, which used it to spy on him—and, through him, Khashoggi. NSO Group denies that its software was used against Khashoggi. In October WhatsApp, an encrypted-messaging firm owned by Facebook, also sued the firm, saying its software had been used to hack roughly 1,400 of its users. WhatsApp says it has urged America's Department of Justice to open an investigation. NSO Group disputes WhatsApp's allegations "in the strongest possible terms". On November 26th a number of NSO Group's workers filed a lawsuit against Facebook, claiming that the social-media giant has unfairly blocked their private accounts.

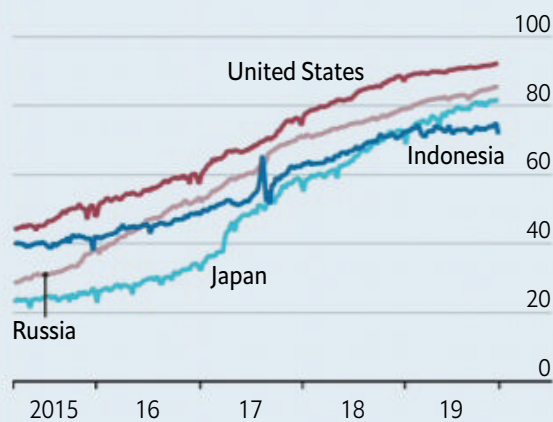
The flurry of lawsuits has drawn attention to a little-known corner of the cybersecurity industry. Most cyber-security firms focus on defending clients from hackers and malware. But some, including

NSO Group, as well as Gamma Group (an Anglo-German firm) and Hacking Team (an Italian one which in April merged with another company to create Memento Labs), sell software to help governments access online data on persons of interest. Business appears to be brisk.

The opaque nature of the market for "intrusion software" means the job of trying to compile figures falls mostly to academics and NGOs. NSO Group, which is unusually candid, says its revenue in 2018 was \$250m. In February Novalpina Capital, a British private-equity firm, bought a majority stake in the firm. The valuation implied by the transaction reportedly placed the firm in the "unicorn" club of startups worth over \$1bn. Most of NSO Group's competitors

Safety in number theory

Encrypted webpages loaded in Google Chrome*
% of total



are much smaller, says John Scott-Railton, a researcher at the University of Toronto's Munk School of Government. Danna Ingleton of Amnesty International, a human-rights group, reckons that the market is worth at least several billion dollars.

The firms are understandably coy about revealing their clients' identities. But in 2015 a widely reported data breach appeared to reveal a list of Hacking Team's clients. The list included a Saudi spy agency and the Sudanese government of Omar al-Bashir, as well as the FBI, Malaysia's Anti-Corruption Commission and the state government of Bayelsa, a province of Nigeria. Memento Labs did not respond to requests for comment.

The industry has been around for a while, but Mr Scott-Railton says that documents leaked in 2013 by Edward Snowden, an American spy—which lifted the lid on America's electronic-surveillance capabilities—gave it a big boost. "Other states said 'how do we get hold of something like that?'" The leaks also pushed Western technology firms to encrypt more web traffic and instant messages, making existing forms of eavesdropping harder (see chart). Some private firms now offer governments that do not have the expertise to breach such defences themselves the tools to do so. Many are staffed by former Western spooks. According to a leaked personnel roster obtained by the *New York Times*, DarkMatter, based in the United Arab Emirates, has hired several people who used to work for the National Security Agency, America's main signals-intelligence organisation. DarkMatter did not reply to requests for comment.

Trench coats and grey hats

Most of the companies say they assist law enforcement in fighting terrorism, drug smuggling or other misdeeds. At a conference in November Shiri Dolev, NSO Group's president, complained about the coverage of her firm. She argued that services such as WhatsApp are used by some "as a vehicle for terrorism and crime", and that software such as Pegasus is vital. The firm insists its products are "not a tool to be weaponised against human-rights activists or dissidents". In September it announced a new human-rights policy, based on UN guidelines; it reckons it is the first firm in the industry to do so. Even before that, says a spokeswoman, the firm had turned down around \$100m of business on ethical grounds in the past three years.

In theory the export of hacking software is controlled by the same laws that regulate the sale of weapons. In practice most observers think such restrictions have little bite. David Kaye, the UN's special rapporteur on freedom of opinion and expression, has described the market for spyware as "out of control" and "unaccountable". ▶▶

► State use of the industry's products to target political opponents, journalists and others seems common, says Ms Ingleton.

Previous lawsuits have foundered, she adds, in part owing to their high-tech, international nature. Courts first need to be convinced that plaintiffs have suffered an injury, that the injury could be traced back to the defendant, and that the court can redress it. Even if this "standing" can be established, it is hard to procure evidence. "And even then it can be hard for some judges to understand what is being presented," she says. In a recent case in Ameri-

ca "Mr Kidane", a pseudonymous American with links to Ethiopia, alleged that the Ethiopian government had been spying on him and his family using FinSpy, one of the Gamma Group's products. A judge threw out the case on the grounds that the alleged spying did not occur entirely within America's borders. The Gamma Group did not respond to requests for comment.

All the recent publicity has nonetheless increased pressure on the companies. In November Ron Wyden, an American senator, called for an investigation into whether NSO Group's products had been used

against American citizens. Mr Kaye wants a moratorium on exports until stricter laws can be drawn up. And the WhatsApp lawsuits marks an escalation by the big technology companies, which want to safeguard their users' data.

A serious crackdown remains unlikely, thinks Edin Omanovic at Privacy International, another NGO, owing partly to the official background of many employees at such firms. "Enforcement has always been a problem within the arms industry," he says. Until that changes, purveyors of snooping software can expect to thrive. ■

Bartleby Conduct yourself



What businesses can learn from the arts

PICTURE A LECTURE session at a business school and you probably envisage students gazing at screens filled with equations and acronyms. What you might not expect is choristers attempting to sing "O clap your Hands", an eight-part anthem composed by Orlando Gibbons and first performed in 1622. But Bartleby was treated to this delight, and others facing MBA students, on a visit to Saïd Business School in Oxford earlier this year.

There was a catch. Some of the students had to try conducting the choir. The first to take the challenge was a rather self-confident young man from America. It didn't take long for him to go wrong. His most obvious mistake was to start conducting without asking the singers how they would like to be directed, though they had the expertise and he was a complete tyro.

The experience was doubtless chastening, but also instructive. The session, organised by Pegram Harrison, a senior fellow in entrepreneurship, cleverly allowed the students to absorb some important leadership lessons. For example, leaders should listen to their teams, especially when their colleagues have specialist knowledge. All they may need to do, as conductors, is set the pace and then step back and let the group govern itself.

It was noticeable, too, that the choir managed fairly well even if the conductors were just waving their batons in an indeterminate fashion. The lesson there, Mr Harrison said, was that leaders can only do so much damage—provided they do not attempt to control every step of the process. The whole exercise illustrated it is possible for a lesson to be instructive and entertaining at once.

Other business schools have also

realised that their students can learn from the arts. At Carnegie Mellon University in Pittsburgh, Leanne Meyer has introduced a leadership-training programme that includes poetry, art installations and a book club. Involvement in such pursuits can help develop empathy in future leaders, she argues; for example, reading a novel helps students get into the mind of a character. She also believes that the programme benefits students in terms of how they promote themselves to recruiters.

It is hardly surprising that art-based programmes are popular. They provide a welcome diversion from the stodgy content that marks out most MBA courses. But are they really helpful? Intriguingly, there are signs that successful businesses are incorporating the arts into their training. AQR, a fund-management group best known for its number-crunching skills, has started a professional- and personal-growth programme called the Quanta academy; one component is a book club where members have read "Destined for War", a book about American-Chinese relations by Graham Allison.



Rather than turn the pages, some business people tread the boards. The Royal Academy of Dramatic Art (RADA) has trained many great thespians, such as Sir Anthony Hopkins, Alan Rickman and Phoebe Waller-Bridge. It also offers training courses for executives, ranging from half a day to six days.

"Acting is about finding the truth in the character and in yourself," says Charlie Walker-Wise, one of RADA's tutors. "We help people to become more aware of their habits; what they do without realising it. How people manage their physicality—their breath, their voice. Not many people are aware of how they come across."

It might seem odd to link running a business with a profession that ranges from Laurence Olivier proclaiming Hamlet's soliloquy to Robert de Niro training as a boxer to play the lead in "Raging Bull". But Mr Walker-Wise says that middle managers are often delivering speeches that are not their own (because they were devised by head office) or trying to inspire staff to meet an objective that was set by someone else. "The lesson from acting is how do I connect to this message without betraying my own personality," he argues.

Being a manager involves a lot more than just setting targets and entering numbers into a spreadsheet. It requires empathy and an understanding of human nature. It makes sense that an education in the arts might help develop those qualities. Above all, the students on Mr Harrison's course at the Saïd school were experiencing something Bartleby never expected to see in those attending an MBA lecture: they were having fun.

Schumpeter | Green with shame

Stigma is a force for creative destruction



IN SOME HOUSEHOLDS 'tis the season to be jolly cross. A young generation of climate Scrooges will be on the warpath this Christmas, ticking everyone off for the air miles travelled, Santa's carbon footprint, gorging on meat and the sacrilege of lighting a log fire. It is not as if, like Dickens's Scrooge, they think that "every idiot who goes about with 'Merry Christmas' on his lips should be boiled with his own pudding, and buried with a stake of holly through his heart." After all, boiling and burying would also release carbon dioxide. But as emissions rise, the killjoys are resorting to shame and repulsion as weapons against environmental evils. It is not just parents who are in the line of fire. Whole industries are, too.

From *flygskam*, or flight shame, to spurning fast-fashion to shunning meat, a relatively small number of young consumers exert a growing influence on big corporations—and politicians who regulate them. It is easy to dismiss the zealots. By and large they are Western, wealthy, well-educated and "woke". Much larger numbers fret about how far their next pay-cheque will stretch to trouble themselves with issues of environmental sustainability. And it is unclear to what extent shoppers in the developing world, where airlines, garment-makers and food producers see growth for decades to come, share the Western shamers' concerns.

Yet even in consumer hotbeds like China, climate consciousness is on the rise. It enjoys an Instagram-fuelled tailwind from successful campaigns against plastics and fur. Everywhere it is amplified by a small but growing coterie of investors not just worried about climate change, but looking for the next big thing. In fashion and food, a new generation of startups is turning sustainability into a brand, as Tesla has done for cars. Some of this may be greenwash. But it is disrupting huge businesses.

Take flight shame. It began as an expression of personal guilt over one's carbon air trail, which is high per passenger and cumulatively accounts for about 2% of global emissions. But it has transformed into something closer to collective culpability. Some airlines, especially in northern Europe, are taking it seriously. In Sweden, where the movement was born, passenger numbers have been falling for more than a year (though some of that may be down to a slowing economy). KLM, a Dutch carrier, is urging cus-

tomers to "fly responsibly"—even telling them that it is quicker to take the train to Brussels from Amsterdam than to fly. (In Swedish, *flygskam's* corollary is *tagskryt*, or train-bragging.) Awareness about the environmental impact of air travel is spreading. On December 9th UBS, a bank, released a study showing that 37% of respondents in a survey of eight big countries have reduced air travel in the past year out of flight shame. Chinese flyers were among the most concerned. Investors are, too. Citi, another lender, says flight shame makes the industry's current demand forecasts look "uncomfortably high". It could hit corporate valuations.

In fashion and food shame is rearing its head, too. Both produce far more carbon emissions than aviation, use huge amounts of water and pollute soils and rivers. Fast-fashion, led by brands such as Zara and H&M, has vastly increased the number of collections sold each year. The resulting throwaway culture has drawn the ire of Western activists. Emerging-market shoppers may join the backlash. Even if they do not, clothing firms feel obliged to show that they are doing something to clean up their act. This summer 32 of the world's best-known garment-makers, including Gap, Nike, H&M Group and Zara's owner, Inditex, forged a pact to make fashion less dirty. They are twitchy that alternatives to fast-fashion, such as resale and rental clothing, which promote the peaceful co-existence of altruism and narcissism, might be on the rise.

Vegan vitriol against animal products can resemble that of "Carnage", a British film from 2017 in which bucolic youngsters 50 years hence look back with disgust on their forebears' consumption of flesh and milk meant for calves. A voice-over likens Paul McCartney's promotion of "meat-free Mondays" to "ethnic-cleansing-free Tuesdays". The film may be a satire, but the trend towards meatlessness is real enough for fast-food chains like McDonald's and Burger King to be introducing plant-based burgers, made by companies such as Beyond Meat and Impossible Foods. Sweden, for its part, is in the throes of a long-running "milk war" between Oatly, an oat-drink producer, and Arla, a dairy multinational. Oatly has run an ad campaign that says of its product: "It's like milk but made for humans." The dairy industry hates it.

Sugar and spice and all things nasty

Using consumption to make political or ethical statements is not new. Lawrence Glickman of Cornell University, author of a history of the subject, likens today's shaming culture to that in the run-up to the American revolution, when anti-British merchants in the colonies refused to sell the crown's goods. Protesters wore homespun clothing and ostracised those who drank English tea—even the stuff washed ashore after the Boston Tea Party. In the late 1700s British abolitionists, especially women, boycotted sugar and other goods produced by slaves in the West Indies. Since then, action has more often focused on specific companies. In the 1990s Nike and Gap were pilloried for their alleged use of "sweatshop" labour. In 2010 Nestlé had to fend off a campaign alleging that it had orangutans' blood on its hands because oil palms which provided ingredients for KitKats had replaced the apes' jungle habitat. This month Peloton, an exercise-bike company, got into hot water over a Christmas ad some deem sexist.

It is harder to shame diffuse behaviour than individual firms. Green-tinged scorn may prove hard to sustain. But it is also hard to counter—the shamers love to trash firms' cuddly marketing guff. As with any consumer trend, few will be as committed as pious early adopters. But they can herald a genuine revolution. Companies ignore them at their peril. ■



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America v China

A profitable student

HONG KONG

Should the World Bank still lend to China?

THE CARIBBEAN islands of St. Kitts and Nevis are known for luxury tourism (visitors include Meryl Streep and Oprah Winfrey), pricey citizenship (on sale for \$150,000), and a sprint world champion (Kim Collins). But despite the country's many assets (including a national income per person of over \$18,000) it is eligible for loans from the World Bank, an institution dedicated to eradicating extreme poverty.

Because the islands are so small, this draws little comment. Not so for China. Its income per person is half that of St. Kitts and Nevis, and lower than that of Poland, Malaysia, Turkey and 15 other potential borrowers. But its eligibility to borrow from the World Bank strikes many Americans as anomalous, even scandalous.

One of them is President Donald Trump. "Why is the World Bank loaning money to China? Can this be possible?" he tweeted on December 6th, a day after the bank discussed a new five-year lending framework for America's rival. Another used to be the World Bank's president, David Malpass, in his former job as an American treasury offi-

cial. In 2017 he argued that "it doesn't make sense to have money borrowed...using the US government guarantee, going into lending in China". Steven Mnuchin, the treasury secretary, heard similar sentiments in a congressional hearing on December 5th. "What are you doing to stop those loans?" asked a Democrat. "It's unconscionable to me that our taxpayers should...be subsidising the Chinese growth model," said a Republican. On this question, at least, America's legislature is almost as harmonious as its Chinese counterpart.

America had objected to the new framework, Mr Mnuchin said. But it cannot have surprised him. In a deal struck last year, America agreed to an increase in the bank's capital, in return for which the bank agreed to charge its richer borrowers higher interest rates, lend to them more sparingly and encourage more of them to "graduate" (ie, cease to be eligible for the bank's loans).

But graduating from the bank is like graduating from a German university: neither brisk nor uniform; leaving behind many *dauerstudenten* (eternal students).

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Once a country reaches a national income of \$6,975 per person, a "discussion" begins. The bank also considers a country's access to capital markets and the quality of its institutions. Of the 17 countries that have graduated since 1973, five later sank back into eligibility, according to a study by the Policy Centre for the New South, a Moroccan think-tank. South Korea left in 1995, then needed the bank's help in the Asian financial crisis. It remained eligible for further loans until 2016, when its income per person was almost three times China's current level.

The bank will, however, lend to China more selectively. The country now owes it about \$14.7bn. Over the next five years, it envisages lending \$1bn-1.5bn a year, 15-40% less than it averaged in 2015-19. The new money aims to encourage fiscal reforms, private enterprise, social spending and environmental improvements. If the bank can help nudge China towards cleaner growth that will benefit everyone, including China's geopolitical rivals. It also hopes to finance pilot projects that poorer countries can learn from. It has paid for Ethiopian officials to study China's irrigation and Indian officials to study its trains.

But would the money not be better spent in poorer countries themselves? The bank's friends point out that its lending to China earns a tidy profit (roughly \$100m last year). It charges China a higher interest rate than it pays on its own borrowing. That is money that can then be used to help poor ►

▶ people who live elsewhere.

In theory, its donor governments could do all this more cheaply and simply themselves. They could issue an equivalent amount of low-yielding sovereign bonds, buy higher-yielding emerging-market securities and donate any profits to low-income countries. But that is not what critics of China's lending are proposing.

Given the profits it can earn, the bank is eager to keep lending to China. Harder to explain is why China wants to keep borrowing from the bank. The sums are small (0.01% of GDP) and the process can be cumbersome. China may value the bank's expertise. But if so, why not buy it without a loan attached?

There are examples of China doing just that. It bought advice on how to improve in the bank's assessment of the ease of doing business. But China may feel a loan gives the bank more skin in the game. Consultants paid only for advice can always blame disappointments on poor implementation of their sound prescriptions. A lender has a greater stake in solving difficulties. Institutions like the bank and the IMF stress the importance of borrowers taking "ownership" of reform programmes. China may feel the same about the lenders it deigns to borrow from. ■

China's economy

Life after tariffs

SHANGHAI

As America raises its walls, China's exporters find new terrain

A YEAR AGO an economic forecasting unit in the Chinese government published an outlook for the coming year. The big worry, it concluded, was the external environment. Shipments to America, China's biggest customer, would suffer as the trade war dragged on. China had maxed out its exports to other big countries, and others were too small to make a difference.

So China's boffins are, like many others, surprised by how things have gone. Exports to America are indeed down, by nearly 15% so far this year. But exports to the rest of the world have been much stronger (see chart). China, it turns out, had more to sell to its big customers: exports to Europe are on track to surpass exports to America this year. Meanwhile exports to smaller markets in South-East Asia, such as Vietnam and Malaysia, have boomed.

According to data from CPB World Trade Monitor, China's share of global exports has reached 11.9%, slightly higher than in July 2018, when the first American tariffs hit. Sluggish imports—in part because of a



domestic slowdown—mean the trade surplus is set to be about a quarter bigger in 2019 than in 2018.

One explanation for China's resilient exports is the yuan's 6% depreciation against the dollar since the trade war began. That has blunted the tariffs' impact. China's currency has also weakened against other major trading partners.

A second is goods routed through other countries to avoid tariffs. Some sent to South-East Asia have ended up in America. Vietnamese customs officials have stepped up checks of everything from seafood to aluminium to ensure that they are not re-labelled Chinese goods. Julian Evans-Pritchard of Capital Economics, a research firm, estimates that American tariffs have cut Chinese GDP growth by about 0.6 percentage points, but that trans-shipments through South-East Asia may have lifted it back up by 0.3 percentage points.

There is also a third, more positive explanation: Chinese companies are highly competitive. Once an assembly centre, China now makes more of the inputs that go into final goods. Its efforts in high-tech sectors such as semiconductors are well-known. But it is making lower-tech progress more broadly. The Chinese light-industry council, representing toymakers, food firms and the like, estimates that its 100 most technologically advanced members invest 2.5% of revenues in research and development, high by international standards; it is pressing them to hit 3%.

The road ahead will not be easy for Chinese exporters. The longer American tariffs last, the more likely American buyers are to find alternatives. The fall in Chinese sales to America has accelerated recently.

On December 4th Chinese exporters of machinery and electronics met for their annual conference. The theme was "flourishing together along One Belt, One Road", in line with the government's policy of promoting economic ties with Asia, Africa and Europe. In previous years that might have been politically astute positioning. Now it looks like a survival strategy. ■

The USMCA

Common ground

WASHINGTON, DC

Where Democrats and Donald Trump see eye-to-eye: on trade

UNION LEADERS and Democratic lawmakers were cool at first towards the USMCA, a replacement for the 25-year-old North American Free Trade Agreement (NAFTA) which was signed by American, Canadian and Mexican trade negotiators over a year ago. But on December 10th, after months of further talks, they swung behind a reworked version. Richard Trumka, the head of the AFL-CIO, America's largest trade-union group, proclaimed a "new standard for future trade negotiations". Nancy Pelosi, the Democratic Speaker of the House of Representatives, called it a "victory for America's workers".

The reversal may seem surprising. The AFL-CIO has not endorsed an American trade deal in nearly two decades, and Ms Pelosi is trying to get President Donald Trump, whose deal this is, impeached. According to polling data provided to *The Economist* by YouGov and published on December 11th, though 79% of Americans say that "trade and globalisation" are important to them, only 37% say the same of replacing NAFTA with the USMCA.

But both the politics and the content of the deal have led to unexpected alliances. Supporting the USMCA lets Democrats claim that they are not obstructing Mr Trump's agenda for the sake of it. And on trade, Mr Trump has more in common with the left wing of the Democratic Party than with his own Republicans. Many Democrats agree that previous deals made trade too free, with too few of the benefits going to American workers. And several of the changes secured by the Democrats are meaningful. Some are sure to be to Mr Trump's taste, too.

Among the revisions are an end to intellectual-property protections for biologics, a specific class of drug, and weaker patents for pharmaceuticals in general. Democrats say such protections stifle competition from generics and raise drug prices. Unsurprisingly, those changes went down badly with the Pharmaceutical Research and Manufacturers of America, an industry lobby. Its president said they amounted to an abandonment of protections for American companies.

Enforcement has been beefed up. Improvements to NAFTA's dispute-settlement system are "probably the most important thing in the whole treaty", says Jesús Seade, Mexico's chief negotiator. Under NAFTA, countries could block the appointment of ▶▶

▶ arbiters to hear awkward disputes. This should no longer be possible.

The shared vision of the Trump administration and Democratic lawmakers is clearest when it comes to labour standards. The aim was to make it less attractive to move jobs from America to Mexico than had been the case under NAFTA by supporting Mexican workers' employment rights. But in the first version of the USMCA, the AFL-CIO complained, the bar for proving a breach of the rules was too high and enforcement mechanisms were too onerous. Critics pointed to the only labour com-

plaint ever to make it as far as a formal dispute as part of an American trade deal: a case against Guatemala in which arbiters agreed that the rules had been broken, but not that any harm to trade or investment had been demonstrated.

The new deal shifts the burden of proof regarding such harm. To avoid penalties, defendants will have to show that it did not happen. Moreover, accusations that manufacturers are breaking Mexican laws covering freedom of association and collective bargaining will be sent for speedy consideration to panels of "independent labour

experts". Rule-breaking will lead to penalties on exports. Overall, the revised labour provisions are good for Mexico, Mr Seade says, and will reinforce its government's own labour reforms.

The revised USMCA will restrict trade a bit more than NAFTA did. It will probably not live up to the hype. Even if greater use of collective bargaining raises Mexican wages, the USMCA's official impact assessment suggests that American wages would rise by just 0.27% in response. But for Mr Trump, his Democratic foes and their neighbours in Mexico, it counts as a win. ■

Buttonwood Dying many times

Why it is hard for foreign investors to be bullish on South Africa

THE FIRST question to consider in any reckoning of South Africa is whether you can get through it without a story about Nelson Mandela. You can't, of course. So here is one that seems apposite. Mandela and his fellow prisoners on Robben Island were allowed one book other than the Bible. They opted for the collected works of Shakespeare. Each marked a favourite passage. Mandela chose one from "Julius Caesar": "Towards die many times before their deaths; the valiant never taste of death but once."

Fast-forward from the struggle against apartheid to today. South Africa's economy has shrunk in two of the past three quarters. The state-owned power company has announced a series of rolling blackouts. An unchecked budget deficit means public debt is on track to rise above 70% of GDP by 2022. The national airline has sought protection from its creditors. The country's investment-grade credit rating is hanging by a thread.

The situation cries out for a valiant response. Remedies have been discussed ad nauseam. If the production of reform blueprints were the key to wealth, South Africa could be the world's richest country. Instead it suffers an unending series of small deaths. It is why, for many investors, it is often a tactical trade but never a strategic one. It is a reform story endlessly sketched out but never written.

The need for fixes is increasingly desperate. This year will be the fifth in which GDP growth has failed to keep up with population growth. The unemployment rate is 29%, a grim statistic that does not fully capture the extent of joblessness. One legacy of apartheid is that many blacks live far from where the jobs are. Since poor public transport makes searching for work costly, many simply drop out. The trouble runs even deeper.

South Africa is a cartelised country, in which insiders—big businesses and their employees; government workers—flourish and outsiders languish. Labour laws intended to reduce inequality have instead reinforced it. Wage deals are fixed by unions and big firms. Small firms must comply, but struggle to do so. Startups and the jobless suffer as a result.

The fixes are well-rehearsed: an end to restrictive labour practices; a dose of competition in industry; a clean-up of state-run power-transmission and transportation monopolies. Countless commissions and development plans have urged such measures. In its annual health-check of South Africa's economy in 2018, the IMF concluded that "bold structural reforms are urgently needed". It was hardly a new message. In 2011 the fund had deemed reforms "critical"; by 2013 they were "imperative"; by 2016 "urgent and imperative". But little has changed.

The wonder is that these simmering problems have never boiled over. A system of welfare grants helps contain some of the population's anger, but weighs on public

finances. South Africa is thus vulnerable to a shift in investors' mood. It runs a persistent deficit on its current account. It relies on overseas capital to bridge this gap between what it spends and what it earns. Ideally this would come through foreign direct investment, which would add to the country's capital stock and create jobs. But it is hard to attract such investment when you do not have a reliable power supply.

So South Africa relies on portfolio inflows to stocks and bonds. It has had enough residual appeal to keep these coming. It has a range of well-run companies that are not especially sensitive to the struggles of the local economy, says Rob Marshall-Lee of Newton Investment Management. Oligopoly in many industries makes for handsome profit margins. Bond investors, with one eye on the country's credit rating, are able to earn higher yields than are available elsewhere. There is still confidence in South Africa's key institutions, says Yacov Arnopolin of PIMCO, a big bond firm. The central bank has stuck to its task of controlling inflation. The Treasury has shrewdly extended the average maturity of public debt to 13 years, which buys the country a bit more time to deal with its problems.

The buying of time seems to have become an end in itself. There is still a great deal of goodwill towards South Africa among the money-men. The memory of Mandela still evokes respect and admiration. But the management of money involves a cold-eyed calculus. Investors are tactical on South Africa; they will buy if the gloom seems overdone or the rewards eclipse the risks, even if barely. Few are valiant enough to be outright bullish. They do not wish to taste of career death even once.



Green central banking

Carbon capture

Central bankers debate whether tackling climate change is mission-critical or mission creep

AS FAR AS interest rates are concerned, the new boss of the European Central Bank (ECB), Christine Lagarde, seems largely in agreement with Mario Draghi, her predecessor. Where she seems to differ is in wanting the bank to be greener. On December 2nd she told European parliamentarians that a planned review of its monetary-policy strategy should take in the impact of climate change. Other central bankers, too, are going green. In recent months ratesetters from Sydney to San Francisco have opined on the impact of climate change on economic and financial stability. The subject has long preoccupied Mark Carney, the governor of the Bank of England, who is soon to become the UN's climate envoy.

So far central banks have focused on the impact of climate risk on the financial system. But activists argue that, just as central bankers saved the global economy during the financial crisis, so too must they tackle the next emergency by shifting capital away from polluters and towards greener uses. Europe's technocrats seem willing to consider the idea. Others caution that it should be a job for politicians instead.

In 2015 Mr Carney set out the channels through which climate change could threaten financial stability. Financial firms are exposed to physical risks: floods, for instance, lead to big insurance payouts and sink the value of banks' mortgage books. Then there is "transition" risk. New government policies, such as a carbon price, could see investors dump the assets of polluting companies. Share prices could collapse, and defaults on bank loans rise. Polluters also risk climate-related litigation. Exxon, an oil company, was accused of misleading investors over the costs of climate change, though on December 10th a court in New York found it not guilty.

So it is important to understand companies' exposures to climate risk. In 2015 central banks from the G20 group of large economies set up a "task force" to encourage disclosure. To date these suggest that exposures are significant but not daunting. As of June nearly half of the world's largest 500 companies (by market capitalisation) had reported exposures, much of which are expected to be realised within the next five years. Those added up to \$1trn—or 6% of the firms' total market value.

Some supervisors have started including climate risk in their assessments of banks and insurers. The Bank of England

requires banks to have a plan for dealing with such risks. The Network for Greening the Financial System (NGFS), a group of 51 central banks and supervisors, collates guidelines for regulators and disseminates scenarios to help analyse potential losses to the financial system. The Dutch central bank was the first to conduct a stress test along these lines in 2018, finding the effects of climate risk to be "sizeable but also manageable". Dutch banks, exposed mostly through their loans to companies, stood to lose up to 3% of their assets. Insurers and pension funds, exposed through holdings of corporate bonds and equities, could make losses of around 10%.

The People's Bank of China (PBOC) helped set up the NGFS, and has led efforts to firm up the definition of a "green bond". Malaysia's central bank is working on a similar taxonomy with the World Bank, and in September hosted a powwow on climate change. But one big emitter has been relatively reticent. Although America accounts for 15% of the world's emissions, its Federal Reserve is not part of the NGFS—no doubt reflecting a lack of political interest.

Even the Fed, though, is talking about how climate change might eventually affect the economy. In November Lael Brainard, a member of its board of governors, said climate-related disruption could affect productivity and long-term economic growth, with consequences for interest rates. Central bankers in commodity-pro-

ducing countries such as Norway and Australia note that a shift from polluters would alter the structure of their economies.

A far more controversial question, though, is whether central bankers should seek to change polluters' behaviour. As part of its asset-purchase scheme, the ECB holds €183bn (\$203bn) of corporate bonds. Its purchases are broadly representative of the market. Energy and utility firms, which are sizeable issuers of corporate bonds, account for roughly a third of the ECB's corporate-bond holdings. On November 27th former central-bank officials and activists pressed Ms Lagarde to stop buying dirty assets or accepting them as collateral when it lends to banks. She plans to study the idea.

Supporters argue that such steps would help correct investors' failure to price polluters' riskiness in full. They would not necessarily conflict with the day job of central banks, says Patrick Honohan, a former head of Ireland's central bank. Many are charged first with ensuring price stability, and second with supporting wider government policy. But critics are unconvinced. In October Jens Weidmann, the head of Germany's Bundesbank, worried that a climate objective could compromise ratesetters' commitment to stable inflation.

Greening asset purchases would mean deciding how much polluters should be penalised—a job for elected politicians, not technocrats, says Tony Yates, an economist formerly at the Bank of England. Notably, the PBOC accepts green bonds as collateral and gives banks' green assets favourable regulatory treatment. But central banks in places where the government holds less sway may be loth to follow its lead. As its economic and financial effects become clearer, climate change is certain to loom larger in central banks' thinking. What they do about it will depend on their willingness to tread on political turf. ■



Underwater assets

Sweden's monetary policy

The Riks flips

A Nordic pioneer of negative interest rates gets cold feet

THE WORLD'S oldest central bank, Sweden's Riksbank, is a trendsetter. In July 2009, in the depths of the financial crisis, it was the first central bank to cut interest rates below zero. It set the global record, of minus 1.25%, for the lowest interest rate on deposits parked with it by domestic banks. Now, however, it looks set to bring the experiment to an end. On December 19th it is widely expected to leave negative territory, raising rates from minus 0.25% to 0%.

Since the economy is in the doldrums, the rationale is unclear. Inflation is 1.7% and forecast to stay below the target of 2% for some time. Meanwhile, the most recent figure for annualised GDP growth was a paltry 1.1%, and the purchasing-managers index, a measure of business activity, is at its worst since the euro-zone crisis of 2012.

The words and actions of the Riksbank's five voting members seem to be all over the place. At the most recent meeting, in October, all expressed concerns about the economy. Stefan Ingves, the governor, argued for a more expansionary monetary policy, noting that Sweden is particularly exposed to weakening global trade. Yet he and his colleagues agreed to the plan to raise rates at the next meeting, on December 19th.

Lars Svensson of the Stockholm School of Economics, a former member of the Riksbank, attributes the move back up to zero to ratesetters who have an "irrational fear of negative interest rates". But the most recent monetary-policy report, in October, assessed negative rates and concluded that they have been a success for Sweden.

If neither the economy nor economists seem to demand an end to negative interest rates, where does the demand come from? The minutes of the latest monetary-policy meeting hint at a possible answer: the general public. Henry Ohlsson, a member of the committee, commented that "it has become very clear that those who are not economists believe it is strange that interest rates can be negative."

Moreover, the Riksbank is under fire for its perceived role in causing Sweden's currency to weaken. In February the krona hit its lowest level ever in real trade-weighted terms, notes Henrik Unell of Nordea, Scandinavia's largest bank. Nordea has dubbed the Riksbank the "krona-killing monster".

In March Mr Ingves brushed off such criticisms. He wrote in *Dagens Nyheter*, a daily newspaper, that the central bank "cannot, and should not, stabilise both in-

flation and the exchange rate". Since Sweden's inflation target of 2% is in line with most other countries', he added, there was no reason to think the krona would weaken indefinitely. The currencies of other small countries with substantial foreign trade had also suffered, he said.

But the pressure continued. When Mr Ingves arrived at a conference in Stockholm in May with three bodyguards, many saw a link with public anger at the weak currency—and, by extension, monetary policymakers. "It's embarrassing and painful to see how the Swedish crown continues to weaken against the euro," tweeted

Barack Obama's intelligence officers told him, variously, that there was a probability of between 30% and 95% that Osama bin Laden was in the Abbottabad compound in Pakistan in April 2011. The president was having none of it. "This is 50:50," he said. "Look guys, this is a flip of the coin." That bin Laden was found and killed does not reveal whose estimate of the odds was best. But new research argues that Mr Obama's instinct—to treat probabilities as evenly split when they are uncertain—is widespread.

In a working paper Benjamin Enke and Thomas Graeber, both of Harvard University, argue that the bias towards 50:50 has shown up in many contexts. One is decision-making under (known) risks, such as gambling at a (fair) slot machine. Economists have long realised that people are more sensitive to changes in probabilities, the nearer they are to the boundaries of 0% and 100%. For example, the chance of a big win of, say, \$1m rising from 0% to 1% seems much more significant than the chance of the same win rising from 20% to 21%. At the extremes, there is a tendency to compress odds towards evens.

Mr Obama did not face known odds, but ambiguous ones. Other researchers have found that such uncertainty has a similar compression effect: it can make people act as if they are facing known odds that are closer to 50:50 than might seem rational, given the information on offer. Messrs Enke and Graeber argue that this tendency even shows up in surveys of expectations about the performance of the economy and the stockmarket.

The authors suggest a new theory to explain this behaviour: "cognitive uncertainty". It could be described as a simple lack of confidence. If people know that

Behavioural economics

Odds and evens

Why are people attracted to 50:50 probabilities?



they may not be doing the sums right, or that their memory may be failing them, or that they are not sure what their own preferences are, then their choices depend less on the information they are presented and more on a "mental default" of equal probabilities.

In a series of online gambling experiments Mr Enke and Mr Graeber show that the more uncertain people are in their judgments, the more likely they are to hedge their bets—even when they have access to information that should, in theory, be useful.

Researchers have in the past suggested that odds of 50:50 are really code for "I don't know". That may well have been what was going through Mr Obama's mind when faced with such a wide range of estimates. Forecasters put odds on events because words like "probable" and "likely" are interpreted very differently by different people. But numbers mean nothing without confidence.

Carl Bildt, Sweden's prime minister from 1991 to 1994. Goran Persson, one of Mr Bildt's successors, has complained publicly about how cheap Swedish assets have become for foreign investors.

Perhaps the Riksbank has been worn down by all the criticism. It is one of five central banks with negative policy interest rates—including two giants, the European Central Bank and the Bank of Japan. Nearly a quarter of global GDP is supported by negative rates. If the Riksbank's experience is anything to go by, the great experiment with negative rates will continue to unsettle people all over the world. ■

Free exchange | Mighty market power dangers

A new book argues that anti-competitive firms are killing American innovation



WHEN THOMAS PHILIPPON moved from France to America in 1999 to begin a PhD in economics, he found a consumer paradise. Domestic flights were dazzlingly cheap. Household electronics were a relative bargain. In the days of dial-up modems Americans, who were charged a flat rate for local calls, paid far less than Europeans to get online. But over the past two decades, Mr Philippon writes in “The Great Reversal”, this paradise has been lost. Europeans now enjoy cheap cross-continent flights, high-street banking, and phone and internet services; Americans are often at the mercy of indifferent corporate giants. Perking up their economy might mean cutting those giants down to size.

Much that has happened to the American economy since the 1990s has not been to the typical worker’s advantage. Growth in output, wages and productivity has slowed. Inequality has risen, as have the market share and profitability of the most dominant firms. Economics journals are packed with papers on these trends, many of which argue that the dominance of big firms bears some blame for other ills. Between 1987 and 2016 the share of employment accounted for by firms with over 5,000 employees rose from 28% to 34%. Between 1997 and 2012, this newspaper reported in 2016, the average share of revenues accounted for by the top four firms in each of 900 economic sectors grew from 26% to 32%.

Two rival stories vie to explain the rise in concentration. One is that domestic competition has been weakened by lax antitrust enforcement, anticompetitive practices and regulatory changes friendly to powerful firms. This is Mr Philippon’s view. Some economists reckon, though, that concentration is rising because of the success of superstar firms—highly innovative and productive companies that have shoved aside unfit competitors. Either explanation could account for the size and persistent profitability of industry-dominating companies. But the implications of each for future growth—and policy—differ greatly. Which is right?

If concentration is caused by ultra-productive firms outcompeting weaker rivals, then investment ought to rise as those firms scale up to exploit their competitive edge. Investment, however, has been disappointing across the American economy. In the 1990s a statistic called Tobin’s Q (a measure of a firm’s market value relative to the cost of replacing its assets, named after an economist,

James Tobin) closely tracked rates of net investment. A high Tobin’s Q indicates that future profits are likely to be high relative to the cost of expanding production. That suggests leading firms should scale up or see a flood of investment by competitors seeking to divert part of that profit stream. In this millennium, however, investment has lagged behind what one would expect, given the level of Tobin’s Q across the economy. A finer-grained analysis shows that the most concentrated sectors account for nearly all the investment shortfall. The change could be caused in part by a shift in investment from tangible capital, such as buildings and machines, to harder-to-measure intangible capital, such as intellectual property, brand value and firm culture. Superstar firms may invest more in intangible capital. But accounting for intangibles, says Mr Philippon, narrows but does not close the investment gap.

Then there is productivity. If concentration is mainly caused by the triumph of superstar firms, it should be rising. Here the data are murkier. The authors of “The fall of the labour share and the rise of superstar firms”, a forthcoming paper in the *Quarterly Journal of Economics*, find a clear link between size and productivity (bigger firms are more productive) and between industry concentration and patenting (which they use as a proxy for innovation). But the relationship between concentration and measures of productivity is less clear, particularly outside manufacturing. Mr Philippon, on the other hand, finds a positive and statistically significant relationship between concentration and productivity in the 1990s but not more recently. What seems clear is that even as concentration has risen across the economy over the past two decades, the rate of productivity growth has not. If superstar firms are indeed a force for concentration, their unique capabilities have not translated into broader gains for the American economy.

Few economists—or Americans—would deny that there are problems with competition in certain sectors, including health care, finance, telecoms and air travel. The most heated arguments about corporate power, however, concern tech giants. They have not, for the most part, used their market power to raise prices; on the contrary, much of what they provide to consumers is free. The most aggressive invest heavily and eke out rather modest profit margins. Comparisons with Europe are not very helpful, since the continent has mostly failed to produce big and innovative rivals to Google, Apple and Amazon. Would it really be wise for America to carve up its tech champions?

The harder they fall

As Mr Philippon notes, economic power is not all that matters. America’s tech giants have gobbled up competitors and spent lavishly on political donations and lobbying. There is no guarantee that superstars, having achieved dominance, will defend it through innovation and investment rather than anti-competitive behaviour. And even if large platform firms are perfectly efficient, economically speaking, Americans might worry about their influence over communities, social norms and politics.

There is no obvious right answer to the question tech giants pose. It was far from clear, in 1984, whether dismembering AT&T would be remembered as a triumph, a fiasco—or simply nothing much. The choice facing American regulators is harder now, precisely because of America’s lack of dynamism. Since innovative, productivity-boosting, socially useful firms come along so rarely, it seems risky to tackle tech behemoths too vigorously, lest doing so weaken the economy’s most vibrant parts. But that reticence may prove a recipe for long-run stagnation. ■



Fighting tuberculosis

TB or not TB? That is the question

Tuberculosis kills more people than any other pathogenic illness. New drugs, vaccines and tests offer hope, though—if there is money enough to deploy them

IN 1882, WHEN Robert Koch discovered *Mycobacterium tuberculosis*, the microbe that causes tuberculosis, the disease caused one in seven deaths in America and Europe. Transmitted through droplets from coughs, sneezes or just talking, tuberculosis felled rich and poor alike. In the century that followed, TB (as the illness is called for short) beat a retreat thanks to antibiotics and a vaccine that protected infants. By the 1990s wiping it out completely seemed tantalisingly within reach.

Since then, however, progress has been glacial. New cases are falling by just 1-2% a year. Today, *M. tuberculosis* kills more people than any other single pathogen (see chart, overleaf). The World Health Organisation (WHO) estimates that 10m people fall ill with it each year and 1.5m die. This is more than three times the number of those who succumb to malaria. A recent wave of

scientific breakthroughs is, though, starting to bear fruit, and there is now widespread optimism that things will change dramatically over the next decade. “It is the first year in which we have some hope,” says Lucica Ditiu, head of the Stop TB Partnership, a global alliance of antituberculosis organisations.

Realising that hope will need money, however. And on December 10th, at a meeting in Jakarta, Indonesia, the partnership published an estimate of how much. The goal, set by the UN in 2018, is to end tuberculosis by 2030. To have any hope of that, the partnership says, will require \$15.6bn a year to be spent over the next five years. This is a doubling of the annual treatment and prevention budget to \$13bn, and a tripling of the R&D budget to \$2.6bn a year.

One reason TB has been hard to crack is that *M. tuberculosis* has an unusual life cy-

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cle. When someone inhales the bug it is either killed by the immune system right away or takes up residence in the lungs. Instead of causing immediate symptoms, though, it usually remains dormant—a state called latent infection that is not contagious. About a quarter of the world’s population has such latent TB. But only about 10% of those so infected ever go on to develop symptoms. Often, those who do have weakened immune systems. People infected with HIV are at particular risk (about 40% of deaths among HIV-positive individuals are caused by TB). Others with higher than average risk of becoming symptomatic are the malnourished, smokers and alcoholics.

Latent problems

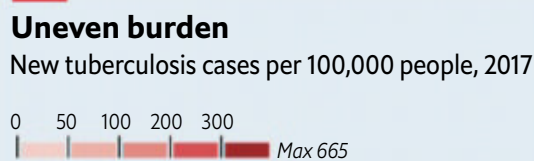
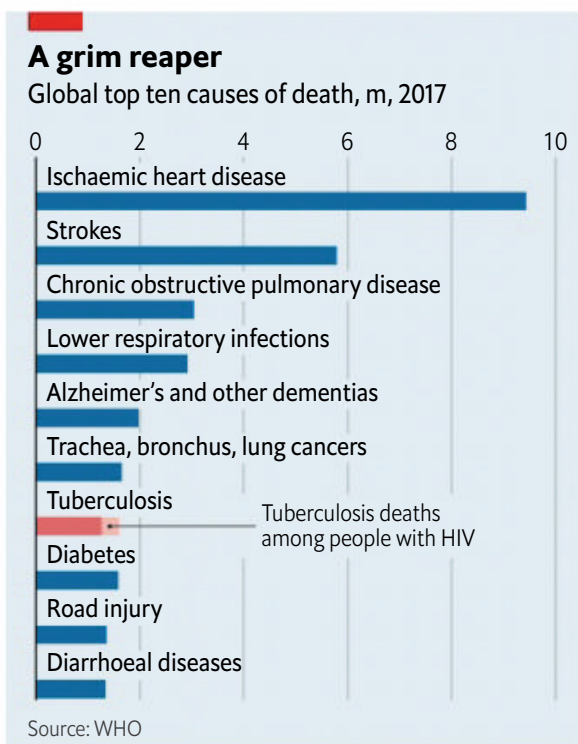
Two developments have complicated the fight against TB since the 1990s. One is the spread of HIV. The other is the emergence of antibiotic-resistant strains of *M. tuberculosis*. Nearly 500,000 of 2018’s new cases were untreatable with standard first-line drugs. And 6% of those cases are classed as extensively drug-resistant—meaning that few or no drugs work for them. Drug-resistant TB has taken a particularly strong hold in Russia and other former communist countries, where it accounts for roughly ▶▶

▶ one in five new cases.

At the moment, the standard treatment for drug-resistant TB involves taking highly toxic medicaments for as long as two years. A patient may have to swallow as many as 20 pills a day, and receive injections with nasty side-effects, such as permanent deafness. Even this regime, however, has a cure rate of only 25-50%. But shorter and safer drug combinations tested in recent years are now being introduced.

They may get shorter still. In August America's drug regulator approved pretomanid, a medicine developed by the TB Alliance, a non-profit organisation based in South Africa's capital, Pretoria, after which the drug is named. Used in combination with other drugs, pretomanid shortens treatment of the most drug-resistant forms of TB to just six months, with an 89% success rate and no injections. Trials are now under way to check whether simpler regimens that include pretomanid can work for strains of TB that are resistant to fewer of the standard drugs.

Treating those who fall ill promptly is crucial to preventing the spread of *M. tuberculosis*. Someone with active TB may, according to the WHO, infect as many as 15 others in the course of a year. But, the WHO reckons, roughly a third of new cases in 2018 went undiagnosed. That is partly because the most widely employed diagnostic method today remains the one Koch himself used: examining a patient's sputum under a microscope to look for telltale bacteria. This procedure, which Barry Bloom of Harvard University, a doyen of the field, calls "an embarrassment to science", detects only about half of active TB cases. And on top of this, the most common test for drug resistance is also ancient: growing a sample in a Petri dish and sprinkling it with antibiotics to check whether they work. This is an exercise that can take up to 12 weeks to provide an answer.



Fancier diagnostic machines that detect *M. tuberculosis* genes in sputum samples—and can determine whether they are of the drug-resistant variety—have been available for about a decade. These provide results in less than two hours. But at \$10 a test they are out of the reach of most health centres in those countries which host the bulk of TB cases. A urine dipstick test for active TB is available, but it works reliably only for people who also have HIV. The pipeline of new tests, however, is packed. According to Stop TB, 18 new diagnostic products may be ready for evaluation by the WHO in 2020.

Moreover, some of the old-fashioned tools are having a makeover. Diagnosing TB is made trickier by the fact that symptoms, such as a long-lasting cough, often do not present themselves during the early stage of illness. Someone who is seemingly healthy can thus be infecting others.

Chest x-rays can nab such early-stage TB. Scanning people en masse in places where TB is common is therefore a sensible way to slow down transmission. A promising innovation on that front are mobile x-ray machines in which reading of the scans is delegated to artificial-intelligence technology. Vans containing such machines now roam around Africa and Asia.

But the hardest problem to crack is predicting who among those with latent TB are likely to become ill—in order to treat them pre-emptively. Research in this area is concentrating on identifying patterns of gene expression in blood cells (which can be retrieved by pinprick) that might appear six months to a year before active TB develops. Those at risk can then be treated, for a single drug taken once a week for three months will clear their latent infection.

Killing a killer

In the end, the biggest hope for beating TB is a new vaccine. The only one now available is BCG (Bacillus Calmette-Guerin), which goes back to 1921. It is effective in preventing the most severe forms of TB in children, such as brain inflammation. But it is unreliable against TB of the lungs—the

most common form of the illness in adults.

Now, a century after the development of BCG, there seems to be light at the end of the vaccine-search tunnel. At least seven candidates are in advanced clinical trials. A particularly promising one, code-named M72/AS01E, has been developed by GlaxoSmithKline, a big drug company. In trials in Africa, the latest results of which were published in October, it was about 50% effective in preventing TB of the lungs in people with latent infection (a group in which no other candidate vaccine has worked). This seemingly low efficacy is in fact good news for a disease that kills so many people a year, says Dr Bloom.

GlaxoSmithKline has not yet said whether it will proceed with the further trials needed to put M72/AS01E on the market. Who would pay for these is an important question, for the \$500m price tag involved is commercially unattractive. The firm says it is in discussions with outside organisations about the matter, and that saying anything more at this stage would "compromise" progress. Observers worry, though, that delay will mean the stockpile of vaccine available for trials will expire—and that creating more will add to costs. Money, as Cicero observed, is the sinews of war, and human beings have been at war with *M. tuberculosis* for a long time. It does look now, however, as if the weapons needed to bring the conflict to an end are being forged. Whether people have the appetite to pay for them remains to be seen. ■

Data storage

Plans within plans

DNA could be used to embed useful information into everyday objects

AHARD DRIVE is a miracle of modern technology. For \$50 anyone can buy a machine that can comfortably store the contents of, say, the Bodleian Library in Oxford as a series of tiny magnetic ripples on a spinning disk of cobalt alloy. But, as is often the case, natural selection knocks humanity's best efforts into a cocked hat. DNA, the information-storage technology preferred by biology, can cram up to 215 petabytes of data into a single gram. That is 10m times what the best modern hard drives can manage.

And DNA storage is robust. While hard-drive warranties rarely exceed five years, DNA is routinely recovered from bones that are thousands of years old (the record stands at 700,000 years, for a genome belonging to an ancestor of the modern horse). For those reasons, technologists have long wondered whether DNA could be ▶▶

harnessed to store data commercially. Archival storage is one idea, for it minimises DNA's disadvantages—which are that, compared with hard drives, reading and writing it is fiddly and slow.

Now, though, a team led by Yaniv Erlich of Erlich Lab, an Israeli company, and Robert Grass, a chemist at the Swiss Federal Institute of Technology, in Zurich, have had another idea. As they describe in a paper in *Nature Biotechnology*, they want to use DNA data storage to give all manner of ordinary objects a memory of their own.

The researchers describe a test run in which they encoded the Stanford bunny—a standard test image in computer graphics—into chunks of DNA. Those chunks were then given a protective sheath of silica nanoparticles. That served to protect them for the next stage, in which they were mixed with plastic and used as feedstock in a 3D printer, which printed a model of the bunny. The result was an object that contained, encoded throughout its structure, the blueprints necessary to produce more copies of itself. By clipping a tiny fragment of plastic from the finished bunny's ear and running the DNA within through a sequencer, the researchers were able to recover those blueprints and use them to make further generations of DNA-infused bunnies.

Satisfied with their proof of concept, they then repeated the trick by encoding a short video in DNA and fusing it in plexiglass, a transparent plastic. They used the plexiglass to make a lens for a pair of spectacles. Once again, clipping a tiny sliver from the lens and dissolving the plastic away was able to liberate the DNA, which could be used to recover the video.

The cost of both producing and reading DNA is falling precipitously. The price of reading a million letters of the genetic alphabet has fallen roughly a million-fold since the start of the millennium. For that reason, Drs Erlich and Grass hope their idea might one day have all sorts of uses. One, they think, could be to embed relevant information into manufactured goods. They give the example of custom-fitted medical implants that contain a patient's medical records and the precise measurements needed to make another implant.

A second use, for the privacy-minded, could be steganography—the art of concealing information within something apparently innocuous (this was the idea behind the DNA-infused spectacles). Their most futuristic idea is an entire world full of objects which, like biological life, contain all the information needed to make copies of themselves in every part of their structure. Drs Erlich and Grass have dubbed their technology the “DNA of things”, and it is certainly a clever idea. But the next job might be to come up with a snappier name. ■

Solar power

Windows of opportunity

Transparent solar cells could be used to glaze buildings

OVER THE past few decades, photovoltaic cells have gone from being exotic and expensive power-packs for satellites and similar high-end applications to quotidian generating equipment for grid-scale power stations. One area where they have not yet fulfilled their potential, though, is as local sources of electricity to keep office buildings and the like supplied with energy. The main reason is that no one has a good answer to the question: where do you put them? Roof-top cells can power a one- or two-storey house. They will not power an office block. You could array them on the walls. But office blocks tend to have high window-to-wall ratios and to be governed, for fire-safety reasons, by strict rules on wall cladding.

What is left is to replace the windows themselves with solar cells. Unfortunately, commercially available solar cells are opaque to the point of blackness. But Seo Kwanyong of the Ulsan National Institute of Science and Technology, in South Korea, plans to do something about that. As he and his colleagues report this week in *Joule*, they have created solar cells that are as transparent as tinted glass.

Dr Seo's approach is, in retrospect, blindingly obvious. It is to punch—or, rather, etch—holes in the material of which a cell is made, in order to let light through. Getting the size and layout of the holes right, though, proved tricky.

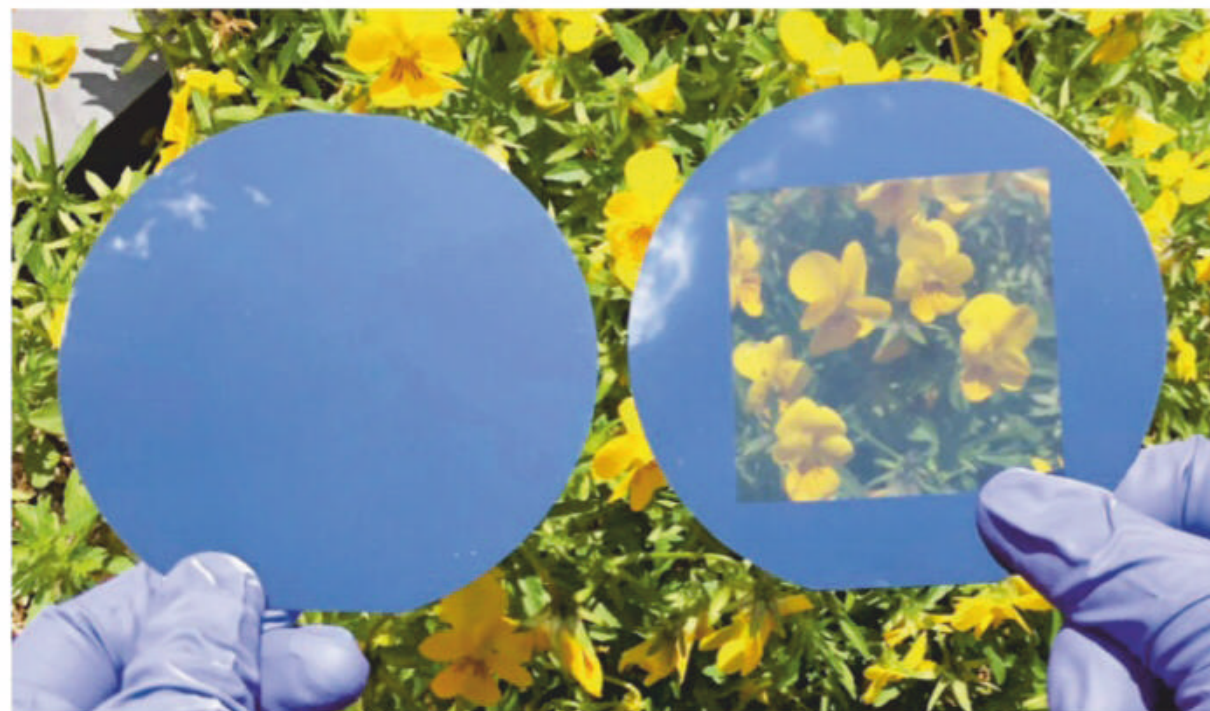
Commercial solar cells are made from wafers of silicon. Dr Seo and his colleagues

worked with sheets of the stuff that were 200 microns thick—the sort of thickness employed commercially. The holes they etched were 90-100 microns across, a diameter calculated to be the minimum needed to permit the passage of visible light without creating awkward diffraction effects that would distort what was seen through the wafer.

Despite this precaution, their first efforts still suffered from strange colours and opaque regions caused by diffraction and consequent interference patterns. But these turned out to be a result of the random spacing and arrangement of the holes, rather than their size. Tweaking the etching process so that it produced holes which were regularly rather than randomly arrayed abolished these distortions and resulted in a material that was evenly transparent and which generated no chromatic aberration. And, crucially, when wired up as a photovoltaic cell it did indeed produce electric current.

Clearly, there is a trade-off between the transparency of a wafer and the amount of light that can be harvested for electricity generation. By adjusting the spacing of the holes, the team were able to make wafers with transmittances of between 20% and 50% of incident light. Commercial tinted and coated glass generally has a transmittance of between 30% and 70%.

Wiring up a wafer with 20% transmittance created a device with an efficiency of 12.2%. That compares with 20% for the best commercial cells, but is not negligible. So, though 20% transmittance is a bit on the dark side for office-window glass, what Dr Seo and his colleagues have created is a prototype that is within shouting distance of numbers that might make it commercially viable. Clearly, it would cost more than standard window glass. But, unlike window glass, it would pay back its cost in free electric current. ■



The hole story



Evolution

A whale of a tale

How cetaceans got so large is a trade off between dive time and hunting success

WHY ARE whales so big? One answer is simply that they can be. The size of land animals is constrained in part by their need to support themselves against the force of gravity. Marine creatures have that support provided free, by the medium they live in. Even so, what is possible is not always sensible. Resources put into growth are unavailable for reproduction. Given that whales can and do become big, however, a second question arises: what, if anything, stops them being even bigger? Jeremy Goldbogen of Stanford University

and his colleagues suspect that the answers to both questions are related to the animals' food supply. And, as they describe in a paper in *Science*, they have gathered data that illuminate how this might work.

Broadly, big whales come in two varieties. Toothed whales, such as sperm whales (pictured above), hunt individual prey. Baleen whales suck in mouthfuls of water and extract small organisms such as krill, using fibrous buccal filters. The biggest whales of all (blue, humpback and so on) are baleen whales. This might be viewed as paradoxical,

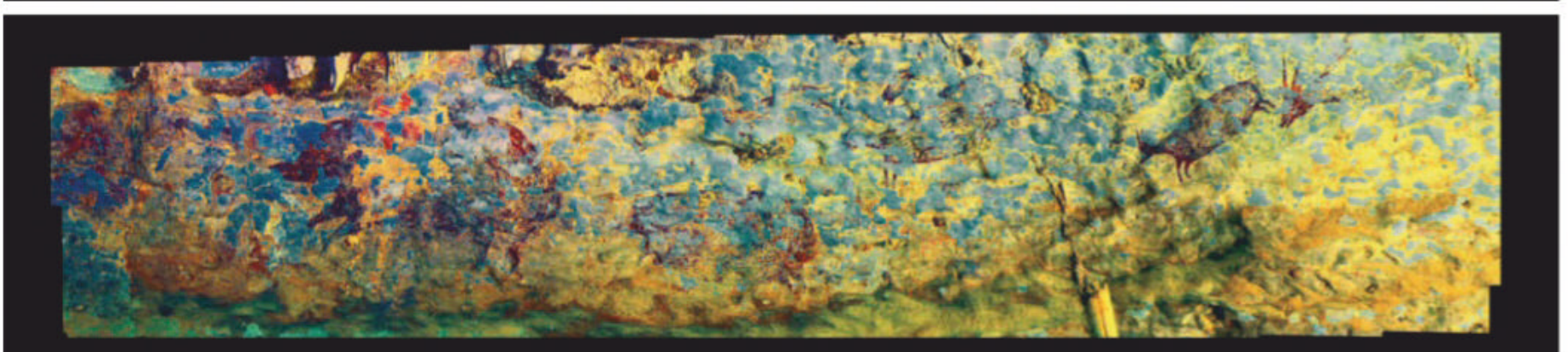
because on land, as predators get bigger, so do their individual prey.

Both toothed and baleen whales often hunt by diving deep—prey being more abundant at depth. To do this they have to hold their breath, which limits how long they can stay underwater. One explanation of giantism in whales is that because bigger whales can hold their breath longer, they can spend more time hunting. But that will only hold good as long as the extra time is spent productively.

Dr Goldbogen and his team attached water-and-pressure-proof data-recording tags to a range of both toothed and baleen cetaceans, to see what they got up to on their hunting dives. In particular, accelerometers in the tags could record the sudden changes of speed, such as lunging movements, that are associated with predatory behaviours.

Counting whale hunts per dive in this way, and knowing from previous studies what types of prey particular cetaceans favour, the researchers were able to work out the feeding efficiencies—energy in versus energy out—of the two sorts of whale. Toothed whales, they found, are living on the edge, size-wise. The number of individual prey they are able to chase and capture in a single dive is just enough to sustain animals of their size. By contrast, the baleen whales the researchers looked at, once they have encountered a shoal of prey, are in nutritional nirvana. A single lunge by a large rorqual, they reckon, can capture ten times as much food as the largest individual prey taken by toothed whales.

Toothed whales thus do seem to have hit some sort of size limit. Perhaps, though, baleen whales might continue to evolve and get bigger still. The blue whale is, at the moment, the largest animal, extant or extinct, known to have lived. Might its descendants be larger yet? ■



Pictures at an exhibition

This photograph shows the world's oldest known art gallery. It is in a cave in Sulawesi, an island in Indonesia. It was discovered by a team led by Adam Brumm of Griffith University, in Australia, and is reported in this week's *Nature*. The most ancient pictures in it date from 43,900 years ago—27,000 years before the well-known cave paintings at Lascaux, in France. Among the exhibits are two pigs and four dwarf buffalo. There are also eight figures that appear, on first glance, to be human, but which closer

examination suggests also have animal features. One seems to have a tail, another a beak. Others have muzzles or snouts. Such constructs are known as therianthropes, and are found in many cultures (the centaurs of ancient Greece, for example, or the jackal-headed Egyptian god Anubis). The oldest known European therianthrope is a statue of a lion-headed man which dates from about 40,000 years ago. That ancient Sulawesians had similar ideas suggests therianthrope has deep roots in human culture.



Democracy in India

Unite and rule

On the 70th anniversary of its constitution, India's liberal democratic order is under threat

RAJMOHAN GANDHI was a teenager when newly independent India adopted its constitution at the end of 1949. "It was a sacred thing, our common religion," he says on the document's 70th anniversary. Now a historian and based in Illinois, he sips milky chai as he recalls how the republic's secular-minded founders sought to forge a modern, democratic country.

British imperialists had ruled India by dividing their subjects into groups, notably of Hindus and Muslims. They let only a tiny, moneyed elite take part in politics. The drafters of the constitution wanted radical change. Its 395 provisions ended up decreeing equal rights for all individuals. All adults, some 160m men and women, could vote; untouchability was abolished; rights to private property, free speech and belief (among others) were enshrined. The courts were to be independent.

Many had doubts about this project. Could a giant democracy with so many diverse and poor people really hold together? Most of its voters were illiterate. Trauma lingered from the bloody partition of Muslim-majority Pakistan in 1947. India's incorporation of its princely states had also

India's Founding Moment. By Madhav Khosla. *To be published in February by Harvard University Press; 240 pages; \$45 and £36.95*

Revolutionary Constitutions. By Bruce Ackerman. *Belknap Press; 472 pages; \$35 and £28.95*

I Am the People. By Partha Chatterjee. *Columbia University Press; 208 pages; \$25 and £22*

been painful. Moreover, none of those vaunted liberal ideas was rooted in traditional society. Bhimrao Ambedkar, the chief drafter of the constitution, said bluntly that he despised life in the villages—where most people lived—as a "sink of localism, a den of ignorance, narrow-mindedness and communalism".

The biggest threat to the new order was posed by extremists who claimed to speak for the Hindu majority (then some 85% of India's population, now 80%). The likes of Nathuram Godse, a zealot who shot dead Mr Gandhi's grandfather, Mohandas Gandhi, called the republic's leaders sell-outs, soft on Pakistan and needlessly con-

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cerned with the interests of non-Hindus. "India must be a Hindu land, reserved for Hindus," wrote Vinayak Savarkar, who coined the term "Hindutva" for the politics of promoting Hindu interests above all.

Such figures hated the constitution's special treatment of Muslim-majority Kashmir, which was given semi-autonomy. Extreme Hindu groups, notably the Rashtriya Swayamsevak Sangh (RSS), wanted nothing secular in the document. There were "very strong cries for a Hindu state", Mr Gandhi remembers. "That Indian leaders said 'No, it will be a secular state'—it was a wonderful thing," he says with a smile. Jawaharlal Nehru, the prime minister, rejected religious rivalry as "a medieval conception which has no place in the modern world".

Seventy years on, how healthy is India's liberal order? In his forthcoming, tightly argued book, "India's Founding Moment", Madhav Khosla captures the pressures on those who wrote the constitution, many of which persist today. He marvels at the "inexplicable survival" of constitutional democracy, while worrying about its future in India and beyond.

Mr Khosla thinks the constitution's endurance derived from the popular legitimacy earned by those universal rights, and from widespread trust in the rule of law. In his book on constitutions around the world, Bruce Ackerman says it helped greatly that strong, charismatic Indian leaders showed restraint by respecting the law themselves. Crucially, Nehru deferred to the authority of the courts and the con- ▶▶

stitutional process. His daughter, Indira Gandhi, did so much less; in Pakistan, those in power have rarely felt so obliged.

It is unclear how long all this will last. Narendra Modi, an unabashed Hindu nationalist and for much of his life an ardent activist in the RSS (others are pictured on the previous page), has been dominant as prime minister since 2014. He is undoubtedly popular, was handily re-elected to a second five-year term in May, and has shown himself ready to smash old norms. He has celebrated Savarkar as a national hero. Parliamentarians in his ruling party even praise Godse, the assassin of Gandhi.

They had a dream

Mr Modi has undermined the constitution that Mr Khosla celebrates. In August he scrapped Article 370, ending Kashmir's autonomy, while suspending democratic rights there, detaining political leaders without trial and imposing military rule. The rest of India, including the Supreme Court, offered barely a squeak of protest. That episode suggests "democracy is failing", as majoritarianism supplants the principle of protecting individual rights, reckons Pratap Bhanu Mehta, another expert on the constitution.

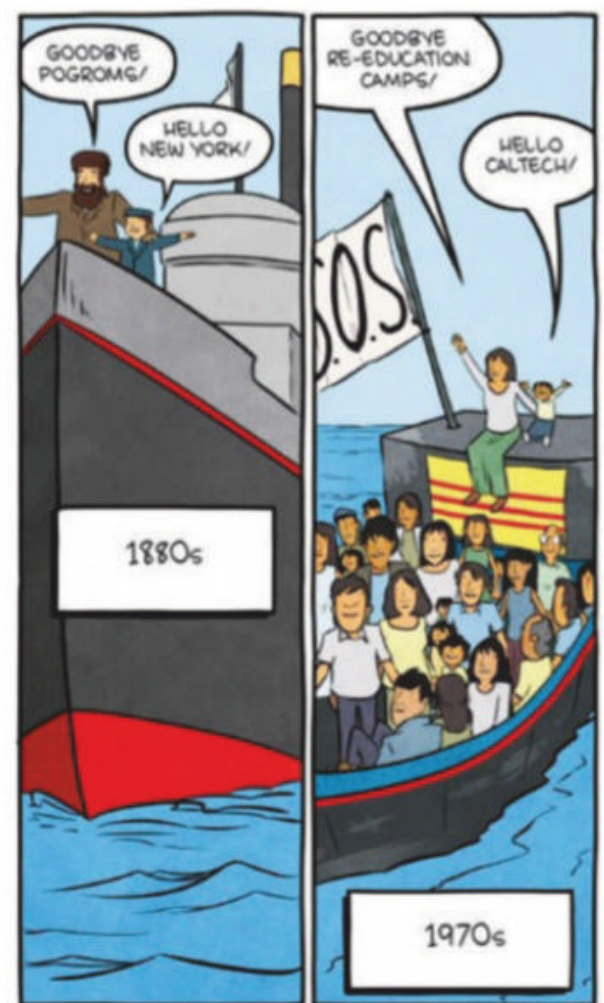
Partha Chatterjee's book on populism in India offers a similar warning. He notes how elected populists, especially in regional governments, have long distributed jobs and handouts to voters. More invidious, he says, is the rise of "ideological" populists, who whip up the majority religious group against the rest. He counts Mr Modi among them, saying he pushes a "homoge-

nised culture of Hinduness", spreading Hindi nationally (to the dismay of speakers of Tamil, Bengali, English and other tongues) while vilifying Muslims as "deviant". For his part, Mr Gandhi thinks India's current rulers consider the constitution to be packed with "foreign"—ie, secular—ideas.

Are they exaggerating? Not really. The more leaders talk about group interests rather than individual rights, the more reason there is to fear that the law may not be applied equally to all. For Muslims, especially, there are creeping reasons to worry. Violent communal attacks are on the rise. Court judgments can seem biased.

A symbolic case is in Ayodhya, a disputed holy site where a mob of Hindu extremists demolished a mosque in 1992, sparking lethal riots. For years courts had refused to grant either Muslims or Hindus exclusive claim to it, but in November the Supreme Court ruled that, after all, the land would be handed over for a Hindu temple. Meanwhile a government-sponsored bill, now in parliament, seeks to amend the law on citizenship. It would explicitly make religious status a condition for nationality, letting Hindus (and members of some other faiths) who flee from nearby countries become Indians—but not Muslims (see Asia).

Such ugly developments should sound an alarm. If Mr Khosla is correct, respect for individual rights and a liberal democratic order have helped keep India stable. Undermining them, and reverting to religious divide-and-rule, will not serve it well. Ambedkar, who dreamed that a democratic constitution would gradually make society more tolerant, would be downcast today. ■



Tale as old as time

saster. Mr Caplan explains why this is unlikely, and how better policies could make it vanishingly so. Are immigrants a burden on taxpayers? Only if the host country's policies allow or encourage them to be. He lays out the fiscal contributions of current migrants, depending on their age and skills, and of a theoretical future mix of new arrivals. His argument is sophisticated and footnoted, but jargon-free and illustrated in a way that helps even readers with no economic training to follow it.

The format is surprisingly effective. The chapter on philosophical arguments for and against open borders features a cartoon John Stuart Mill debating with Mr Caplan, plus Immanuel Kant, John Rawls, Lee Kuan Yew and Jesus. The author puts the strongest arguments against his position into the mouths of sympathetic Everymen and -women, and rebuts them respectfully.

Having set out a maximalist goal—completely free movement—Mr Caplan explores intermediate steps in that direction. For each objection he offers a solution that is less harmful than keeping immigrants out. Worried that they will freeloader? Make them pay more taxes or exclude them from most welfare benefits. Concerned that they won't learn English? Insist that they do, as a condition of entry. Many other books on this topic are angry and hectoring; this one delivers a deeply moral message in a playful tone, interspersed with humour. Schools and colleges should use it not only as the starting point for a civil debate on migration, but also as an example of how to hold such debates in general. ■

The art of persuasion

A thousand words

The case for migration—as you might not have seen it before

ECONOMISTS DO NOT normally write cartoon books. But Bryan Caplan of George Mason University wanted to make a radical argument to the widest possible audience. So he teamed up with Zach Weinersmith, an illustrator with a bold and cheerful brush. The result is a brilliant distillation of the moral, economic and practical arguments for open borders.

It starts with an uncomfortable thought-experiment. Suppose a desperately hungry man called Marvin wanted to walk to a market to buy food—and another man, Sam, prevented him at gunpoint, knowing that he would starve as a consequence. Wouldn't that be murder? And if what Sam did is wrong, why is it all right for Uncle Sam to do something very similar to

Open Borders: The Science and Ethics of Immigration. By Bryan Caplan. Illustrated by Zach Weinersmith. *First Second*; 256 pages; \$19.99. *St Martin's Press*; £15.99

would-be immigrants?

Migration is by far the most effective route out of poverty. Yet all rich countries make it extremely hard, dooming the Marvins of the world to remain in places where life is shorter and more wretched. Governments in rich countries are not merely refusing to help the poor. They are forcibly preventing them from helping themselves.

Advocates of immigration restrictions—ie, nearly everyone in rich countries—predict that free movement would spell di-

Music and politics

Stars and bars

Dangerous Melodies. By Jonathan Rosenberg. *W.W. Norton*; 512 pages; \$39.95 and £28

NOT EVEN classical music, politest of art forms, is safe from politics. In the mid-20th century, when performers affiliated with the Third Reich visited American concert halls, patriotic audiences howled. The Norwegian soprano Kirsten Flagstad—whose husband was a lumber magnate and Nazi collaborator—had to sing in Philadelphia in 1947 amid stink bombs and protest signs. When Herbert von Karajan, an Austrian maestro and former member of the Nazi party, brought the Berlin Philharmonic to New York in 1955, demonstrators released pigeons bearing anti-fascist messages from the balcony of Carnegie Hall.

During the first world war, the concert-going public in America had targeted foreign composers as well as musicians. Audiences evinced a particular distaste for any works featuring the German language, and disdained pieces by living or nationalistic Germans. Hence Wagner and Richard Strauss were struck from playbills, while the humanistic Beethoven generally got a pass. Prominent German conductors of American symphony orchestras were dismissed from their posts and locked up.

Jonathan Rosenberg chronicles these instances of musical nationalism in “Dangerous Melodies”, his survey of classical music’s intersection with politics in the 20th century. The competing strain of thought, he writes, is musical universalism: the squishy notion that music “could act as a balm, a unifier, a force for uplift, and even as a catalyst for global co-operation”. Mr Rosenberg is as sceptical of the universalists as he is of the nationalists, but he ably covers both in his informative (if occasionally repetitive) book.

The two great musical universalists of the century were Arturo Toscanini, a legendary Italian maestro, and Leonard Bernstein, an American composer who conducted, too. Toscanini declined to perform at Bayreuth while Nazi banners flew, instead lending his prestige to the fledgling Palestine Symphony Orchestra. He refused to lead the fascist hymn “Giovinezza” at the beginning of a performance of “Falstaff”, breaking his baton and declaring, “La Scala artists aren’t vaudeville singers.” In 1943, as he walked to the podium to lead a radio broadcast celebrating the collapse of the fascist Italian government, tears of joy streamed down his face. “Nothing should

interfere with music,” he later declared.

Bernstein went further. Rather than simply resisting the efforts of nationalists to co-opt music, during the cold war he actively sought to use the art form to bring adversaries together. Touring Europe and the Soviet Union with the New York Philharmonic in 1959, he stressed the ability of symphonies to break down barriers and calm hostilities. Music is “uncluttered with conceptual notions, no words are involved”, he said. “You can’t argue with a G-sharp.” With lectures and concerts—not to mention podium histrionics full of passion and anguish—Bernstein charmed audiences on both sides of the Iron Curtain.

Yet despite these idealistic gestures, Mr

Rosenberg notes, all sides in the cold war persisted in trying to weaponise their musical stars, with mixed success. The Soviet composer Dmitri Shostakovich, twice denounced by Stalin, said whatever his handlers told him to say in public but would rather have been left alone to work. Van Cliburn, a lanky American pianist, played the great concertos of Rachmaninoff and Tchaikovsky in a lush romantic style, proving that America could compete with Russia culturally as well as militarily. But he was a clumsy statesman. When Dwight Eisenhower hosted him at the White House, he brought a Soviet friend uninvited. The president, no music-lover, paid Cliburn back by skipping his evening concert. ■

Art and society

No crib for a bed

NEW YORK

An opera company recruits singers from among the city’s homeless

L AURA O’DAY is not a professional singer. Nonetheless, last year she auditioned for On Site Opera’s seasonal production of “Amahl and the Night Visitors”, a Christmas staple by Gian Carlo Menotti, because she heard that chorus members would be paid and she needed the money. She used to bag groceries but now, at 58, is on medical leave because of severe arthritis, chronic pancreatitis, lymphoma, diabetes and various

other maladies—“It’s easier to say what I don’t have,” she says with a grim laugh—which are a legacy of her years living rough and addicted to drugs.

She heard about the auditions because she lives in The Times Square, a Manhattan building run by Breaking Ground, the city’s largest provider of permanent supportive housing for the homeless—and a collaborator on the production. Ms O’Day thought she would quit after a rehearsal or two, but found the experience so rewarding that she decided to join the acclaimed troupe for a second year, performing in a sold-out revival at the Holy Apostles Soup Kitchen that ended on December 8th.

On Site Opera has been taking opera out of traditional venues since 2012. The aim, says Eric Einhorn, the company’s co-founder and artistic director, is to demystify an art form that struggles to attract younger audiences. By staging shows in unusual spaces, such as “The Barber of Seville” in an Upper East Side mansion and “Pygmalion” in Madame Tussauds, the company found it could both keep costs down (by avoiding rent and doing without built scenery) and create the kind of intimate theatrical experiences that patrons like. As his team went from staging one production a year to three, Mr Einhorn became more ambitious in other ways, too. Eager to produce an opera with a social impact, he contacted Breaking Ground. The result is a uniquely moving production of “Amahl”.

The title character of Menotti’s opera, which had its premiere in a television broadcast on Christmas Eve 1951, is a poor, crippled shepherd boy who, with his wid- ▶▶



Suffer the little children

Johnson Toil and trouble



Emotive language takes on the legalistic kind in the impeachment battle

“WITCH HUNT!” may be President Donald Trump’s favourite way to describe the impeachment proceedings, but that is far from his only colourful disparagement. “A COUP,” he protested in October. His defenders have chipped in, calling the process a “Star Chamber”, a “show-trial”, “Soviet-style” and a “circus”. Then there is the ultimate inflammatory comparison: Mr Trump says he is the victim of a “lynching”.

Impeachment is a political process as much as a legal one—and it duly involves two linguistic struggles, one rhetorical and the other legalistic, waged simultaneously and overlapping. Mr Trump and his allies have concentrated on the rhetorical task, generating a stream of emotionally charged images and comparisons designed to convince his supporters that the process is unfair—the better to keep their representatives in line. So long as Republican senators hold their ranks, Mr Trump will ultimately be acquitted.

To judge from opinion polls, this effort is succeeding, even if some of the metaphorical flourishes are in poor taste. Some people seem to be confused about who does the chasing in a witch-hunt: at Halloween Republicans sold T-shirts depicting Democratic leaders as witches. Actual coups, meanwhile, involve the telegenic seizure of the presidential palace with tanks, not expert testimony in plodding congressional hearings. Lynching is an offensive analogy as well as an inapposite one; the murder of black Americans, often for imaginary transgressions, has little in common with the attempted removal of the world’s most powerful man by constitutionally sanctioned means.

These buzzwords have caught on all the same. Mr Trump’s camp recently produced a slick television advertise-

ment featuring ordinary voters reaching into this grab-bag of comparisons, calling impeachment a “witch hunt”, a “scam” and a “joke”. Naturally, Democrats want to rally their troops, too, and have duly come up with dubious slogans of their own. Rashida Tlaib, who was elected to Congress in November 2018, said her goal was to “impeach the motherfucker”. Her campaign marketed the catchphrase (bowdlerised with stars) as a T-shirt. For his part, Bill Weld, a dissident Republican, has said that Mr Trump is guilty of “treason”, reminding his audience that the penalty for that is death.

Such is the nature of the process, however, that, as the accusers, congressional Democrats faced another, very different challenge: while pressing their political case, they also had to hone specific charges for the articles of impeachment. Two that they considered, “extortion” and “bribery”, both had disadvantages. One was that they are contradictory; extortion involves putting a squeeze on a victim, while bribery is more consensual. The second drawback was that both are federal crimes.



Politically, if not in law (since the Senate is not a courtroom), pursuing either would have led to demands that they should be proven to the standard of a criminal prosecution. Failure might have undermined the case.

“Bribery” looked the better bet. The constitution specifically mentions it as an impeachable offence. In federal law, any official who demands or seeks “anything of value” in return for “being influenced in the performance of any official act” takes part in bribery. Mr Trump’s critics maintained that dangling a White House visit before Ukraine’s president, and suspending military aid, were official acts, and that the investigations he wanted in return were “of value”.

In the end, Democrats balked, and chose a vaguer charge instead: “abuse of power”, plus “obstruction of Congress”. These, they say, meet the constitution’s standard of “high Crimes and Misdemeanours”. Impeachable deeds need not be statutory crimes of the kind tried in a court, scholars note. Noah Feldman, a law professor at Harvard, told the House Judiciary Committee that the adjective “high” refers not to the gravity of the offence, but to the status of the president’s office.

Yet in rowing back on “bribery” and “extortion” Democrats may have betrayed a nervousness about levels of proof. In preferring “abuse of power”, which has no legal definition, they will seem to some voters to have plumped for a purely political case (if the underlying offence is vague, Republicans of all kinds will be willing to forgive obstruction of Congress). All of which means that, in the clash of rhetorical language and the technical kind, the rhetoric may turn out to be more important. And that is Mr Trump’s home turf.

► owed mother, unexpectedly hosts the three kings on their way to visit the Christ Child. In this modern staging, performed in the round in a vaulted Chelsea church that serves hot lunches to the hard-up, Amahl (Devin Zamir Coleman, pictured on previous page) and his mother (Aundi Marie Moore, a soprano) live in a homeless shelter. The kings arrive wearing ragged robes and makeshift crowns which imply that they, too, are on the streets. In a city where more than 60,000 people have no homes, these characters are distressingly familiar. They are backed by a chorus drawn mainly

from Breaking Ground’s tenants, most of whom have—like Ms O’Day—experienced homelessness for themselves.

“Amahl” has always been a story about grace amid misery: the mother steals the kings’ gold to feed her boy, but then gives away everything to honour a divine child who will one day build a kingdom “on love alone”. This version reminds viewers that such desperation remains shockingly common in one of the richest cities in the world. After it opened last year, many audience members were so moved by this “Amahl” that they asked for it to be an an-

nual holiday event. Most of the original performers cleared their schedules to ensure they could take part again. “When you see people crying, not just one person but a lot of people, it’s clear it’s special,” says Musa Ngqungwana, a bass-baritone who reprised his role as one of the kings.

Ms O’Day hopes audiences come away with a better sense of what it is like to be homeless. She notes that Amahl’s mother steals because she worries about her child going hungry. “That’s what homeless people think about,” she says. “Most people don’t know how hard it is not to have.” ■

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Approx. Cost of the Work: Rs. 2.22 Cr., Earnest Money: Rs. 2,60,800/-. Completion Period of Contract: 24 Months. Submission of Tender: - 17.01.2020 up to 15.00 hrs. Opening of Tender: 17.01.2020 @ 15.30 hrs. Cost of Tender Form: Rs. 11,800/- (Rupees Eleven Thousand Eight Hundred only) to be submitted through online payment modes available on IREPS portal only.

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Economic data

| | Gross domestic product | | | Consumer prices | | Unemployment rate | | Current-account balance | | Budget balance | | Interest rates | | Currency units | | |
|----------------|------------------------|----------|-------|----------------------|-------|-------------------|------|-------------------------|--------|-----------------|--|-------------------|--------------|----------------|-------------|------|
| | % change on year ago | | | % change on year ago | | % | | % of GDP, 2019† | | % of GDP, 2019† | | 10-yr gov't bonds | change on | per \$ | % change | |
| | latest | quarter* | 2019† | latest | 2019† | | | | | | | latest,% | year ago, bp | Dec 11th | on year ago | |
| United States | 2.1 | Q3 | 2.1 | 2.3 | 2.1 | Nov | 1.8 | 3.5 | Nov | -2.4 | | 1.8 | -135 | - | | |
| China | 6.0 | Q3 | 6.1 | 6.1 | 4.5 | Nov | 2.7 | 3.6 | Q3§ | 1.5 | | 3.0 | \$\$ | -1.0 | 7.04 | -2.0 |
| Japan | 1.7 | Q3 | 1.8 | 0.8 | 0.2 | Oct | 0.4 | 2.4 | Oct | 3.1 | | nil | -10.0 | 109 | 4.3 | |
| Britain | 1.0 | Q3 | 1.2 | 1.3 | 1.5 | Oct | 1.8 | 3.8 | Aug†† | -4.3 | | 0.8 | -47.0 | 0.76 | 5.3 | |
| Canada | 1.7 | Q3 | 1.3 | 1.6 | 1.9 | Oct | 1.9 | 5.9 | Nov | -2.3 | | 1.6 | -50.0 | 1.32 | 1.5 | |
| Euro area | 1.2 | Q3 | 0.9 | 1.2 | 1.0 | Nov | 1.2 | 7.5 | Oct | 3.1 | | -0.3 | -56.0 | 0.90 | -2.2 | |
| Austria | 1.5 | Q3 | -0.7 | 1.5 | 1.1 | Oct | 1.5 | 4.6 | Oct | 1.7 | | -0.1 | -61.0 | 0.90 | -2.2 | |
| Belgium | 1.6 | Q3 | 1.7 | 1.3 | 0.4 | Nov | 1.3 | 5.6 | Oct | -0.1 | | nil | -80.0 | 0.90 | -2.2 | |
| France | 1.4 | Q3 | 1.1 | 1.3 | 1.0 | Nov | 1.3 | 8.5 | Oct | -0.9 | | nil | -66.0 | 0.90 | -2.2 | |
| Germany | 0.5 | Q3 | 0.3 | 0.5 | 1.1 | Nov | 1.3 | 3.1 | Oct | 6.6 | | -0.3 | -56.0 | 0.90 | -2.2 | |
| Greece | 2.7 | Q3 | 2.3 | 1.9 | 0.2 | Nov | 0.5 | 16.7 | Aug | -2.3 | | 1.4 | -284 | 0.90 | -2.2 | |
| Italy | 0.3 | Q3 | 0.2 | 0.2 | 0.4 | Nov | 0.6 | 9.7 | Oct | 2.9 | | 1.3 | -180 | 0.90 | -2.2 | |
| Netherlands | 1.9 | Q3 | 1.8 | 1.8 | 2.6 | Nov | 2.7 | 4.3 | Oct | 9.4 | | -0.2 | -56.0 | 0.90 | -2.2 | |
| Spain | 2.0 | Q3 | 1.7 | 2.1 | 0.4 | Nov | 0.9 | 14.2 | Oct | 0.8 | | 0.5 | -102 | 0.90 | -2.2 | |
| Czech Republic | 3.4 | Q3 | 1.5 | 2.6 | 3.1 | Nov | 2.8 | 2.2 | Oct† | 0.5 | | 1.5 | -56.0 | 23.0 | -0.8 | |
| Denmark | 2.1 | Q3 | 1.3 | 2.1 | 0.7 | Nov | 0.8 | 3.7 | Oct | 7.8 | | -0.3 | -51.0 | 6.74 | -2.2 | |
| Norway | 1.3 | Q3 | 0.1 | 1.0 | 1.6 | Nov | 2.2 | 3.9 | Sep†† | 5.4 | | 1.5 | -38.0 | 9.16 | -6.4 | |
| Poland | 4.2 | Q3 | 5.3 | 4.0 | 2.6 | Nov | 2.2 | 5.1 | Nov§ | -0.7 | | 2.0 | -104 | 3.86 | -1.6 | |
| Russia | 1.7 | Q3 | na | 1.1 | 3.5 | Nov | 4.5 | 4.6 | Oct§ | 6.2 | | 6.6 | -217 | 63.6 | 4.5 | |
| Sweden | 1.7 | Q3 | 1.1 | 1.2 | 1.8 | Nov | 1.8 | 6.0 | Oct§ | 3.5 | | nil | -44.0 | 9.44 | -3.7 | |
| Switzerland | 1.1 | Q3 | 1.6 | 0.8 | -0.1 | Nov | 0.4 | 2.3 | Nov | 10.2 | | -0.5 | -46.0 | 0.99 | nil | |
| Turkey | 0.9 | Q3 | na | 0.1 | 10.6 | Nov | 15.5 | 14.0 | Aug§ | 0.2 | | 12.1 | -542 | 5.81 | -7.6 | |
| Australia | 1.7 | Q3 | 1.8 | 1.6 | 1.7 | Q3 | 1.6 | 5.3 | Oct | 0.1 | | 1.2 | -130 | 1.46 | -4.8 | |
| Hong Kong | -2.9 | Q3 | -12.1 | -0.3 | 3.1 | Oct | 3.0 | 3.1 | Oct†† | 4.4 | | 1.7 | -45.0 | 7.81 | 0.1 | |
| India | 4.5 | Q3 | 4.5 | 4.9 | 4.6 | Oct | 3.4 | 7.5 | Nov | -1.8 | | 6.8 | -77.0 | 70.8 | 1.4 | |
| Indonesia | 5.0 | Q3 | na | 5.1 | 3.0 | Nov | 3.1 | 5.3 | Q3§ | -2.2 | | 7.1 | -89.0 | 14,035 | 4.0 | |
| Malaysia | 4.4 | Q3 | na | 4.5 | 1.1 | Oct | 0.8 | 3.3 | Sep§ | 3.1 | | 3.4 | -65.0 | 4.16 | 0.5 | |
| Pakistan | 3.3 | 2019** | na | 3.3 | 12.7 | Nov | 9.8 | 5.8 | 2018 | -3.5 | | 11.3 | ††† | 155 | -10.4 | |
| Philippines | 6.2 | Q3 | 6.6 | 5.7 | 1.3 | Nov | 2.3 | 4.5 | Q4§ | -1.3 | | 4.5 | -263 | 50.8 | 3.9 | |
| Singapore | 0.5 | Q3 | 2.1 | 0.5 | 0.4 | Oct | 0.6 | 2.3 | Q3 | 14.3 | | 1.7 | -53.0 | 1.36 | 0.7 | |
| South Korea | 2.0 | Q3 | 1.7 | 1.8 | 0.2 | Nov | 0.4 | 3.1 | Nov§ | 3.0 | | 1.6 | -33.0 | 1,195 | -5.4 | |
| Taiwan | 3.0 | Q3 | 2.4 | 2.5 | 0.6 | Nov | 0.5 | 3.7 | Oct | 12.0 | | 0.7 | -20.0 | 30.5 | 1.4 | |
| Thailand | 2.4 | Q3 | 0.4 | 2.4 | 0.2 | Nov | 0.7 | 1.0 | Oct§ | 7.0 | | 1.5 | -85.0 | 30.3 | 8.3 | |
| Argentina | 0.6 | Q2 | -1.3 | -3.3 | 50.5 | Oct† | 53.7 | 10.6 | Q2§ | -1.4 | | 11.3 | 562 | 59.8 | -37.1 | |
| Brazil | 1.2 | Q3 | 2.5 | 0.8 | 3.3 | Nov | 3.6 | 11.6 | Oct§†† | -1.9 | | 4.6 | -319 | 4.12 | -5.1 | |
| Chile | 3.3 | Q3 | 3.0 | 1.8 | 2.7 | Nov | 2.4 | 7.0 | Oct§†† | -1.5 | | 3.5 | -81.0 | 771 | -11.7 | |
| Colombia | 3.3 | Q3 | 2.3 | 3.1 | 3.9 | Nov | 3.5 | 9.8 | Oct§ | -4.4 | | 6.0 | -89.0 | 3,384 | -5.9 | |
| Mexico | -0.3 | Q3 | 0.1 | 0.1 | 3.0 | Nov | 3.6 | 3.6 | Oct | -1.1 | | 6.9 | -221 | 19.2 | 5.6 | |
| Peru | 3.0 | Q3 | 2.9 | 2.6 | 1.9 | Nov | 2.1 | 6.7 | Oct§ | -2.1 | | 5.6 | 64.0 | 3.39 | -0.6 | |
| Egypt | 5.6 | Q3 | na | 5.6 | 3.6 | Nov | 8.4 | 7.8 | Q3§ | -0.8 | | na | nil | 16.1 | 10.9 | |
| Israel | 4.1 | Q3 | 4.1 | 3.2 | 0.4 | Oct | 0.9 | 3.4 | Oct | 2.4 | | 0.8 | -161 | 3.48 | 7.8 | |
| Saudi Arabia | 2.4 | 2018 | na | 1.0 | -0.3 | Oct | -1.2 | 5.6 | Q2 | 1.9 | | na | nil | 3.75 | nil | |
| South Africa | 0.1 | Q3 | -0.6 | 0.6 | 3.6 | Nov | 4.2 | 29.1 | Q3§ | -3.9 | | 8.4 | -79.0 | 14.7 | -2.6 | |

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

Markets

| In local currency | Index | % change on: | |
|-------------------------|-----------|--------------|---------------|
| | | Dec 11th | Dec 31st 2018 |
| United States S&P 500 | 3,141.6 | 0.9 | 25.3 |
| United States NAScomp | 8,654.1 | 1.0 | 30.4 |
| China Shanghai Comp | 2,924.4 | 1.6 | 17.3 |
| China Shenzhen Comp | 1,639.5 | 1.9 | 29.3 |
| Japan Nikkei 225 | 23,391.9 | 1.1 | 16.9 |
| Japan Topix | 1,715.0 | 0.7 | 14.8 |
| Britain FTSE 100 | 7,216.3 | 0.4 | 7.3 |
| Canada S&P TSX | 16,939.6 | 0.3 | 18.3 |
| Euro area EURO STOXX 50 | 3,687.5 | 0.7 | 22.9 |
| France CAC 40 | 5,860.9 | 1.1 | 23.9 |
| Germany DAX* | 13,146.7 | nil | 24.5 |
| Italy FTSE/MIB | 23,155.6 | 0.5 | 26.4 |
| Netherlands AEX | 599.0 | 1.3 | 22.8 |
| Spain IBEX 35 | 9,392.5 | 1.3 | 10.0 |
| Poland WIG | 55,531.3 | -1.1 | -3.7 |
| Russia RTS, \$ terms | 1,463.2 | 2.3 | 37.2 |
| Switzerland SMI | 10,405.3 | 0.7 | 23.4 |
| Turkey BIST | 107,921.6 | 0.2 | 18.2 |
| Australia All Ord. | 6,853.2 | 2.1 | 20.0 |
| Hong Kong Hang Seng | 26,645.4 | 2.2 | 3.1 |
| India BSE | 40,412.6 | -1.1 | 12.0 |
| Indonesia IDX | 6,180.1 | 1.1 | -0.2 |
| Malaysia KLSE | 1,563.2 | 0.1 | -7.5 |

| | % change on: | | |
|-----------------------|--------------|------|----------|
| | index | one | Dec 31st |
| | Dec 11th | week | 2018 |
| Pakistan KSE | 40,531.4 | 0.6 | 9.3 |
| Singapore STI | 3,172.9 | 0.4 | 3.4 |
| South Korea KOSPI | 2,105.6 | 1.8 | 3.2 |
| Taiwan TWI | 11,700.8 | 1.7 | 20.3 |
| Thailand SET | 1,551.8 | -0.9 | -0.8 |
| Argentina MERV | 35,019.5 | 0.9 | 15.6 |
| Brazil BVSP | 110,963.8 | 0.6 | 26.3 |
| Mexico IPC | 43,195.2 | 2.4 | 3.7 |
| Egypt EGX 30 | 13,427.2 | -1.5 | 3.0 |
| Israel TA-125 | 1,619.1 | 1.2 | 21.4 |
| Saudi Arabia Tadawul | 8,133.7 | 3.3 | 3.9 |
| South Africa JSE AS | 55,766.5 | 1.4 | 5.7 |
| World, dev'd MSCI | 2,295.0 | 0.9 | 21.8 |
| Emerging markets MSCI | 1,058.2 | 2.1 | 9.6 |

US corporate bonds, spread over Treasuries

| | Basis points | |
|------------------|--------------|---------------|
| | latest | Dec 31st 2018 |
| Investment grade | 149 | 190 |
| High-yield | 476 | 571 |

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

Commodities

The Economist commodity-price index

| 2015=100 | % change on | | | |
|------------------------|-------------|-----------|-------|------|
| | Dec 3rd | Dec 10th* | month | year |
| Dollar Index | | | | |
| All Items | 111.2 | 113.6 | 4.2 | 10.6 |
| Food | 98.5 | 99.8 | 1.9 | 8.8 |
| Industrials | | | | |
| All | 123.0 | 126.5 | 6.0 | 12.0 |
| Non-food agriculturals | 98.9 | 100.1 | 3.4 | -7.2 |
| Metals | 130.2 | 134.3 | 6.6 | 17.3 |
| Sterling Index | | | | |
| All items | 130.6 | 131.7 | 1.6 | 5.2 |
| Euro Index | | | | |
| All items | 111.3 | 113.6 | 3.5 | 12.9 |
| Gold | | | | |
| \$ per oz | 1,478.8 | 1,463.3 | 0.8 | 17.6 |
| Brent | | | | |
| \$ per barrel | 61.2 | 64.5 | 3.3 | 5.9 |

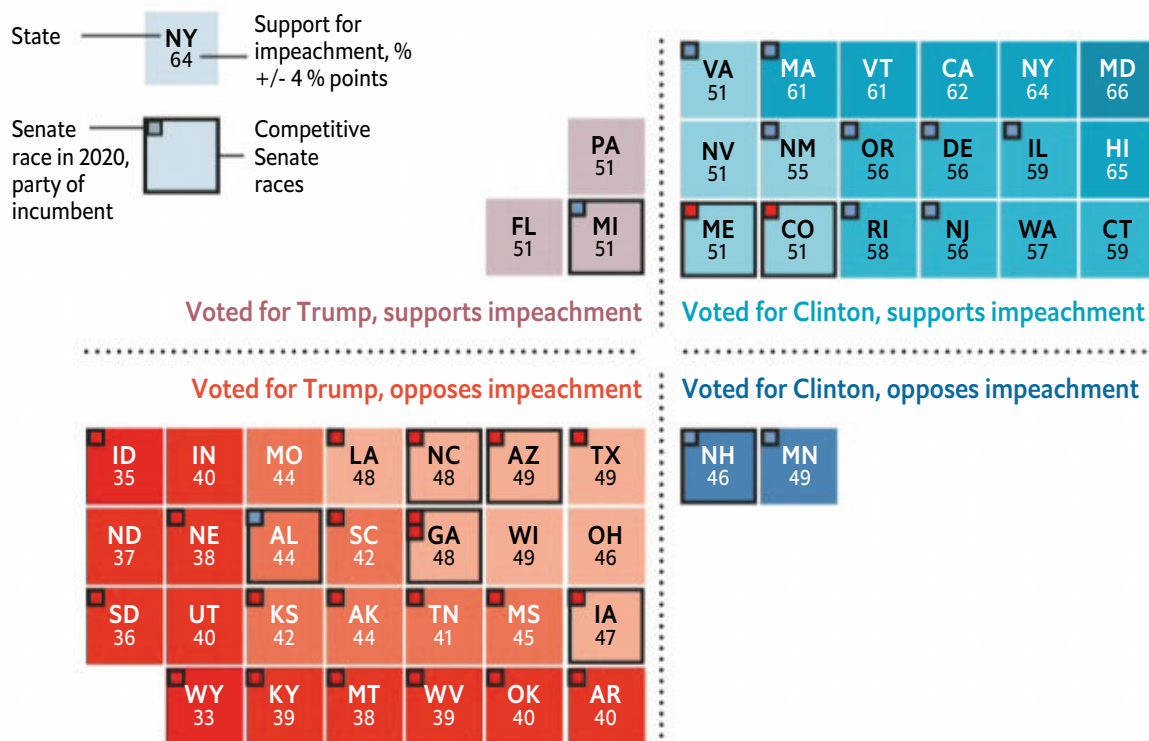
Sources: Bloomberg; CME Group; Cotlook; Datastream from Refinitiv; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit [Economist.com/indicators](https://www.economist.com/indicators)

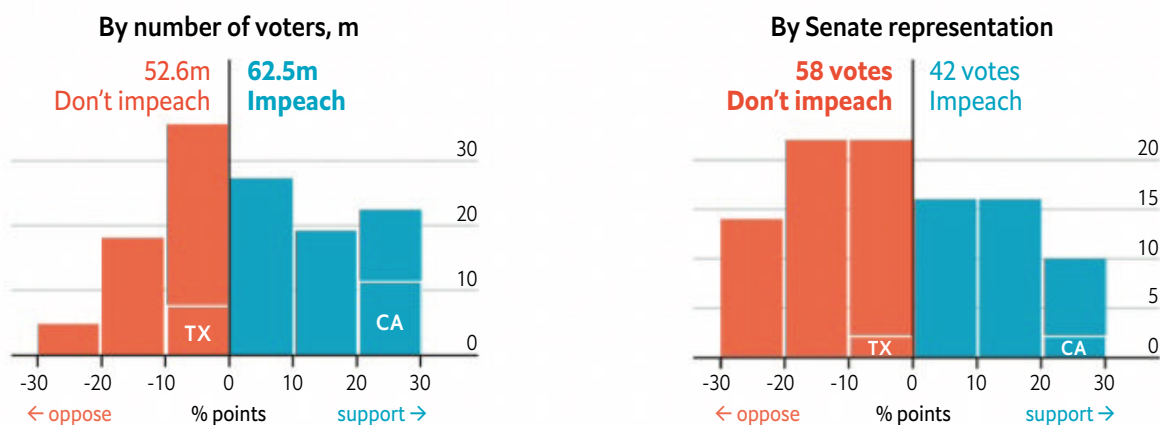
The Senate overrepresents less-populated states, which are disproportionately opposed to impeachment

Estimated support for impeachment* and vote in presidential election in 2016

By state, at December 4th 2019



Estimated net support for impeachment*



All the wrong places

A plurality of Americans—but not of states—want Donald Trump impeached

DONALD TRUMP owes his presidency to America's quaint system of electing leaders. Despite losing the popular vote, he prevailed in the electoral college by winning lots of states by small margins and losing a few by large ones. Now, as Democrats prepare to impeach him, a similar quirk is helping him stay in office—and insulating his party from voters' wrath.

Whereas the electoral college is only mildly anti-majoritarian, the Senate often deviates wildly from the popular will. Because each state is weighted equally, voters in less-populous states are over-represented relative to those in large ones. Now that Republicans derive an outsize portion of their support from rural voters, their share of senators exceeds their share of total

votes cast in Senate elections.

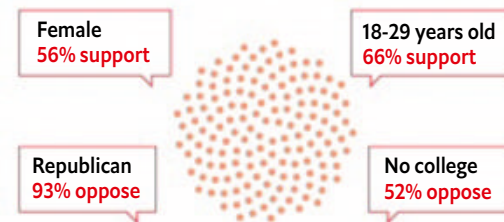
This imbalance weighs on the politics of impeachment. Even if the Senate were apportioned by population, as the House of Representatives is, it would not reach the two-thirds majority needed to convict the president. However, if the chamber reflected public opinion more closely, some Republican members seeking re-election might feel obliged to support his removal.

In reality, Republicans are likely to benefit from closing ranks around Mr Trump. To determine senators' incentives, we estimated opinions on impeachment using a method called multi-level regression and post-stratification (MRP). Its first step uses a national survey—YouGov, a pollster, gave us data from 18,000 people—to measure how demographic traits affect views (eg, Hispanic voters over age 64 tend to oppose impeachment). Next, MRP applies these relationships to the demography of each state, mimicking 50 separate state polls.

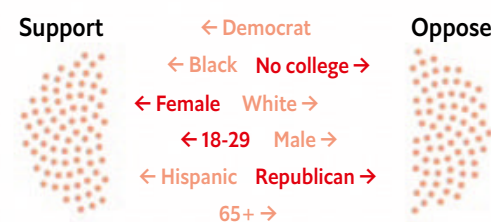
The result should make Democrats nervous. Although 52% of voters with an opinion back impeachment, that is less than the 55% who disapprove of the president. This

How our "multi-level regression and post-stratification" model works

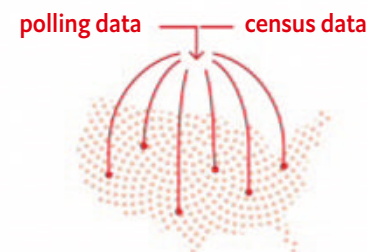
1 YouGov surveyed 18,000 Americans, asking them about their backgrounds and whether they support or oppose impeachment



2 We built a statistical model—a "multi-level regression"—that measures how each demographic trait affects support for impeachment



3 We applied this model to the demography of each state to predict the share of its residents who support impeachment (the "post-stratification")

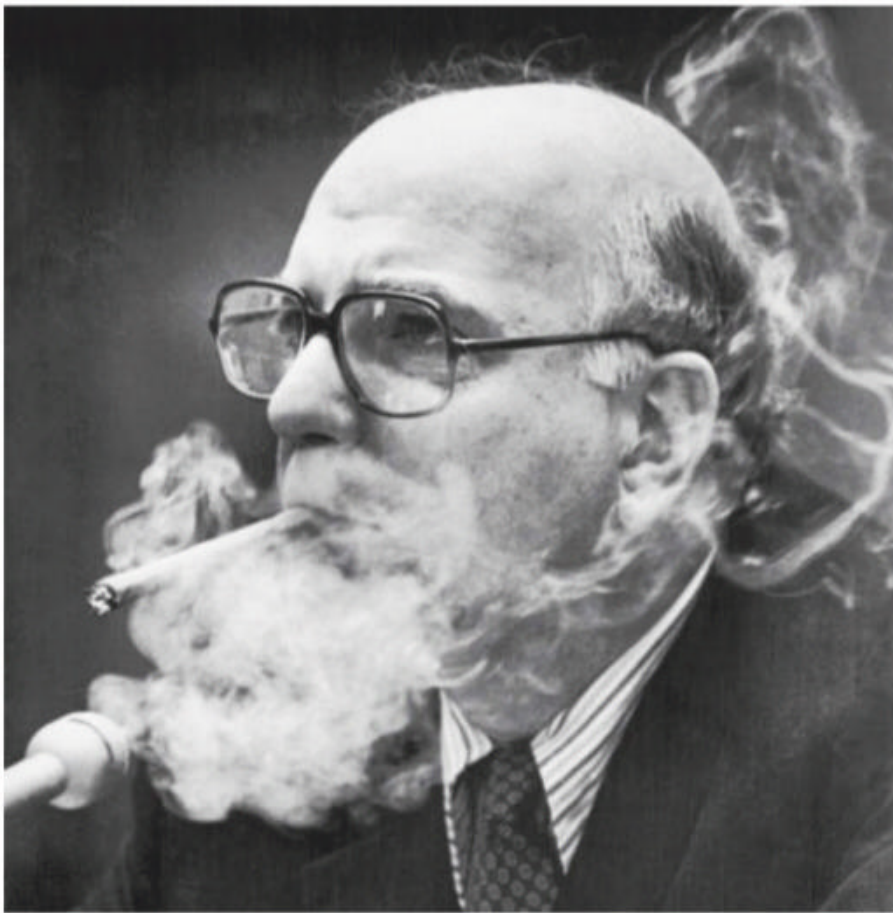


Sources: United States Census Bureau; YouGov; The Economist *Excludes don't knows

means that a block of voters dislikes him, but wants Congress to leave him in place.

Moreover, in 29 of the 50 states, a plurality of voters opposes impeachment. Views split about 50/50 in Colorado, Maine and Arizona, giving those states' Republican senators little reason to buck their party ahead of tough re-election races. Impeachment is unpopular in Iowa and North Carolina. Surprisingly, Texas, long a Republican bastion, is also 50/50. But most pundits put its Senate seat out of the Democrats' reach.

Meanwhile, Democrats may struggle to keep their caucus on side. Voting to remove Mr Trump might end Doug Jones's hope of re-election in deep-red Alabama. And although divided public opinion will probably prevent defections in Minnesota and Michigan, New Hampshire is an outlier. Despite voting for Hillary Clinton in 2016, MRP finds that impeachment trails there by 48% to 41%. Jeanne Shaheen, a Democratic incumbent in the state, is expected to win re-election, but far from assured. If she backs impeachment, Republicans might gain the chance to pick up a seat in a cycle when they are mostly on the defensive. ■



Through a cloud, brightly

Paul Volcker, chairman of the Fed and America's toughest inflation-fighter, died on December 8th, aged 92

IN HIS SPELLS of leisure time, when he had any, Paul Volcker liked to go fishing. Towering above a river in his jerkin and waders, fly cast, cigar firmly in mouth, was a good way to ruminate on big decisions. And he believed in rumination. "Procrastinate and flourish" was a favourite motto. Another, from George Washington, which his father had kept above his desk when he was city manager of Teaneck, New Jersey, was: "Do not suffer your good nature...to say yes when you ought to say no." So when he was asked in 1974 to be president of the New York Fed, he went off on a fishing trip to chew it over. And in meetings and congressional-committee hearings later, as chairman of the Federal Reserve from 1979 to 1987, he hid his bald head in smoke-clouds, as if he was slowly weighing up what answers he could possibly give.

His salvo against America's inflation in 1979, which slew the dragon for decades, therefore seemed unusually abrupt. The times certainly required it, with annual inflation then at 12%. And his measures, announced at an extraordinary press conference in the boardroom of the Federal Reserve building in Washington, were drastic. From then on the Fed would control not the price of money, by adjusting the interest rate, but its supply, leaving interest rates to be set by the market. He would force America into recession to cure people of their expectations that since prices would keep on rising, they must keep on spending. The downturn that followed—double-dip, because he briefly took his foot off the brake—brought soaring unemployment, reaching 10.8% in 1982, and a federal funds rate of over 20%, the highest in history, before both rates and prices eased. By 1983 inflation was less than 4%.

Yet he had been ruminating about the beast, and how to subdue it, since his Princeton student days. He was struck by Friedrich Hayek's observation that the only way inflation cured unemployment was by disguising cuts in real wages. This linked inflation and deception indelibly in his head. Price instability destroyed

trust, not only in the dollar but in government; and trust that officials would work for the common good, as his father had selflessly worked in Teaneck, was basic to the social contract. These feelings, more than any strong commitment to monetarism, convinced him that gentle rate-raising would not be enough. And with inflation running at well over 5% for most of the 1970s, he arrived at the Fed ready to tighten until interest rates went through the roof.

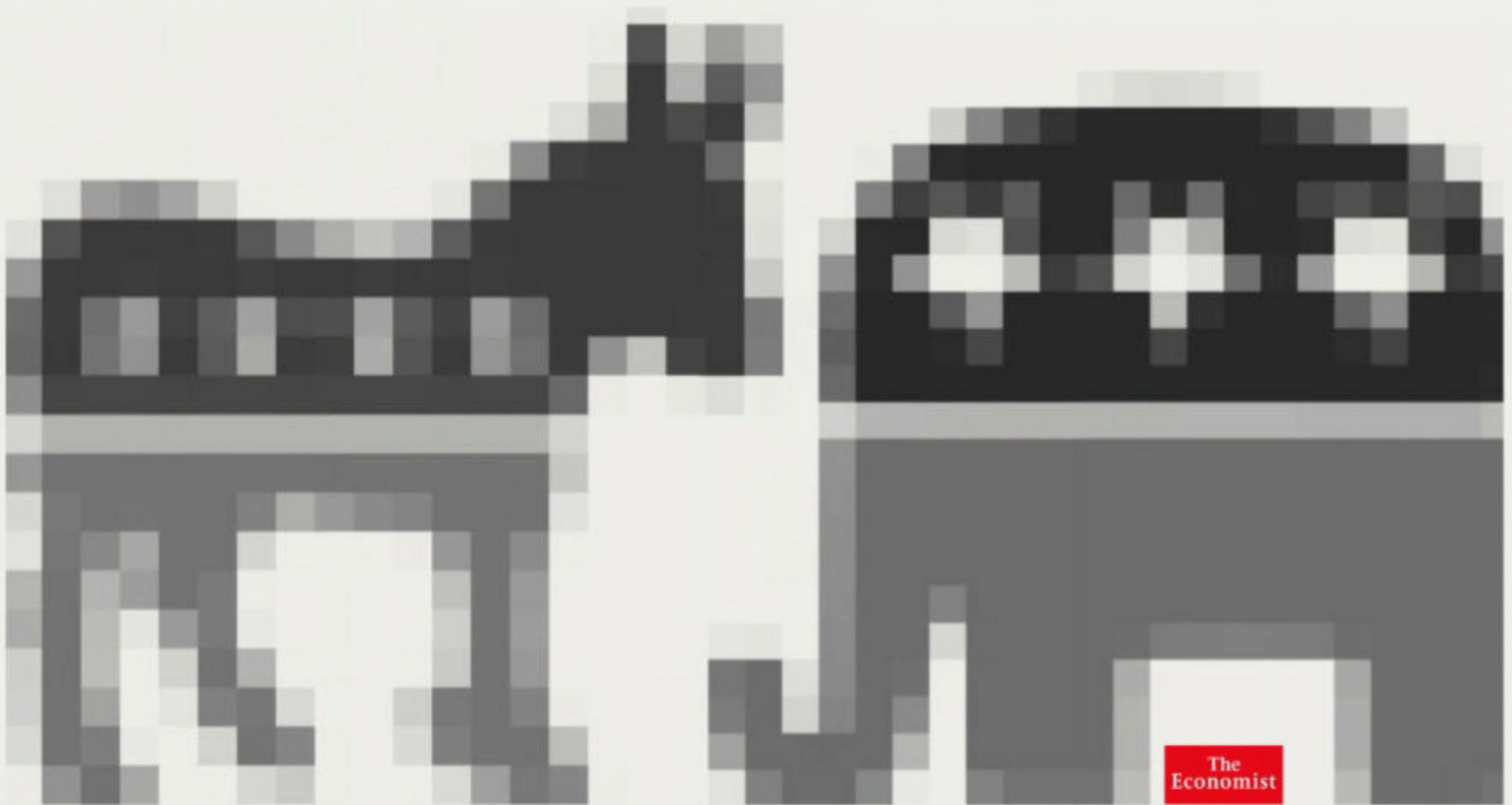
This caused fury and despair. As consumers stopped spending, home-building tanked and businesses closed down. Angry crowds and farmers on tractors besieged the Fed; the keys to cars that dealers could not sell were sent to him in the mail. Though he had doubts, and wore out his office carpet with anxious pacing, he kept at it: not just because expectations would leap back up if he relented, but because persistence was a virtue in itself. And he stayed on guard, so much so that during Ronald Reagan's 1984 campaign he was ordered by Reagan himself not to dare raise interest rates before the election, even though, by then, he was not intending to.

Reagan's men thought he wanted to hold the economy back, and tried to dislodge him. He opposed the president's tax cut in 1981 unless it was matched by cuts in spending, but this was not political; deficits led to inflation. Besides, to a man who believed in frugality and discipline, they were also offensive. He was happy, even at the Fed, to wear crumpled suits, live in a students' apartment block and fly coach back to New York and the family at weekends. (His salary had fallen by half when he went from the New York Fed to Washington, and even when he returned to Wall Street in 1987, making \$1m a year, he kept his old pinchpenny ways.) As for discipline, he smoked AC Grenadier cigars not only because they were cheap, at a quarter each, but also because he had trained himself to like only what he could afford.

Discipline was something he wanted banks to show, too. He battled to get them better regulated, though the weight of lobbying from the Washington swamp and, under Reagan, the pressure of the president's advisers, made this hard. He mightily defended the Glass-Steagall Act which, since the 1930s, had prevented banks from trading in securities, but lost. His failure to clamp down on reckless lending, either at home or to foreign countries, showed up in a string of debt crises during and after his tenure, culminating in the Great Recession of 2008-09. At that low point he was called in again, the ever-reliable disciplinarian, to chair Barack Obama's Economic Recovery Advisory Board. Although he much disliked having his name on things, it was pinned to the Volcker Rule of 2010, which barred banks from playing fast and loose with customer deposits just to boost their bottom lines.

Behind almost everything he did lay concern about trust in the dollar, which also meant trust in America as the leader of the free world. In his time as a Treasury official in the 1960s he had laboured to maintain the Bretton Woods agreement of 1944, which had built an international monetary system round pegging the dollar to gold at \$35 an ounce. When this began to founder he went along with a temporary suspension and then, in 1973, with decisive decoupling, but longed for some system of fixed exchange rates. Instead, the dollar was allowed to float. To him floating exchange rates were fundamentally dangerous, an open invitation to countries to manipulate their currencies—and so inherently unstable that they undermined the stability of governments, too.

It was probably his wartime adolescence that made him yearn for such a rules-based world. But in so far as he managed to impose rules himself, they were a success. After 1983 the economy mostly grew without inflation and political leaders, by and large, learned to defer to the central bank on monetary policy. What worried him more as the years passed was a growing lack of trust in and respect for institutions in general, from the Supreme Court to Congress to the presidency. America sometimes seemed to be in a mess in every direction. Every direction, that was, except the coast of Florida, where he might get a big plump tarpon on his line, or the sparkling, ever-beckoning salmon rivers of Maine. ■



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