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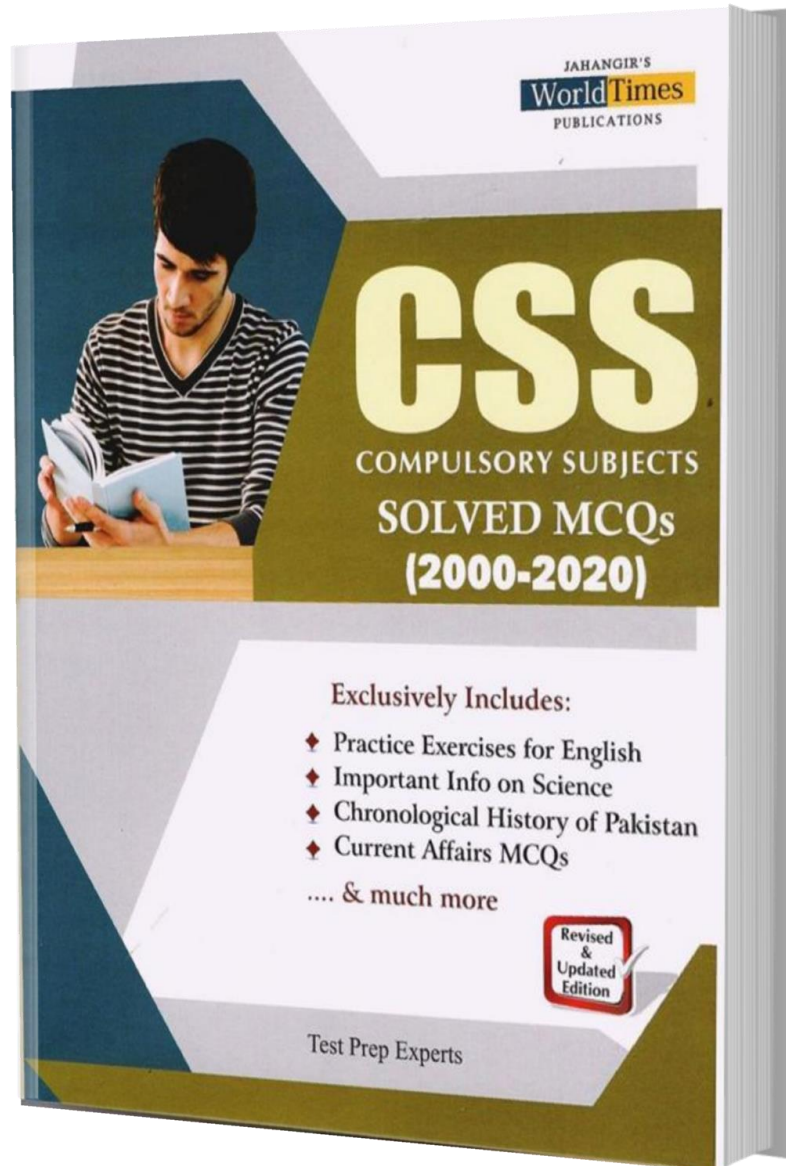
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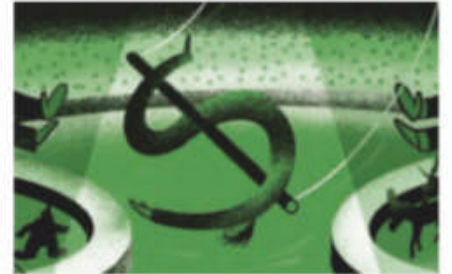
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Government forces in **Ethiopia** said they had captured key towns on the road towards Mekelle, the capital of the rebellious province of Tigray. The civil war has spilled across the border into Eritrea and led to an ethnic massacre. The government has resisted calls for talks or mediation. Tens of thousands of refugees have fled into Sudan.

Russia said it would build a naval base in **Sudan**, adding to a “great power” rivalry that has already seen the establishment of American and Chinese naval and air bases on the Red Sea.

Shooting broke out between **Morocco** and the Polisario Front, which is fighting for the independence of **Western Sahara**, after rebel forces blocked a key highway. The UN, which monitors a ceasefire, called for restraint.

Egypt unearthed more than 100 intact sarcophagi and other artefacts dating as far back as 2,500 years from the necropolis of Saqqara, near Cairo. In October the authorities revealed dozens of other sealed sarcophagi, most with mummies inside, in the same area.

The UN’s atomic watchdog reported that **Iran** had restarted advanced centrifuges installed underground at Natanz, a nuclear site. It also said that Iran had more than 2,440kg of low-enriched uranium, well beyond the limit set by the nuclear deal it signed with world powers in 2015. Both developments move Iran closer to producing a bomb, an ambition it denies. Donald Trump reportedly asked his advisers for options on attacking Natanz.

America announced that it would reduce its forces in **Afghanistan** from 4,500 troops to 2,500 by mid-January. That will allow Mr Trump to say he has ended America’s longest war, but could have dire consequences for Afghanistan’s stability. Troop numbers in **Iraq** are also to be cut.

A report by the inspector-general of **Australia’s** armed forces found that at least 39 people in Afghanistan had been unlawfully killed by elite troops in a culture of “blooding” that treated killings as a rite of passage. In some cases weapons had been planted on the bodies of the victims to justify shootings. The report recommended that police investigate 19 former or current soldiers.

Thailand’s parliament, one chamber of which was appointed by the leaders of a military coup in 2014, rejected the idea of curbing the powers of the monarchy. At the same time, the authorities used greater force to disperse protests in Bangkok against the military-led government and the monarchy.

Manuel Merino resigned as **Peru’s** president after five days in the job. He took office when Congress removed President Martín Vizcarra. Mr Vizcarra’s departure sparked protests and a police crackdown in which at least two people were killed, prompting Mr Merino’s resignation. He has now been replaced by Francisco Sagasti, who is expected to serve until after an election next April.

America’s Justice Department dropped charges of drug-trafficking and money-laundering against Salvador Cienfuegos, a former **Mexican** defence minister, so that Mexico can investigate him.

Hurricane Iota, the strongest storm ever to strike Nicaragua, made landfall close to where Hurricane Eta hit the country this month. Iota is the 30th named storm of the Atlantic season. It is the first to strike

Colombia at category-five force and has also hit Honduras and El Salvador.

Most candidates supported by **Brazil’s** far-right president, Jair Bolsonaro, failed to win office in the country’s local elections. Established politicians from the *centrão*, a bloc of centre-right parties, did well, in contrast with their performance in national elections in 2018. The president himself remains popular thanks to big spending on poor people.

Dominic Cummings, the chief adviser to Boris Johnson, Britain’s prime minister, left his job amid a power struggle at Downing Street. Speculation swirled that Mr Cummings leaked lockdown proposals and briefed against his boss. A master in the art of out-maneuvring the executive (Mr Cummings was the strategist behind the Brexit vote), his uncompromising style finally forced his exit. Separately, Mr Johnson announced the biggest boost to British **defence spending** in 30 years.

An agreement on a €1.8trn (\$2.1trn) budget for the EU, including a special covid-19 recovery fund worth €750bn, hit a new snag as **Poland** joined **Hungary** in threatening a veto because the package contains provisions that require recipients to abide by EU standards on the rule of law. But there is still optimism that the deal will be agreed to by the end of the year, when the existing seven-year budget expires.

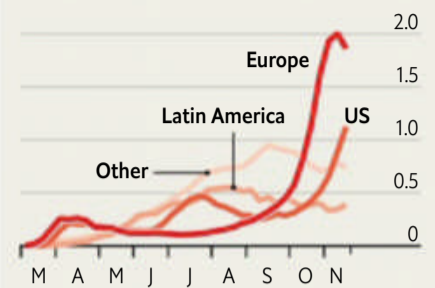
In America’s election **Joe Biden** was deemed the winner in Arizona and Georgia, bringing the final tally in his electoral-college votes to 306 to Donald Trump’s 232. In Georgia, one county found 2,600 ballots it had overlooked.

Still not conceding the race, which hinders the smooth transfer of power to Mr Biden, Mr Trump sacked the official overseeing cyber-security at the **election**, who had contradicted the president’s claim that the vote was fraudulent.

Coronavirus briefs

To 6am GMT November 19th 2020

Weekly confirmed cases by area, m



Confirmed deaths*

	Per 100k	Total	This week
Belgium	129.6	15,025	1,267
Peru	107.1	35,317	325
Spain	89.9	42,039	1,934
Argentina	80.4	36,347	1,816
Brazil	78.8	167,455	4,087
Britain	78.5	53,274	2,909
Italy	78.1	47,217	4,264
Chile	77.9	14,897	264
Mexico	77.2	99,528	3,098
Bolivia	76.0	8,875	57
United States	75.7	250,537	9,583

Sources: Johns Hopkins University CSSE; UN; The Economist *Definitions differ by country

The number of deaths in **America** passed 250,000 and the tally of cases hit 11m. New York City closed its schools again. California’s governor said he was “pulling the emergency brake” on reopening.

South Korea, which has been widely praised for bringing the disease under control, tightened social-distancing measures after reporting 200 fresh cases for four straight days.

With growing pressure on intensive care, **Sweden** lowered the number of people who can gather together to eight. In **Denmark** the agriculture minister resigned over the recent order to cull 17m mink, which had no legal basis.

The quarantine rules for foreign poultry workers were relaxed in **England** to ensure there is enough turkey on the table at Christmas. Stuffed in their accommodation, they can mix only with fellow workers.

→ For our latest coverage of the virus and its consequences please visit [economist.com/coronavirus](https://www.economist.com/coronavirus) or download the Economist app.



NOT A BLACK SWAN



COVID-19 has affected billions of lives. Some call it a 'black swan event'. But it isn't, pandemics have always existed.

Many of the effects of a pandemic of this scale have been known for years, knowledge to which Swiss Re's analysis has contributed. As the world's leading provider of reinsurance and risk transfer, we specialise in modelling and underwriting risk.

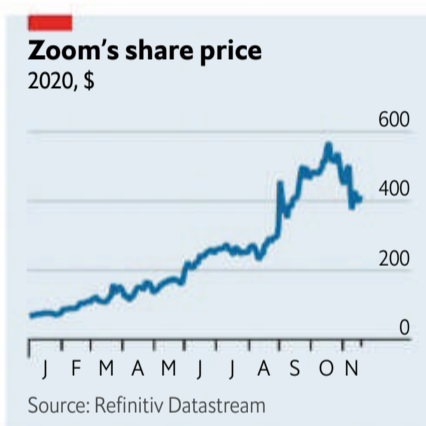
Swiss Re and the re/insurance industry have set aside billions to help shoulder the financial impact of the pandemic. And across the world, countries have made emergency aid programmes available. Still, the suffering and the uncertainty for those affected is enormous.

To do better next time, we as a society need to be better prepared. One solution is to partner in public-private risk-sharing arrangements to cover pandemic-related losses.

Swiss Re is committed to helping society become more resilient and progress.

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Pfizer and BioNTech said further data showed that their **vaccine for covid-19** was 95% effective, and similarly efficacious in people over 65. They will soon ask regulators in America and Europe for emergency approval of the treatment. That came after Moderna reported that its vaccine was 94.5% effective in an interim analysis, the second breakthrough in potentially preventing the disease in just over a week. Moderna's advantage is that its vaccine can be stored at refrigerated temperatures of between 2°C and 8°C for 30 days. The shots being developed by Pfizer and BioNTech need to be transported at -70°C and last less than a week in refrigerated conditions.



The good news on vaccines is bad news for the share price of **Zoom**, one of the star performers in tech stocks boosted by remote working. It is not just office staff who are stuck indoors. Zoom is making its video-chat service entirely free on Thanksgiving Day so that families can catch up for longer; free meetings are usually limited to 40 minutes.

Amazon launched an online pharmacy in America that offers discounts of up to 80% to subscribers to its Prime programme, assuring customers that their health data would be kept confidential and separate from other information. The share prices of big pharmacy companies, such as Rite Aid and cvs Health, swooned in response.

Australia, New Zealand and 13 Asian countries, including China, signed the **Regional Comprehensive Economic Partnership**. The trade deal is

limited in scope, joining together a patchwork of existing free-trade agreements, and does not include India, which withdrew for fear of being overwhelmed by Chinese imports. But it will produce benefits, raising global GDP in 2030 by an annual \$186bn according to one estimate.

Jay Clayton decided to step down as chairman of America's **Securities and Exchange Commission** by the end of the year. Joe Biden is expected to appoint someone to the job who will be tough on banks.

PNC, a bank operating primarily in America's east and south, agreed to buy the American operations of **BBVA**, a Spanish bank, for \$11.6bn. The deal will make PNC the country's fifth-largest commercial bank by assets (though still some way behind the big four). Meanwhile, more consolidation in Spain's banking industry beckoned when BBVA said it was in talks to merge with **Sabadell**, a rival.

Airbnb filed the prospectus for its long-awaited IPO, which is expected in December. **DoorDash**, a food-delivery service, also published a prospectus for its stockmarket flotation, also expected next month.

Cleared for take-off

The Federal Aviation Administration gave its approval for Boeing's **737 MAX** aircraft to fly again in America, 20 months after the fleet was grounded following two crashes. The 737 MAX won't take to the skies immediately. Among other things, airlines based in America must still get the FAA's all-clear for revised pilot-training procedures for the plane.

With flying curtailed during the pandemic, **easyJet** reported a £1.3bn (\$1.7bn) annual loss, the first in its 25-year history.

The British government brought forward to 2030 the date by which the sale of new **petrol and diesel cars** will be banned. It forms part of a new "green industrial revolution" strategy, which includes energy-efficiency measures and a huge boost to offshore-wind power. Critics said the plan would need more money, not least for charging points for the millions of electric cars that drivers are supposed to buy.

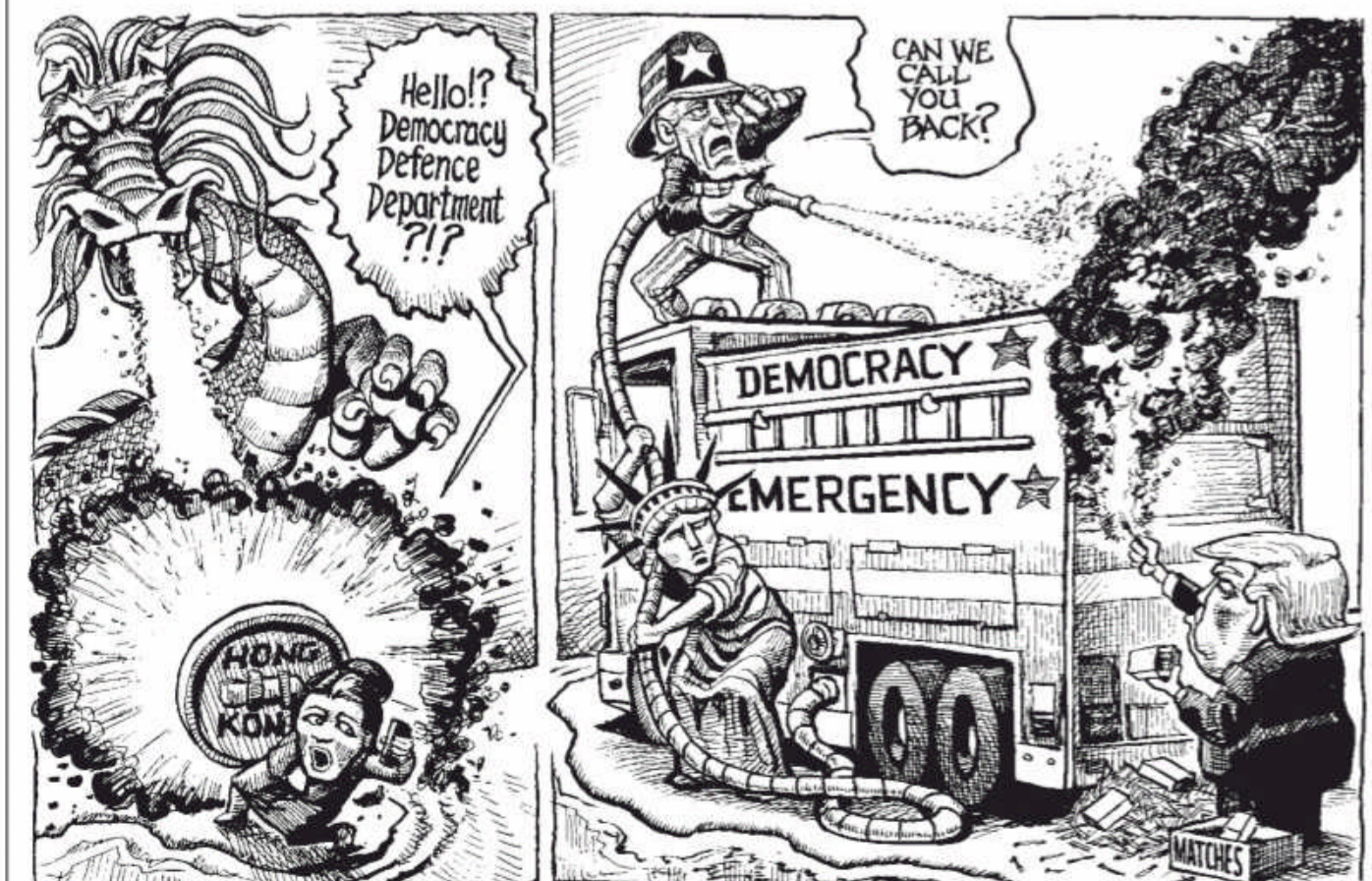
Japan's economy grew by 5% in the third quarter over the second, though year on year it was 5.8% smaller. Consumption bounced back, but business investment fell again.

Four astronauts were transported to the International Space Station aboard the **Crew Dragon spacecraft** built and operated by SpaceX. NASA described it as the first operational flight of the spacecraft. Two astronauts who took the trip in May, the first to be launched from American soil since 2011 and the first from any country to reach orbit in a vessel designed and operated by a private company, were conducting tests.

Swire Pacific was dropped from Hong Kong's Hang Seng stockmarket index. Founded in 1816, the conglomerate used to be synonymous with business in the territory and is still the largest shareholder in Cathay Pacific. Its replacement in the index is a food-delivery app.

Respectability at last

Having previously been spurned by the S&P 500, **Tesla** is to be included in the index from December 21st. Fund managers that track the S&P will now have to buy the electric-car maker's stock for their portfolios. The share price has soared this year, and surged again on the news. Tesla will be one of the biggest companies by market value in the S&P 500 when it joins.



The China strategy America needs

As president, Joe Biden should aim to strike a grand bargain with America's democratic allies

THE ACHIEVEMENT of the Trump administration was to recognise the authoritarian threat from China. The task of the Biden administration will be to work out what to do about it.

Donald Trump's instinct was for America to run this fight single-handed. Old allies were henchmen, not partners. As Joe Biden prepares his China strategy (see China section), he should choose a different path. America needs to strike a grand bargain with like-minded countries to pool their efforts. The obstacles to such a new alliance are great, but the benefits would be greater.

To see why, consider how the cold war against China is different from the first one. The rivalry with the Soviet Union was focused on ideology and nuclear weapons. The new battlefield today is information technology: semiconductors, data, 5G mobile networks, internet standards, artificial intelligence (AI) and quantum computing. All those things will help determine whether America or China has not just the military edge (see Science section), but also the more dynamic economy. They could even give one of the rivals an advantage in scientific research.

The first cold war created separate looking-glass worlds. The protagonists in the second are interconnected. That is partly a result of China's integration into the global economy, especially after it joined the World Trade Organisation (WTO) in 2001. But it also stems from the network efficiencies of many tech businesses, which reward size and spread. And it reflects how hard it is for any one country to master the full range of specialisms in the tech economy. In chips, say, American or British designs may be made in Taiwanese plants, using Japanese and Dutch equipment with German lenses before being assembled in Chinese factories. It is no accident that autarkic North Korea can build nukes but not advanced computers.

The Chinese Communist Party has understood that tech is the path to power. China is blessed with a vast market, ambition and plenty of hard-working talent. The party is supercharging the efforts of Chinese firms with subsidies and industrial espionage. Aware of how scale matters, China is touting its technologies by securing export contracts, promoting itself as a digital power using the Belt and Road Initiative and waging a campaign of pro-China standards-setting in global bodies.

Mr Trump's abrasive solo response has had some successes. He has browbeaten some allies to stop buying gear for 5G networks from Huawei, a Chinese firm. And by threatening sanctions on chipmakers who supply Huawei, he has damaged it.

But in the long run this approach favours China. It has already accelerated China's efforts to create its own world-class chip industry—though that could easily take a decade or more. More important, if a bullying America always focuses solely on its own narrow interests, it will drive away the very allies that can help it stay ahead in tech. Europe is increasingly unwilling to leave itself open to American pressure. The European Union's highest court has twice restricted the transfer of data to America, where they may be picked over by the intelligence agencies. And European policymakers have announced plans to impose rules on the cloud, to impose digital taxes on American tech giants and to

limit foreign takeovers—including, potentially, American ones.

A grand bargain would turn that conflict with Europe into collaboration (see Briefing). Rather than be consumed by squabbles, the allies could share an approach to issues like taxation, takeover rules and supply chains. For example, Europe's General Data Protection Regulation (GDPR) is on the way to becoming a de facto standard outside Europe. With closer collaboration in intelligence, the alliance could be more alert to security threats from Chinese hackers and tech firms. By co-ordinating their efforts on critical technologies, they could specialise rather than duplicate research. By diversifying supply chains and vetting each link they can protect themselves from accidental or malevolent disruptions. By working together on technical standards such as OpenRAN, which uses mostly off-the-shelf hardware for 5G networks, they can create a favourable environment for their own companies. Crucially, by collaborating on ethical norms over, say, facial recognition, they can protect their societies.

Instead of leaving America isolated, a grand bargain would help it keep ahead in the race for tech dominance by bringing it the gains of closer co-operation with like-minded countries. The whole alliance would be boosted by the tech industry's formidable network effects. A bargain would also leave America more open to cross-border scientific collaboration and immigration, vital for a place that thrives on the contributions of foreign students, many of whom stay on to carry out research or work in tech. Such openness is a strength that China lacks.

Some people argue that co-operation of this sort needs a treaty, an institution like NATO or the WTO. But that would take a long time to set up. What it would possess in gravitas it would lack in flexibility. A grouping like an enlarged G7 would be more adaptable and less clumsy.

Either way, striking a grand bargain will be hard. For one thing, America would need to acknowledge that it is not as dominant as it was when it set up global governance after the second world war. It would have to be willing to make concessions to its allies right now—over privacy, taxation and some details of industrial policy, say—in order to protect its system of government in the long term. For the strategy to be credible abroad, there would need to be bipartisan consensus in Washington.

America's allies would have to make concessions, too. They would have to trust a country which, under Mr Trump, has sometimes looked on the transatlantic alliance with contempt. Some Europeans would have to temper their dream of becoming a superpower that stands apart from both China and America.

Yet that European dream has always looked far-fetched. And if anything can overcome divisions in Washington, China can. Moreover, the sacrifices would be worth it. A grand bargain would help focus competition with China on tech, potentially enabling detente in areas where collaboration is essential, such as curbing global warming, health and, as with the Soviet Union, arms control. A grand bargain could make the world safer by making it more predictable. When superpowers are set on a collision course, that is something profoundly to be wished for. ■



American politics

The art of losing

Accepting a disappointing election result is a vital part of a healthy democracy

ALMOST TWO weeks after the votes that made him a one-term president were counted, Donald Trump is still claiming that he won. In reality there is no room for doubt. Joe Biden beat him by almost 6m votes, amassing 306 electoral-college votes to Mr Trump's 232. Yet reality is a stranger to Mr Trump, who was crying fraud before the first vote had been cast. He has since fired an official who contradicted his view that the election was stolen and encouraged his supporters to protest against the result.

Most Republican leaders go along with the president. They include his attorney-general, Bill Barr, who told prosecutors to investigate "substantial allegations" of election fraud; Mitch McConnell, the Senate majority leader, who has championed the president's right to go to court; and Lindsey Graham, one of Mr Trump's staunchest Senate defenders, who Georgia's secretary of state says pressed him to exclude legitimate ballots.

As so often in the Trump presidency, it is hard to know how seriously to take all this. No coup is under way in America. Mr Trump does indeed have the right to mount legal challenges. The counting and certifying of election results has withstood pressure from above. Most of the Trump campaign's lawsuits have already been dropped or tossed out by the courts. Mr Barr's prosecutors explained that they could find no evidence of the kind of systematic fraud that the president insists took place. Despite violent threats, Georgia's secretary of state refused to buckle (see United States section).

Whatever he says or does, Mr Trump will be out on January 20th and Mr Biden will be inaugurated. Might ignoring him thus be the best strategy? Some wonder if it might be best to let the courts explain to forlorn Trump voters that their man lost.

Yet Republican conduct is expedience dressed up as principle. Lawmakers are cowed by the threat that Mr Trump might back a primary challenge against anyone he judges disloyal. They think they need Mr Trump's support to win two run-off

elections in early January in which control of the Senate is at stake. Worse, their indulgence of Mr Trump imposes a cost on America. The effect of Republican leaders agreeing that perhaps Mr Trump really did win damages America's ability to govern itself.

All Americans should wish the incoming administration to be competent. By delaying the transition, which in America's spoils system entails the appointment of 4,000 new officials—all of whom must receive clearances before getting to grips with their new posts—Mr Trump is making that harder. When George W. Bush handed over to Barack Obama, they held a joint session of cabinet where outgoing officials sat with their replacements and ran through a series of hypothetical crises. The Biden officials will come into office with several existing crises to handle, including the logistics of a vaccination programme for covid-19 in which lives are at stake.

The president and his apologists are doing harm in another way, too. Voters have elected a divided government in Washington, with Democrats controlling the House and the presidency and Republicans favourites to keep the Senate. This requires both parties to work together, finding common interests where they can. If most Trump voters, encouraged by the likes of Mr McConnell, have come to believe that Mr Biden's win is illegitimate, why should they want their representatives to work with him?

America has had bitter elections before, yet the electoral system has almost always generated loser's consent. In 2000 a minority of Gore supporters (36%) thought the result was illegitimate; in 2016, 23% of Clinton voters thought so. In 2020, 88% of Trump voters currently think the result was illegitimate. It is up to their elected officials to explain why it was not. This requires more than waiting for the courts, local election officials—or anyone else—to speak up. Failure to do so does not just make America harder to govern. It betrays a contempt for the spirit of democracy and thus a lack of patriotism. ■



Afghanistan

Leaving too soon

America risks handing Afghanistan to the Taliban

BACK IN FEBRUARY President Donald Trump achieved what ought to be one of his enduring foreign-policy successes. In Doha, the capital of Qatar, bearded Taliban, some of whom had never previously allowed themselves to be photographed, accepted a peace deal with American envoys. America would withdraw its troops. In exchange, the Taliban agreed to cease attacks on foreign troops and to renounce terrorism. They also agreed to take part in further talks in Doha with the internationally recognised government in Kabul. For the first time in four decades, the deal held out the prospect of peace for Afghanistan.

Since then, America has kept its side of the bargain. The num-

ber of troops in Afghanistan has fallen from almost 10,000 to less than half that now. The Taliban have been less consistent. They have ceased attacks on American troops, but on the battlefield they continue to press their advantage. October was the bloodiest month in over a year for civilians, partly because of a Taliban attempt to take control of Lashkar Gah, the capital of Helmand province. That was repelled by American air strikes. In the past few weeks the militants have seized several more rural districts. They seem to see the talks in Doha as a chance for the government in Kabul to surrender, rather than as a serious negotiation.

Mr Trump was right—and brave—to talk to the Taliban. ►►

► Though they do not hold a single city, they are unchallenged in the countryside and have a grip on the roads, on which they raise taxes rather efficiently (see Asia section). The government in Kabul, by contrast, is riddled with corruption and infighting. The militants will not be defeated, so they will have to be negotiated with. The deal struck by America's envoy, Zalmay Khalilzad, was a necessary step towards ending the war.

Yet in his actions now, Mr Trump risks giving the militants far more than they would otherwise be able to claim. In the run-up to the American election, the president promised to bring all American troops home "by Christmas". On November 9th, after losing the election, he followed up by dismissing Mark Esper, his defence secretary, as well as several other Pentagon officials. The acting defence secretary, Christopher Miller, seems keener to satisfy his boss's demands. On November 17th he announced plans to reduce troop levels from 4,500 to 2,500 by mid-January.

That will let Mr Trump say he has kept his promise, but it signals to the Taliban that America is leaving no matter what. It undermines the talks in Doha and heightens the risk that the Afghan army will collapse. Already deprived of much American air support, its forces are deeply demoralised. In the attack on Lashkar Gah hundreds fled without firing a shot. More defeats could lead to much of America's expensive gear falling into the hands of the enemy, who would use it to press on farther. Plenty already has: the Taliban show off Humvees in videos shared on social media. Instead of making peace, America would have surren-

dered. Afghanistan might once again become a rogue state and, one day, a terrorist haven.

Joe Biden, the president-elect, will inherit this poisoned chalice. He has never been an enthusiast for intervention in Afghanistan. He, too, promises an end to "forever wars". As vice-president he opposed Barack Obama's "surge", which increased the number of troops in the country to over 100,000. But that does not mean he needs to hand victory to the Taliban.

On taking office he should announce that he will uphold the deal with the Taliban—as long as they do. It calls for American troops to leave by June of next year. Mr Biden should tell the Taliban that this is conditional on their reducing violence and taking the talks seriously. If they do not, American troops should stay. Mr Biden should also make it clear to the government in Kabul that it must negotiate in earnest.

Jens Stoltenberg, NATO's secretary-general, warns that the price of leaving Afghanistan too soon "could be very high". By contrast, the cost of staying is low. No American soldier has been killed in combat in Afghanistan since February. A few thousand personnel is a tiny force. And yet it allows other allied countries, such as Britain and Germany, to stay and train the Afghan army. As long as some troops—and planes—remain, the Taliban's chance of seizing cities is limited. That gives the Afghan government the opportunity to negotiate a genuine peace. America should not allow the war to drag on for ever, but neither should it jeopardise all that it has fought so hard to achieve. ■

Sovereign debt

A better way not to pay

The G20's new debt-relief framework is welcome. But it could still be improved on

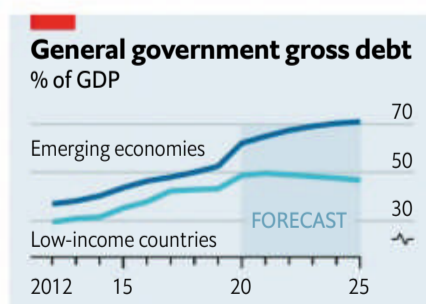
WITH DEBTS looming and dollars scarce, Zambia has wrestled in recent months with a predicament. It knew that failing to pay bondholders would be damaging. But paying only them, having failed to pay others in full, could be worse. Other creditors would "blow off my legs", the country's finance minister said. So on November 13th Zambia became the sixth government to default on its bonds this year—after Argentina, Belize, Ecuador, Lebanon and Suriname. Others may follow. Although financial markets have regained much of the composure they lost in March, many countries still have more debt than they can comfortably handle. Thirty-eight governments have a credit rating that denotes a "material" risk of default or worse, twice the number at the end of 2009.

The debts of poor countries would be less daunting if they were not such a tangle of competing claims. The 73 poorest owe almost a fifth (\$102bn) of their foreign debt to private creditors, from bondholders to banks, a similar amount to China, \$76bn to other governments and the rest to multilateral lenders like the World Bank (see Finance section). And that is just the stuff that international institutions can count. Crafting equitable debt-relief deals from such a hotch-potch is difficult. Three changes in particular would help: a more joined-up approach by government lenders, tougher legislation to curb awkward private creditors, and greater use of flexible instruments that align repayment more closely with a borrower's circumstances.

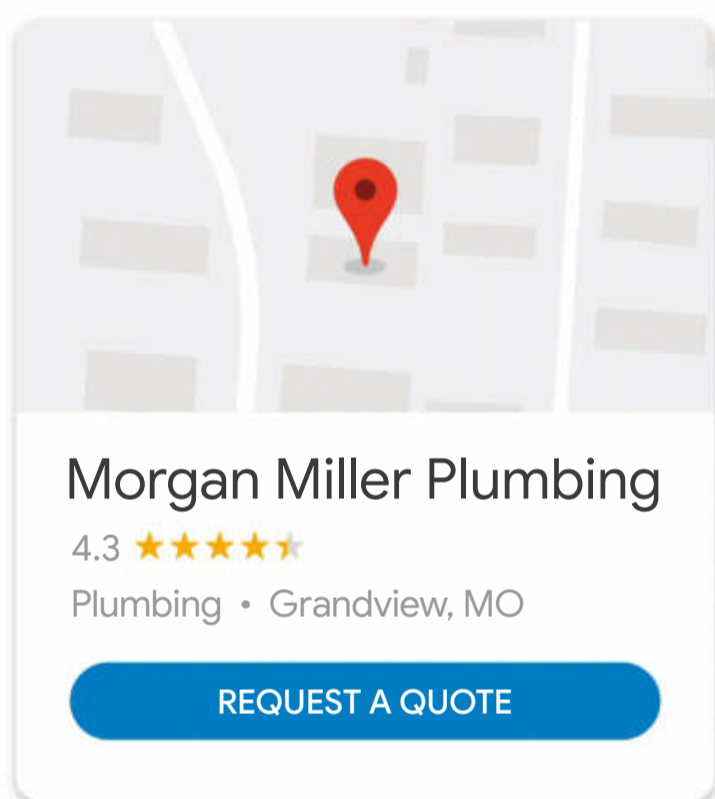
Any debt debacle pits the interests of borrowers against those of lenders, but also pits lenders against each other. One creditor may be forgiving. But that allows others to free-ride on its generosity and collect payment in full. Thus every creditor wants to be sure others are doing their bit. In Zambia's case Chinese lenders (which have agreed to defer some payments) and private bondholders (which have not) blame each other for the impasse.

To make sure each of them is doing their fair share, most rich-country governments offer debt relief jointly through the Paris Club, a grouping of government lenders. America has long urged China to join. And at a summit on November 21st-22nd, China will do the next best thing. Along with the rest of the G20 group of big economies, it will sign off on a "common framework" for relieving the debts of the world's 73 poorest countries, if they prove impossible to bear. The framework is limited in scope. It will apply only to countries that request help, fess up to their full liabilities, submit to IMF-style policy prescriptions and show that they cannot sustain their debts. It won't, in other words, deliver quick, unconditional debt relief to all poor countries, regardless of their need or demand for it. The framework requires all official creditors to do their share. It also obliges the borrowing country to seek similar help from private lenders.

The framework is a welcome step. The G20 should now consider some extensions. The same principles should also apply to other emerging markets, beyond the 73 poorest. The framework ►



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► favours reducing interest rates or delaying repayments over cutting the stock of debt. That bias should change. It typically reflects accounting conventions in creditor countries rather than any strong economic rationale. Indeed, investment and growth respond more vigorously when debts are reduced, rather than payments lightened or lengthened. And if private creditors resist doing their share and pursue full payment in the courts, G20 governments should pass additional legislation to cap the gains that vulture funds can obtain from litigation. Such laws may look like clumsy infringements on creditors' rights. But they can be justified if a creditor's prospects for a favourable legal settlement depend on debt relief provided ultimately by taxpayers.

Debt crises can spur innovation in financial instruments as well as institutions. The Latin American debt crisis of the 1980s, for example, was ultimately solved only when illiquid bank loans were turned into tradable "Brady" bonds, named after

Nicholas Brady, then America's treasury secretary. To ward off future crises, the IMF and its sister organisations could help promote further innovations in the kinds of debt a country can offer.

Uncertain times have, for example, inspired new interest in bonds that automatically pay less when commodity prices tumble or natural disasters strike. Other instruments might pay out extra when GDP growth exceeds a threshold. Some of these instruments might need an independent institution to help standardise terms and referee disputes. Another idea worth exploring is "bendy bonds", which would let the borrower lengthen their maturity in a pinch (and defer interest payments) in return for extra interest at the end of the bond's extended life. Similar bonds already exist in the corporate-debt markets, which might make a sovereign version easier for investors to accept and price. Mr Brady's clever idea revolutionised the market for developing-country debt. The time is ripe for another transformation. ■

Race and health

Wanted: more data

To tackle inequalities, governments need to overcome qualms about collecting information on ethnicity

COVID-19 IS NOT colour-blind. In England a black man is nearly four times more likely to die from the disease than a white man of a similar age. In the state of New York, in the first months of the pandemic, black and Hispanic children were more than twice as likely to lose a parent or caregiver to covid-19 than those who were white or Asian. Few countries publish health data filtered by race or ethnicity, but in those that do the pandemic seems to be killing more people from racial minorities.

That confirms public-health officials' worst fears. Covid-19 has laid bare countries' broad racial inequities in health and exacerbated them (see International section). The virus has also highlighted the scarcity of decent data on ethnicity or race. Most governments do not know if the pandemic is hitting particular groups harder, let alone why. In April a mere 7% of reports published in leading journals about covid-19 deaths recorded ethnicity. In western Europe most countries collect information only on people's "migrant status" (often, where parents were born), a flawed proxy.

Covid-19 should be a wake-up call. As in the debate about gender inequality, awareness of racial gaps has grown. Both suffer from too much intuitive argument and too little data. But whereas there has been something of a gender-data revolution, many remain uneasy about gathering data on ethnicity and race. Some countries, such as France, prohibit collecting such data. In Germany members of the Green party want to remove the word *Rasse*, a loaded term for "race", from the constitution.

Such anxieties should not be ignored. It is no coincidence that the countries and communities, including Jews and Roma, most opposed to registering race or ethnicity have often seen how it can be used to facilitate discrimination, segregation and even genocide. More recent reminders of the harm that such information can do in the wrong hands include the war in Ethiopia (see Middle East & Africa section).

Yet these are arguments for anonymising data, not ignoring them. Race itself is not the cause of most health differences, but

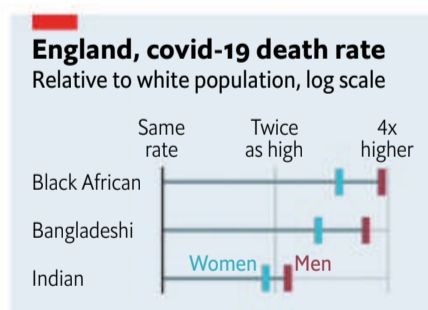
it is often closely correlated with policy failures, such as access to education, health care or jobs, that do cause such disparities. It is only by understanding the roots of these failings that gaps can be reduced. Data should be carefully safeguarded and their use tightly regulated. Although recognising the sensitivity of information is crucial, so is gathering and sharing it.

Inequalities and injustices can be tackled efficiently only once they become statistically visible. It was fear of inequality that led Britain, Finland and Ireland to make sure public bodies regularly gathered this data. Colombia, New Zealand and America, among the few places that collect statistics on indigenous people, use them to distribute federal funding. After Brazil started collecting data in the late 1990s by five different skin-colours, the gulf in infant mortality between indigenous and white babies became apparent. Public outrage led to serious efforts to start narrowing the gap. The Brazilian example shows that the data need to be granular. Catch-all terms such as "BAME" (Black, Asian or Minority Ethnic), used in Britain, are unhelpful. "Non-Western migrant" or "foreign born" contain even less information.

The data also provide a baseline. This lets you make comparisons and monitor progress. Canada makes regional ethnicity data available, in part, so that local employers can see whether their workforce is representative.

The relationship between ethnicity and other factors, such as health or school performance, can change over time. The children of migrants are often better off than their parents were. And although the health of black Americans is still worse than that of whites, the gap is narrowing. The health of poor Americans, by contrast, remains much worse than that of rich ones and the gap is widening. So it is crucial also to have data on other characteristics, such as deprivation, education and parental income.

Collecting data is just the start. Governments must then resolve to use the information to grapple with the underlying causes of inequality in health, education or the labour market. But ignorance should not be a reason to hold back. ■





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Political reform in Britain

Remaking the state

The Tories have got the wrong idea about why government isn't working

THE YEAR was 1976 and revolution was in the air. Punk was destroying orthodoxies in the music business. Concorde was breaking the sound barrier. The economy was going down the tubes. And Lord Hailsham, a former Conservative Lord Chancellor and old boy of Eton, Oxford and the Rifle Brigade, urged the overthrow of what he called Britain's "elective dictatorship"—the overweening executive, whose power, in Britain's parliamentary model, was untrammelled by the checks and balances of the courts and legislature that restrict it in most democracies.

Since then, the executive—made up of ministers and the people who do things on their behalf—has been constrained in many ways. The European Union's powers have grown, and in the 1990s Tony Blair weakened the executive by strengthening other parts of government, creating a Supreme Court, starting a reform of the House of Lords, devolving power from Westminster and granting independence to the Bank of England.

Now a Conservative counter-revolution is under way, driven by radicals in and around Number 10. They believe that the executive is the expression of the will of the British people, so to limit its power is to muzzle democracy. And they complain that government is far too slow. Frustration over the difficulty of getting Brexit done has fused with an enthusiasm for Silicon Valley's mantra—move fast and break things—into a determination to speed government up.

Accordingly, they are pursuing a programme of radical reform to the British state. Brexit is the boldest step, but it is only the first. The Tory plan is to unchain the executive by limiting judicial power, pushing back against devolution and reforming the civil service. Dominic Cummings, Boris Johnson's recently defenestrated chief adviser, was one of the architects of this transformation, but it will continue without him (see Britain section).

Plenty about Britain needs to change, but the reformers' argument and direction of travel are both wrong. First, weakening devolution will not make the union stronger, it will only undermine it. The parliaments in the union's smaller nations were created in response to a real demand for a government with which their people could identify better than they can with Westminster. Second, liberal democracy is not majoritarianism. It includes checks and balances on executive power designed both to protect the rights of individuals and minorities, and to promote good governance. None of the reformers, it is worth noting, advocates removing the Bank of England's independence. That's because of the wealth of evidence showing that constraining politicians' power over monetary policy leads to better economic management.

If evidence were needed against the unshackling of the executive, covid-19 has provided it. At the beginning of the pandemic, the government arrogated to itself vast powers, unthinkable in normal times. In some areas, that has worked. Most of what the Treasury has done has been accomplished efficiently and effectively. In others, money has been wasted and chums have bagged top jobs and fat contracts. Yet the government has failed to get the job done. Look abroad, meanwhile, for evidence of the effica-

cy of devolution: powerful, well-resourced local authorities have been central to the effort in Germany and South Korea, two of the countries that have managed the pandemic best.

Brexit is indeed a good moment for a reset. The reformers are right to argue that the civil service needs more expertise, less churn and a powerful cohort of techies to digitise the operations of government. But their actions to undermine the political independence that gives career civil servants the confidence to say "No, minister" would make governance worse, not better.

The main impediment to getting things done is not the constraints on the executive but the people running it. Mr Blair was a highly effective prime minister even as he constrained the executive's power. That was because he was focused and energetic, and surrounded himself with a team of clever, hard-working ministers. Mr Johnson needs to emulate him in both of these ways, and should start by replacing incompetent ideologues with some of the talented, experienced MPs who have been excluded from the cabinet just because they are not Brexiteers.

The Tories are also right to advocate constitutional reform, but their proposals would take the country in precisely the wrong direction. The biggest issue which Mr Johnson will confront next year is Scottish independence. Instead of alienating Scots—on November 16th he described devolution as a "disaster"—he should focus on making the relationship work better. The pandemic has shown that the four parts of the United Kingdom struggle to co-operate on common problems. That job is supposed to fall to the joint ministerial committee of the four nations. It needs the power and status to act more like a real federation.

Britain should have more devolution, not less. City mayors have had a good pandemic:


their popular standing ought to be matched by resources and responsibility. The balance of power between the branches of government needs to shift away from the executive, not towards it. The legislature should have a second chamber with more credibility; that means replacing a selection process for the House of Lords that combines feudalism and cronyism with an elective one. Turning the Lords into a senate of the devolved nations and the regions would give it a useful dual role. The judges' power to prevent ministers from acting unlawfully ought to be bolstered, not constrained. Regulators with the independence to insulate business from ministerial whim need to be set up to wield some of the powers that are returning from Brussels.

L'état, c'est eux

These changes to the way the executive and the constitution work would both strengthen British democracy and improve government's ability to get things done. Restoring the elective dictatorship of half a century ago would not.

Concorde, the most memorable relic of 1976, was a thing of beauty, but it was also a commercial disaster that used up huge quantities of taxpayers' money with virtually no oversight—just the thing for a prime minister with a taste for untrammelled power and *grands projets*. Mr Johnson would have loved it. ■





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Directorate-General for Budget, Brussels
COM/2020/10397

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The closing date for registration is **7 December 2020, 12 noon Brussels time.**

**President of the Community Plant Variety Office (CPVO)
Angers, France.**

Vacancy: European Union senior management position
Temporary Agent Grade AD14 - COM/2020/1037



The Community Plant Variety Office (CPVO) is an independent EU Agency, established by Council Regulation (EC) No 2100/94 (1) on 27 July 1994. The CPVO is responsible for the management of the Community Plant Variety Rights System which provides protection with an intellectual property right for new plant varieties in the European Union. It has around 50 staff members and a budget of approximately EUR 20 million yearly, financed mainly by the proceeds of the various fees it levies. Further information can be found at: www.cpvo.europa.eu

The post of President of the CPVO will be available as of 1 September 2021 for an initial mandate of 5 years, with a possible extension of 5 additional years. The place of employment is Angers (France) where the CPVO is based.

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The closing date for registrations is *10 December 2020, 12:00 noon* Brussels time. Register at: <https://ec.europa.eu/dgs/human-resources/seniormanagementvacancies/>



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A solid win for Biden

Joe Biden has won 306 electoral-college votes, including the “Republican states” of Arizona and Georgia. He has taken back the blue-wall states of Michigan, Pennsylvania and Wisconsin. He also won the national popular vote, probably by a margin of five percentage points. All this while running against an incumbent president and all the advantages that conveys, and the substantial bias towards Republicans in the electoral college.

The narrative that this was a close election is a false one (“When every vote counts”, November 7th). It arose from the order in which votes were counted—Florida was an early win for Donald Trump—and the inevitable delays in counting record numbers of postal ballots, most of which came from Democrats. True, it was not the landslide predicted by many pollsters, who have clearly failed in consecutive election cycles, but it is an enormous victory for Mr Biden and the coalition he has built, and a repudiation of Mr Trump.

EAMON GLACKIN
New York

Many of us who voted for Mr Trump in 2016 did so reluctantly. Not so in 2020. The further drift to the left of the Democrats was part of it, with their idiotic identity politics. But then so was the Russia-hoax investigation, the ridiculous impeachment proceedings and the unfathomable hatred spewed towards our president. We saw President Trump as someone who got things done, using a wrecking ball when dealing with stagnant bureaucracies. We saw the Iran deal as appeasement, the Paris accord as wealth redistribution doing little to tackle climate issues, the relocation of our embassy to Jerusalem as a law at last implemented, and pushing our European partners to pay their fair share for their own defence as long overdue.

We saw many more accomplishments during his tenure, where you and others saw nothing good. This elec-

tion was close. That is because the Democrats never came to terms with Mr Trump’s victory in 2016. They would have done better if they had tried to understand why they lost then and changed direction.

RUTH BERNER
Swannanoa, North Carolina

Much of the media’s coverage of the election focused on how divided the country is, but Americans are not as polarised as they may appear. Most voted pragmatically, to remove the inept Mr Trump, and ensure that Mr Biden, or perhaps more accurately, his left flank, lacks a clear path to pass a sweeping liberal agenda in Congress. This election had a high turnout, upwards of 155m people. Most of those votes did not come from the fringe, they came from the centre.

THOMAS EASTMAN
Minneapolis

In 1878 William Gladstone declared that the American constitution “is the most wonderful work ever struck off at a given time by the brain and purpose of man.” I find it puzzling that you refer to this wonderful work as “rickety” (“Spell unbroken”, November 7th). Divided government has served the United States well and yielded prosperity. Think of the eras of Ronald Reagan and Tip O’Neill, Bill Clinton and Newt Gingrich, Barack Obama and Mitch McConnell.

ART HOTZ
New York

I am, I hope, a reasonably sophisticated reader of opinion polls, and chaired the House of Lords select committee on the subject, which reported in 2018. No doubt the American Association for Public Opinion Research will do the thorough job of investigating this miss as they did after Hillary Clinton’s defeat, just as Professor Patrick Sturgis and his team did after the British polls got the election in 2015 so wrong. Like you (“Whiffing twice”, November 7th) I think the most likely explanation is that the voters who refused to reply to

pollsters—11 in 12 according to some estimates—are not typical of voters as a whole. That proportion of refuseniks has grown, and is growing.

Opinion polls have their uses, particularly on social matters when small differences in the precise numbers don’t matter. In elections however, small differences can matter very much indeed. A tool is not a good tool if it is used for a purpose, in this case forecasting election results, for which it is not really fit.

DAVID LIPSEY
House of Lords
London

The attempted coup in Turkey

“Voltaire’s heirs” (November 7th) stated that thousands of Muslims in Turkey were locked up “for belonging to the wrong religious group”. That is incorrect. The people in question were jailed for trying to stage a military coup in Turkey in July 2016 that caused the loss of life of more than 250 people while bombing cities, and the Turkish Parliament, with fighter jets. Describing them as the “wrong religious group” does nothing to contribute towards protecting the freedoms of speech and belief.

UMIT YALCIN
Ambassador for Turkey
London

Thailand’s politics

When reporting on Thailand’s monarchy the media should avoid cherry-picking anecdotes to fit certain narratives (“Battle royal”, October 17th). The Crown Property Bureau has dedicated large sums of investment for public benefits. King Maha Vajiralongkorn has asked the CPB to consider using its land for constructing water reservoirs to solve a water scarcity problem. Siam Bioscience, an investment of the CPB to improve patients’ access to high quality medicine, is co-operating with AstraZeneca to develop a covid-19 vaccine for Thailand and South-East Asia.

Although the monarchy is regarded in high esteem, it has

often been inappropriately politicised by opposing factions, particularly when tension arises. The recent protests and suggestions for political reform reflect the reality of the conflict between people of different viewpoints in our society, which has been exacerbated by the increase of hate speech circulated both in mainstream and social media. As such, structural changes can only be achieved through open dialogue and not further divisiveness and violence.

PISANU SUVANAJATA
Ambassador for Thailand
London

The provenance of a proverb

The phrase, “like two bald men fighting over a comb”, has a longer history than the border skirmish in 1998 between Ethiopia and Eritrea (“Ethiopia is poised to unravel”, November 7th). It is often quoted as if it is a new witticism. In fact, Jorge Luis Borges used it in reference to the Falklands war in 1982, and it stretches back further in time than that, possibly all the way to Phaedrus, a writer in ancient Rome. Borges, however, may have been the first to use it as a metaphor for futile war.

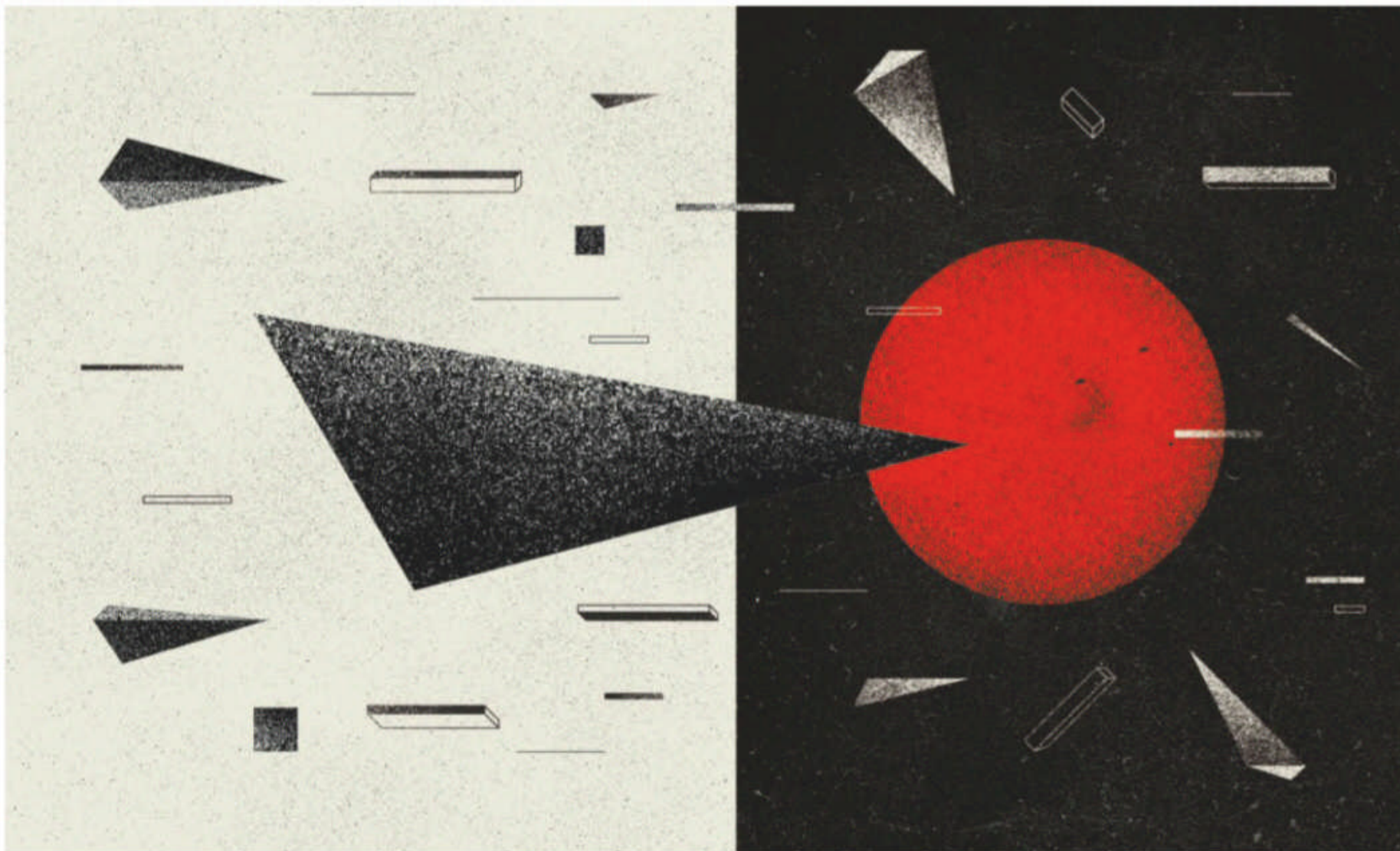
CHRIS CHAPMAN
London

No wish to return

Chaguan’s column (October 24th) on China’s double-edged message to Taiwan of “Come home, or China will kill you” reminded me of “Hamilton”. In that musical King George III responds to the American revolutionaries’ demand for independence with the line, “I will send a fully armed battalion to remind you of my love!” The song is called “You’ll Be Back”.

RACHEL GOLDBERG
London

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The new grand bargain

SAN FRANCISCO

Without teaming up, democracies will not be able to establish a robust alternative to China's autocratic technosphere

AMERICA HAS long dominated the world in information technology (IT). Its government, universities and enterprising spirit have provided it with decades of leadership in hardware and software. Its military drones, satellites and “system of systems” give its armed forces a powerful edge over those of any competitor. Silicon Valley is more visited by foreign dignitaries and finders-of-fact than any other business locale in the world. One of its tech giants is currently worth over \$2trn; three more are worth over \$1trn. The contribution technology makes to the buoyancy of its markets is without equal.

China, too, has digital resources in abundance, not least its huge population of 1.4bn, which means it will eventually boast an even deeper pool of data and experts to develop AI models. The country's digital giants, from Alibaba to Tencent, have already become AI and cloud-computing powers in their own right. Its people live online to an extent that Americans—many of whom still have cheque books—do not.

The country's Great Firewall keeps undesirable digital content out. Within the wall, tech firms are allowed to fight it out as long as they are happy helpers of China's surveillance state.

And China is on the move. It is investing billions in emerging technologies, from AI and chip fabrication to quantum computing and 5G, a new generation of mobile networks. It is hacking other countries' computer systems and grabbing intellectual property where it can. It is packing the organisations that develop global technical rules, such as the International Telecommunication Union. And it is pulling other countries into its orbit with initiatives such as the “digital Silk Road”, helping them build out their digital infrastructure.

President Donald Trump saw, correctly, that this made China a serious challenger to America's digital supremacy. His humbling of Huawei, a Chinese telecoms-equipment maker, has begun a decoupling of Chinese and American IT infrastructures and of the supply chains between China

and America that will continue.

Many device-makers have already moved part of their production out of China and some will end up with two separate supply chains. Apple's contract manufacturers, for instance, are setting up plants in India. TSMC, a Taiwanese chip firm, announced in May that it will build a facility in Arizona. Feeling its dependence on American semiconductor technology, China is doubling down on efforts to build its own. In software and other areas, too, bifurcation has begun—and not just because of bans against Chinese apps.

What Mr Trump was unable or unwilling to understand, though, was that China and America are not the only economies that matter in this contest, and that fact provides America with a potentially decisive advantage. India, the European Union, Japan and others all play crucial roles in the world's IT system—as do tech giants such as Alphabet, Apple and Microsoft.

All these entities, whether national or corporate, are at odds with the American government and often with each other over something or other in the IT world, whether it be visas, privacy rights or competition complaints. But they would also all prefer a world in which international agreements, practices and expectations for IT embody the values and interests they share with America, rather than those of China. And if democratic countries cannot agree on common rules in the digital realm, China ▶▶

► could end up setting the rules for large swathes of the world. The result would be a technosphere engineered for the comfort and support of autocracies.

A partial catalogue of the past few months' disagreements shows the fractiousness that stops the free world coming together on this—and how many opportunities for dealmaking there would be if it decided it should. America's commerce department told foreign firms they could sell no more chips made using American technology to Huawei; its justice department filed an antitrust lawsuit against Google. America also pulled out of talks at the Organisation for Economic Co-operation and Development (OECD), a club of mostly rich countries, about how to tax the tech giants. India blocked dozens of Chinese apps, including TikTok, a popular video-sharing service, which the American government also wants to ban. The European Court of Justice (ECJ) struck down the "Privacy Shield" agreement between America and the European Union (EU), thus throwing the legal basis on which personal data flows across the Atlantic into doubt.

Europe has been trying for some time to carve out its own space in the digital realm as a protector of the citizenry—a noble goal made easier by the fact that the companies from which its citizens are being protected are mostly based the other side of the ocean. This has heightened tensions between Brussels, Washington and Silicon Valley. The ECJ's ruling on the Privacy Shield is one example. The European Commission is drafting legislation that would weaken the power of America's tech giants. Its proposed Digital Services Act would outlaw some of the firms' business practices, such as bundling their services to take over new markets or displaying them more prominently than competing ones.

We will rock you

Some of the EU's member states have also begun defending their right to rule their own digital roost, something now called "digital sovereignty". There is talk of creating a European cloud within the American one. GAIA-X is a step down that road—a federation of clouds, launched by Germany and France in June, whose members agree to certain rules, such as allowing customers to choose where their data are stored and move freely to providers' competitors if they wish. There is more to come: a "data strategy" on the table in Brussels would, if fully implemented, create "data spaces" ruled by European law and give people more rights on how their data are used.

These disputes offer ample space for mutually beneficial trade-offs. If America and its allies can reach good enough accommodations on the most contentious issues—notably privacy and competition—and find ways to live with the smaller

contradictions and conflicts which remain, they can become a force to be reckoned with—one that others will need little encouragement to join. An insular America can remain a technology superpower. A connected America cemented into the rest of the world by means of a grand technological bargain could be the hub of something truly unsurpassable.

There is a range of ideas about how to do this. In a recent report for the Council on Foreign Relations, a think-tank, Robert Knake imagines such a grand bargain taking the form of a "digital trade zone", complete with a treaty organisation. America would "weaponise its digital trade relationships" in order to promote such things as cyber-security, privacy protection and democratic values on the internet. Only countries that comply with the organisation's rules on such matters would be able to become members and only members would be allowed fully to trade with each other digitally. Violations would be dealt with by imposing sanctions and tariffs. "If the digital trade zone grows strong enough, China might see more benefit to co-operative engagement than to continued disruptive behaviour," writes Mr Knake.

Others prefer to imagine something

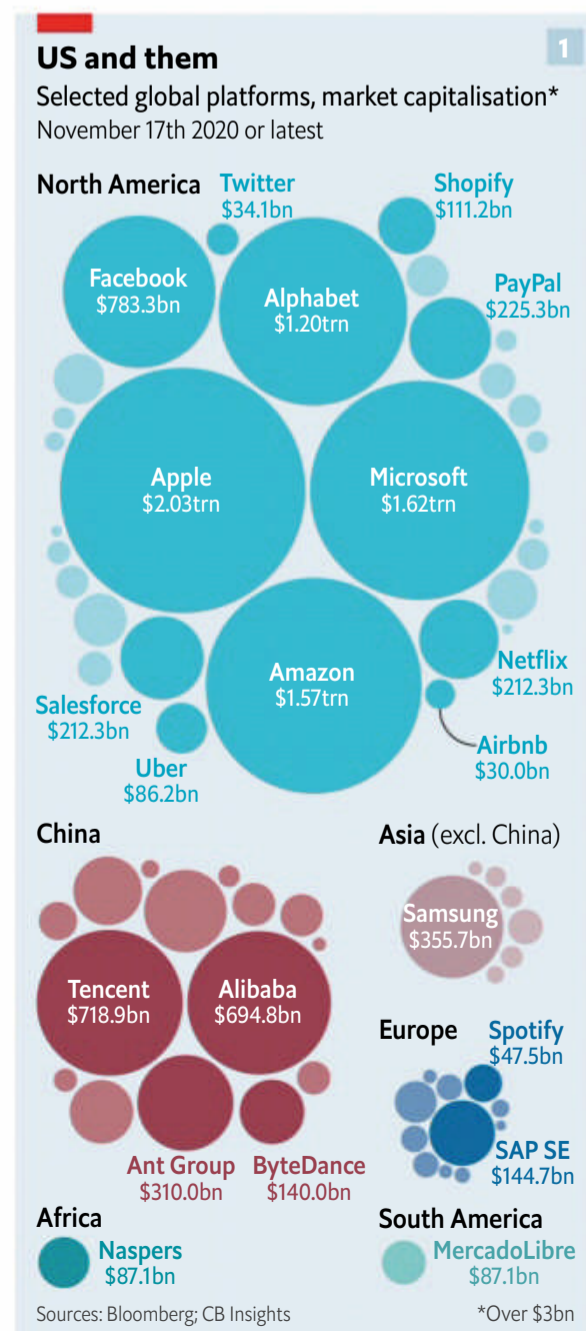
less formal, rules-based and punitive. In October three other think-tanks—the Centre for a New American Security (CNAS), MERICS of Germany and the Asia-Pacific Initiative of Japan—outlined a less exclusive construction. They propose that democratic countries form a "technology alliance" not subject to a formal treaty. It would be like the G7, which consists of America, Britain, Canada, France, Germany, Italy and Japan, and could one day, perhaps, include India and other countries from the Global South. It would hold regular meetings, as the IMF and World Bank do, and issue consensus opinions, and it would invite other stakeholders—from NGOs to tech firms—to pitch in.

Let us cling together

Until this month, such ideas seemed premature. But with Joe Biden soon in the White House, they have become more realistic: IT will be high on the agenda of the "summit of democracies" he has promised to convene. Closer co-ordination and some new institutions to back it up are also more needed, and not just because of the Chinese threat. The coronavirus, by pushing much of human activity into the cloud, has emphasised the importance of the digital realm and its governance. Left alone, the world of technology will continue to disintegrate into a splinternet in which digital protectionism is widespread—much as the global financial system fell apart before the second world war.

To make sense of all this, it helps to see the political world as one in which technology is beginning to look ever more like geography. The geopolitical way of looking at the world, which was born in the 19th century and revolutionised strategic thinking in the 20th, was based on the idea that the geographical aspects of the physical world could be crucially important to the relations between states. Mountains that blocked transit and plains that permitted it; oilfields and coalfields; pinch-points where maritime traffic could be constrained. Where a state's territory stood in respect to such geographical facts of life told it what it should fear and what it might aspire to, whose interests conflicted with its own and whose might align with them. In other words, geography was destiny.

The units of analysis for today's nascent technopolitics are platforms: the technologies on which other technologies are built—and alongside them, increasingly, businesses, governments and ways of life. The platform of all platforms is the internet. Some of the things which stand upon it are huge and widely known, such as Facebook, others small and obscure, such as Kubernetes, a sort of software used in cloud computing. Like geographical territories, these platforms have their own politics. They have their own populations, ►►





▶ mostly users, coders and other firms. They have their own laws, which lay out who can change code and access data. They have a position with respect to other platforms which underpin, compete with or build on them, just as territories have defined relationships with their neighbours.

And they have their own governance systems. Some are “open”. The most famous is Linux, an operating system created and maintained through co-operative efforts to which all are, in principle, free to contribute and from which all are welcome to benefit. Others are “closed”, as is the convention among many corporate-software makers, such as Oracle. Some are run like absolute monarchies, such as Apple under Steve Jobs, who was the final arbiter over the smallest details in his tech empire.

Don't stop me now

Their dominant positions in this world of platforms give companies like Facebook and Google powers approaching or surpassing those of many countries. Yet countries can—as their economies become more digitised—be increasingly understood as platforms, too: national operating systems of sorts. Natural resources still count, but digital resources are gaining ever more relevance: skilled and well-trained tech workers, access to scads of data, computing power, internet bandwidth, industrial policy and venture capital. And as with technology platforms, a country's competitiveness will, to a large extent, depend on how it manages and multiplies these resources.

America is a platform like Microsoft's Windows and Android, Google's mobile operating system. These mix aspects of open and closed systems, allowing others to develop applications for their platform, but also closely control it. America combines monopolies and a strongish state with lots of competition. Mainly thanks to

this profitable amalgam, the country has given rise to most of the world's leading tech firms. China is more like Apple and Oracle, which combine being closed with lots of internal competition. The European Union is best compared to an open-source project such as Linux, which needs complex rules to work. India, Japan, Britain, Taiwan and South Korea all run differently and have technology bases to match.

The rise of cloud computing and AI—the first a truly global infrastructure, the second its most important application—has heightened the tensions between these platforms. More and more value is created by using oodles of computing power to extract AI models from digital information generated by people, machines and sensors. The models can then be turned into all sorts of services. Transport, health care, teaching, campaigning, warfare—these parts of society will not become “data-driven” as fast as many predict, but in time they will all be transformed. Whoever controls the digital flows involved can divert much of the rent they generate. Knowledge is power in the virtual world even more than in the real one—and it generates profit. Ian Hogarth, a British tech thinker, summarised the sudden sense of urgency when he wrote in a paper in 2018 that “AI policy will become the single most important area of government policy”.

Many rich countries have drawn up ambitious industrial-policy plans for AI. Some have also instituted national data strategies which limit the data that can leave the country. A few have begun attacking other countries' platforms by hacking their computer systems and spreading misinformation. In short, they are behaving increasingly like the companies producing the technology reshaping their world. “Everybody has become much more technonationalist,” says Justin Sherman of the Atlantic Council, a think-tank.

That the 21st-century internet would be a splinternet was, perhaps, inevitable. It is not just that nations act in their own interests; they also have different preferences

and values, for instance regarding privacy. High digital borders behind which data get stuck, however, are not in the interests of most countries—though they may be in the interest of some governments. Russia wants to create a “sovereign internet” that can be cut from the rest of the online world at the flip of a switch (while retaining the capability to mess around in more open systems). Countries interested in using flows of data to improve their citizens' lot, though, will see few advantages. In a splinternet world choice will be limited, costs will rise and innovation will slow. And all the while China, with the biggest silo and thus the greatest access to data, loses least.

You're my best friend

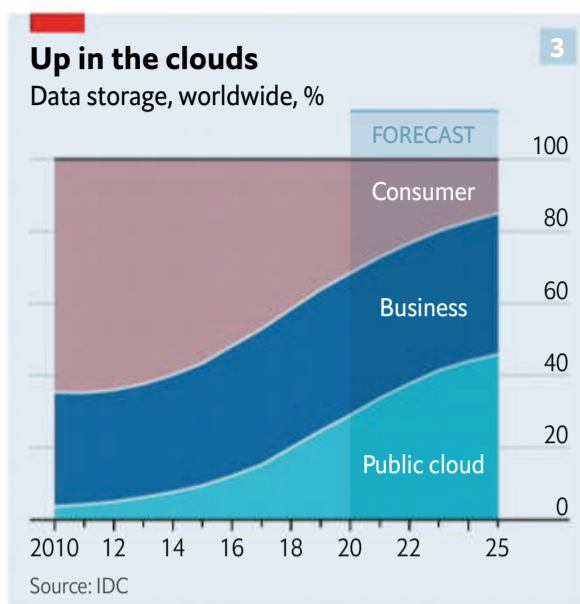
It is against this background that a grand bargain needs to be struck. Its broad outline would be for America to get security guarantees and rule-making bodies in which its interests can be taken seriously. In return it would recognise European privacy and other regulatory concerns as well as demands that tech titans be properly taxed. Ideally, such a deal would also include India and other developing countries, which want to make sure that they do not risk becoming mere sources of raw data, while having to pay for the digital intelligence produced.

In terms of security, the parties to the bargain would ensure each other secure, diverse supply chains for digital infrastructure. To get there, the CNAs proposes, in effect, to partially mutualise them: among other things, members of a tech alliance should co-ordinate their efforts to restructure supply chains and might set up a semiconductor consortium with facilities around the world. Supporting open technologies and standards that create a diverse set of suppliers would help, too. An example is OpenRAN, a mobile network that allows carriers to mix and match components rather than having to buy from one vendor. A world with open infrastructure like this need not, in principle, just depend on a few suppliers, as is the case today with Huawei, Nokia or Ericsson.

To give in to Europe on other fronts in return for help in such matters would be costly to America, which has largely opposed attempts to regulate and tax its tech giants abroad. In terms of statecraft, that is an attractive part of the arrangement; to be willing to pay a cost shows that you place real value on what you are getting.

If an alliance of democracies is to deliver a China-proof technosphere, America will have to accept that the interdependence of the tech world on which the whole idea is based means that it cannot act unconstrained. Henry Farrell of Johns Hopkins University argues that America has so far simply “weaponised” this interdependence, using chokepoints where it has le- ▶





verage to strangle enemies and put pressure on friends. But Europe's resistance to banning Huawei's gear and the ECJ's decision show that even friends can balk. America needs to give if it is to receive.

It might not have to give all that much. European views on regulating platforms more strictly because of their tendency to become quasi-natural monopolies are not exactly mainstream in Washington, DC, but nor are they completely alien to the political debate there. A recent congressional report about how to limit big tech's power included many ideas already touted in Brussels, such as banning tech giants from favouring their own services and refusing to connect to competing ones. Positions on regulating speech online are not that far apart either. As in Europe, there is growing agreement in America that legislation is needed to push social-media firms to do more to rid their services of hate speech and the like.

A deal on taxing tech firms seems within reach, too. The Trump administration resisted efforts to compel them to pay taxes where they do business rather than in tax havens, regarding this as a grab for the profits of American companies. A Biden administration is likely to be more open to the argument that more of the taxes on digital firms should go to places where their customers live. Expect negotiations on the matter at the OECD to be revived—as they must be to keep countries from charging digital taxes unilaterally. Barring a compromise, France, Spain and Britain will start collecting such a levy early next year.

In parts of the world's international bureaucracy the grand bargaining has already begun. When Japan presided over the G20, a club of developing and rich countries, last year, it succeeded in getting the group to launch the "Osaka Track", an attempt to come up with rules to regulate global data flows. This summer also saw the launch of the Global Partnership in AI, which is meant to come up with rules for the responsible use of AI, and of the Inter-Parliamentary Alliance on China, which brings

together lawmakers from 18 countries. These new groups join a few established ones, such as the OECD and the Internet Governance Forum, which have long pushed for common rules in the digital realm. NATO has started to do the same for AI and data-sharing among its members.

One of the key parameters in the bargaining will be how formal a framework the parties want. In some ways, formal is better: everyone knows where they stand. In others, formal is worse: agreement is harder. Take the example of trade, thoroughly formalised within the WTO. Trade agreements take years to negotiate, often only to be blocked by legislatures at the last minute. This is why a Biden administration will probably aim for a much looser form of co-operation, at least initially. An idea discussed in foreign-policy circles close to Mr Biden is that, instead of agreeing on certain policies that then have to be implemented nationally, governments should opt for a division of labour within certain red lines. If Europe wants to go ahead with rules to regulate big tech which do not amount to expropriation, America would not put up a fight—thus allowing the EU regulation to become the global standard of sorts, rather as it has done with the GDPR.

The show must go on

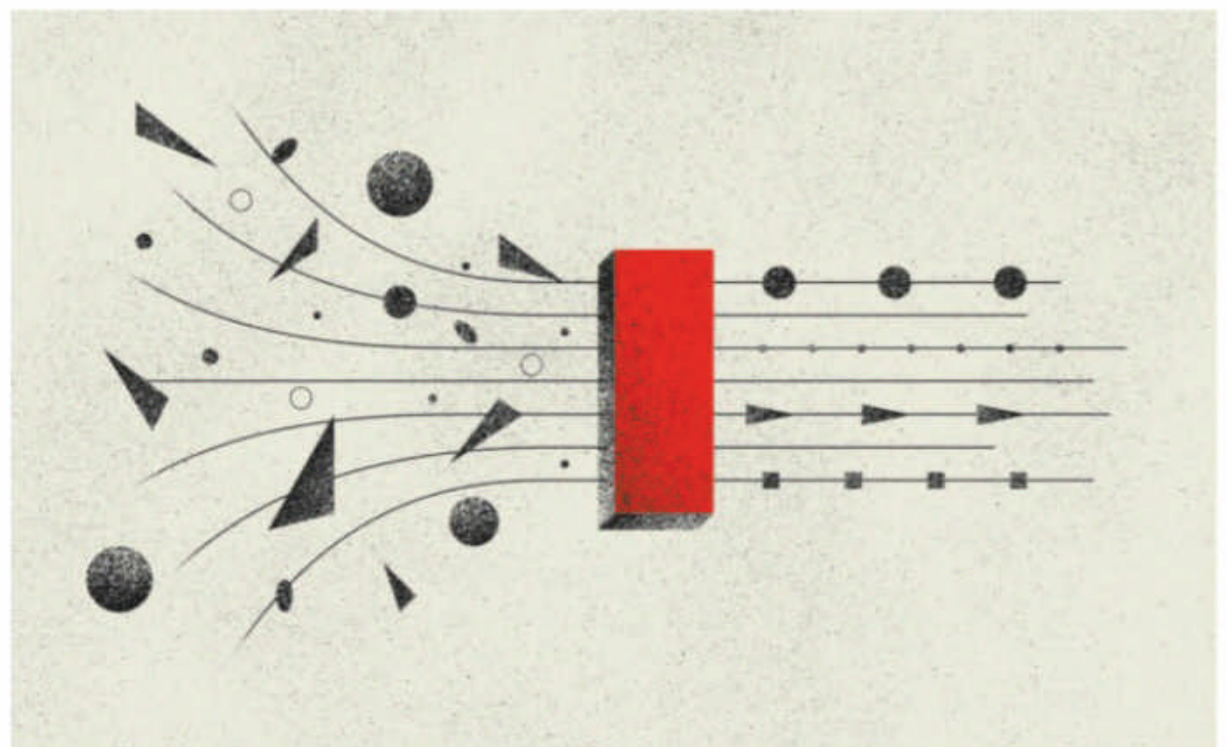
Compromises that provide something for everyone are not hard to spot. But reaching them will not be easy. After four years of President Trump, "the mistrust on the European side runs deep," says Sam Sacks of CNAS. On the other side of the Atlantic, Congress will not want to make life more difficult for its intelligence agencies, for whom social media and online services have become a crucial source of information. In order for a grand bargain to be reached, all of that must be made more difficult. If the ECJ struck down the Privacy Shield, it was mostly because the court be-

lieved that America does not provide enough safeguards to protect European data from the eyes of its intelligence and law-enforcement agencies.

Another big barrier on the way to a bargain will be the question of how much America's tech titans need to be reined in. "To bring globe-spanning technology firms to heel, we need something new: a global alliance that puts democracy first," argues Marietje Schaake, a former member of the European Parliament who now works for the Cyber Policy Centre at Stanford University, in a recent article. Many in California and elsewhere in America like the sound of this, but Congress will only go so far in restricting its tech giants and their business model, which is increasingly based on extracting value from data.

Even if a grand bargain can be reached, many small ones will need to be done as well. That is why, in the long run, the world needs more than bilateral deals and a loose form of co-operation, but something more robust and specialised. It may even have to be something like a World Data Organisation, as Ian Bremmer of the Eurasia Group has suggested (or at least a GADD, a General Agreement on Data and Digital Infrastructure, a bit like the General Agreement on Tariffs and Trade, as the WTO's predecessor was called). Given the sorry state of the WTO, this may seem fanciful, but without such an organisation today's global data flows may shrink to a trickle—much as protectionism limited trade in the days before the GATT and the WTO.

Will it ever happen? Yes, if history is any guide. In July 1944 representatives of 44 countries met in Bretton Woods, New Hampshire, to hash out a new financial order, including the IMF and the World Bank. Granted, the pandemic is no world war. But, with luck, living through it may provide enough motivation to try again in the digital realm. ■





The White House

To the bitter end

WASHINGTON, DC

President Donald Trump's refusal to concede is harming America

"STOP THE STEAL" has become the anthem of outraged Republicans who believe President Donald Trump's claims that Democrats stole his re-election by committing massive voter fraud. It is the hashtag they rally around online and the slogan they chant when they throng in the streets, as they did on November 14th in Washington, DC, earning a laudatory drive-by from the presidential motorcade.

But this is not the first time surrogates of Mr Trump have deployed it. Roger Stone, a former adviser to the president who recently had his prison sentence for several convictions commuted, actually founded a group by that name in April 2016—then to expose Senator Ted Cruz's purported plot to steal the Republican nomination. Similar pre-emptive claims of voter fraud were made before the general-election contest with Hillary Clinton in 2016. Now that Mr Trump has actually lost, the slogan has finally been deployed in earnest.

Mr Trump has a long-held aversion to admitting defeat, or really conceding any

fault at all. That is now throwing up an unprecedented scenario: an incumbent American president refusing to hand over power due to baseless claims of electoral fraud. It is a serious democratic norm to trample over—one easy to underplay because of public confidence that other institutions, like the courts and the military, will not accede to Mr Trump's wishes. The chances of a reversed decision are low. The lawsuits filed in the swing states that Mr

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Trump lost are floundering. Despite Mr Trump's recent replacement of civilian leadership at the Department of Defence, there is little risk of a self-coup.

Even if this low-energy *autogolpe* does not succeed, Mr Trump's actions are still alarming. Presidential transitions involve a large number of civil servants: some 4,000, are politically appointed, with 1,200 requiring confirmation by the Senate. By not conceding, Mr Trump has stalled this process. Mr Biden is not receiving his classified presidential daily briefings. His team does not have access to secure governmental communications, relying instead on encrypted messaging apps. The commission to study the 9/11 attacks found that the shortened transition in 2000, caused by the disputed result in Florida, may have contributed to American vulnerability to terrorist attacks. By contrast, the well-managed transition between George W. Bush and Barack Obama in the midst of the global financial crisis enabled faster implementation of economic relief. Asked what was at stake this time, Mr Biden said "more people may die" if the Trump administration refused to co-ordinate on virus suppression and vaccine distribution.

The stalled transition is also a test for the president's party. Never-Trump Republicans had hoped the president would be dealt a stinging electoral rebuke, forcing a reckoning among accommodationist party grandees. That did not happen. Down-bal- ▶

▶ lot Republicans benefited from the high turnout among Mr Trump's supporters, probably keeping control of the Senate and eroding the Democratic majority in the House. They also wiped out Democrats in state elections, bringing power over gerrymandering. "They think the ducking and accommodating of Trump without quite sounding like Trump—that worked fine," says Bill Kristol, a conservative writer long opposed to the president.

Most prominent Republicans still in office have continued to humour the president. "All legal ballots must be counted. Any illegal ballots must not be counted," said Mitch McConnell, the Republican leader in the Senate. The implication that there may be sufficient fraudulent ballots to alter the election's outcome has so far proven to be baseless. Only a few exceptional Republicans, like Mitt Romney and Susan Collins, have acknowledged the results and congratulated Mr Biden.

Others have gone even further than Mr McConnell's careful statement. Brad Raffensperger, the Republican in charge of administering elections in Georgia, which Mr Biden narrowly won, has come under withering criticism from members of his own party for refusing to tilt the result in Mr Trump's favour. Kelly Loeffler and David Perdue, the Republican senators who face run-offs in January that will determine control of the Senate, issued a joint statement calling for his resignation. Lindsey Graham, an especially Trumpist senator, personally called Mr Raffensperger to dispute the absentee ballots cast in the race.

At some point, reality will intervene. The remaining lawsuits will fizzle. States have started to certify their election results. The electoral college will formally vote on December 14th to make Mr Biden the next president. More and more Republicans are telegraphing that they understand this by, for example, saying that Mr Biden probably ought to be receiving classified intelligence briefings after all.

Yet the equivocations now portend a Republican Party that remains firmly under the grips of post-truth Trumpism. This may be a rational strategy in the short term to ensure the president campaigns in the coming, critical Senate run-offs in Georgia. But it will probably last beyond that. Mr Trump will relish his role as kingmaker who anoints the winner of Republican primary contests by tweet. The president has reportedly also been talking of running in 2024, which would effectively freeze the next generation of Republicans in place.

Hyperpartisanship has wreaked havoc on American politics, but at least most voters could agree that the other side won fairly and squarely. That no longer appears to be the case. According to our latest poll from YouGov, 88% of those who voted for Mr Trump think that the election result is

illegitimate. There are always some gripes after hotly contested races. But the scale this time—like Mr Trump's refusal to acknowledge the results—is breathtaking.

During the much-closer election in 2000, where 537 votes in Florida separated winner from loser, 36% of Mr Gore's voters thought the result was illegitimate. Similarly, 23% of supporters of Hillary Clinton felt fleeced after her election loss in 2016. Perhaps as the weeks wear on, and Mr Biden inches closer to inauguration, the number of Republicans who see him as illegitimate will shrink. But Mr Trump seems unlikely to ever concede, and would rather establish the myth of his stolen election as a new lost cause among his supporters. If that happens, it would add a dangerous strain to America's factionalism—one that cannot be easily contained. ■

Missile defence

De profundis ad astra

An American ship takes out an ICBM—and opens a can of worms

THE INTERCONTINENTAL BALLISTIC missile (ICBM) took off from Kwajalein Atoll in the middle of the Pacific Ocean on November 17th. American satellites spotted its bright plume at once. They alerted Schriever Air Force Base in Colorado which in turn informed the *USS John Finn*, an Arleigh Burke-class destroyer poised north-east of Hawaii. A hatch on the deck flipped open and spewed out a torrent of flames as an SM-3 Block IIA interceptor shot up and



Something daring, incontinental

out. High above the Earth, it collided with the descending ICBM.

It was the first time an interceptor fired from a warship had shot down a (mock) ICBM in space. "Politically this test is a big deal," says James Acton of the Carnegie Endowment for International Peace, a think-tank. Russia and China have always complained that American missile defences undermine their own deterrents. America has always batted away those concerns. When the SM-3 was developed, America first said it would protect aircraft-carriers, and later that it would shield Europe from Iranian medium-range missiles. In fact, only a software tweak was needed to make it work against longer-range ones. Now that the system has been demonstrated against an ICBM, both Russia and China will claim vindication.

America already has a missile shield for its homeland, comprising 44 ground-based interceptors (GBIs) in Alaska and California. These were previously the only ones to have shot down an ICBM. Yet these are staggeringly expensive, relatively few in number and unreliable in tests. The ship-based system, known as Aegis Ballistic Missile Defense (BMD), has several advantages. It can be rolled out more quickly, moved where needed and allows America to field many more interceptors.

Currently, 44 destroyers and cruisers are equipped with Aegis BMD. Each has 90-plus launch tubes, so several thousand interceptors could theoretically be put to sea (in practice, the tubes also carry other weapons, like Tomahawk cruise missiles). The navy plans to fit Aegis to 65 ships, 11 of which would be allocated for the protection of the continental United States. Just three to four ships deployed off America's coast could cover its whole landmass, notes George Lewis, a missile-defence expert who recently retired from Cornell University. The idea is that if GBIs failed to take out a missile, Aegis could mop it up at a lower altitude—though SM-3 IIAs can still reach three times higher than the International Space Station.

In practice, notes Mr Acton, intercepting an incoming ICBM would still be forbiddingly difficult. They would travel a longer distance and therefore arrive at greater speed than in the test, armed with countermeasures to trick the interceptor and potentially in sufficient numbers to overwhelm defences. "SM-3 IIAs can't fundamentally undermine China's or Russia's nuclear deterrents, or even frankly North Korea's," he says. But that is not how those countries are likely to see the matter.

Russia has long held that arms-control talks ought to include not just offensive systems, like bombers and missiles, but also defensive ones which might neuter them. It has been especially irked by land-based Aegis systems built in Romania and ▶▶

Political donors

My Kochtopus teacher

CHICAGO

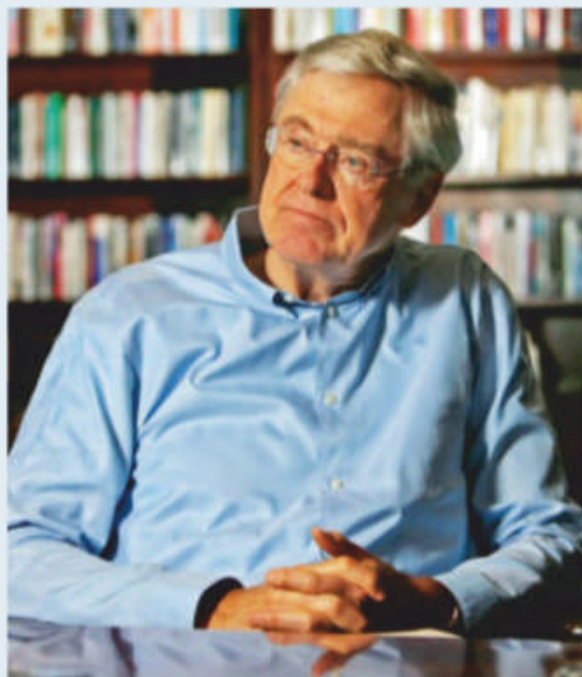
Charles Koch offers partial regrets for his partisan ways

“BOY DID we screw up. What a mess!” Towards the end of his new book, Charles Koch, the billionaire owner of Koch Industries, the second-largest private firm in America, offers this surprising mea culpa. For years he gave extraordinary sums to Republican campaigns, encouraging partisan confrontation. (He and associates probably guided over \$1bn in political spending in the past decade). Today he would like readers to know that he boomed. He says he picked the “wrong road”.

The wizard from Wichita is too coy to set out in detail what he, his late brother David, and their political action committee, Americans For Prosperity (AFP), were up to. Soon after the election of Barack Obama, he writes, “we started engaging directly in major party electoral politics”. They mostly funded enthusiasts for the Tea Party movement. This fostered tribalism and weakened moderate Republicans. Mr Koch now regrets that this meant most efforts at bipartisan cooperation amount to “a sick joke”. He worries, too, that such dysfunction is pushing youngsters to favour socialism.

What is behind his admission? In “Believe in People”, he claims his goal was “not to toot my own horn”. Yet he must have noted the widespread, unflattering, coverage after his brother David died last year. The 85-year-old knows his own reputation is toxic on the left, for his hostility to Obamacare and ongoing denial of climate science. He has also lost standing on the right, where politicians mostly prefer the big-spending populism of Donald Trump. The author—who does not mention the president—is dismayed by most of his policies: the increases in tariffs, the tendency to pick corporate favourites, the curtailment of legal immigration.

His writing is a mix of family memoir, stories of corporate good deeds and calls for government to shrink so the needy



Before the fiddlers have fled

can better tug at their bootstraps. The author seems to argue that philanthropists and well-meaning activists will do most to tackle inequality, deaths from despair, falling life expectancy, racism and other social ills. That won’t change sceptics’ minds about him, but it is rare to hear a prominent figure express such blunt regrets for past actions. He now argues that partnership—such as the First Step bipartisan efforts he backed in 2018 to reform the criminal justice system—achieves more than party confrontation. He has also started sending smaller sums to Democratic candidates.

Mr Koch has not changed his spots entirely, though. AFP poured millions into this year’s elections. These include help given recently to David Perdue, a Republican senatorial candidate in a run-off in Georgia. Meanwhile the AFP’s website brags of how it lobbied to get Amy Coney Barrett installed quickly on the Supreme Court last month (to Democratic fury), just as it pushed for Brett Kavanaugh two years ago. A road once taken can be hard to leave again.

The future of diplomacy

Altered State

Two new reports propose a rich feast of reforms for America’s foreign service

JOE BIDEN, the president-elect, wants to end his country’s “forever wars” and believes diplomacy should be “the first instrument of American power”. He promises to reinvest in America’s hollowed-out diplomatic corps, the better to nurture alliances and tackle the global issues of the future, such as climate change and great-power competition. But how to make the foreign service fit for the future? Two new reports, one from the Council on Foreign Relations (CFR), a think-tank, the other the result of an extensive project at Harvard University, offer thoughts.

Both say the State Department is in crisis. Its problems stretch back well beyond the Trump administration but have deepened dramatically under it. Morale is low, budgets are squeezed and the foreign service is suffering from an exodus of talent. Diplomats’ careers are stymied by the politicisation of senior posts. For the first time in a century, not one of the 23 Senate-confirmed assistant-secretary positions is a serving career official, and 43% of ambassadors are political appointees, also a modern record. The story on diversity is dismal: in March the Senior Foreign Service was 90% white and 69% male. Only five of 189 ambassadors are African-American (over their two terms, Barack Obama appointed 46 African-American ambassadors and George W. Bush had 44). Under Donald Trump, a quarter-century trend of rising female ambassadors has gone into reverse.

Remedies, say the reports, need to be radical. The CFR emphasises immediate steps an incoming administration can take to start revitalising the State Department, from appointing a chief technology officer to bringing in climate experts and more Chinese-speakers (the department still has more Portuguese-speakers than the combined total for Mandarin and Arabic), as well as issuing a public apology to career diplomats who have been subjected to political retaliation. The Harvard report suggests a ten-point action plan for the longer term, including a new mission and a new name for the foreign service: the “United States Diplomatic Service”. Taken together, the reports offer a rich menu for reform.

A four-course selection for the new administration would include, for starters, an infusion of resources. The Harvard group recommends a 15% increase in foreign-service personnel, to make it possible to have a “training float” like that of the

▶ Poland. The new test “is likely to have a crushing effect on prospects for new nuclear arms control agreements”, says Laura Grego of the Union of Concerned Scientists, an advocacy organisation.

“It will also provide motivation (or justification) for Russia and China to diversify and grow their nuclear weapons arsenals,” she adds—the logic being that more missiles will be needed to saturate stiffer defences. China is especially jittery as it has

relatively few land-based ICBMs.

Ms Grego notes that because the SM-3 interceptor can also take out satellites—something America demonstrated in 2008—deploying more of them will have an impact on space security, too. But with the Iranian and North Korean nuclear programmes simmering, the incoming Biden administration is not about to abandon a flexible seaborne means of shielding its European and Asian allies. ■

armed forces. This would involve an increase of 2,000 positions over three years, followed by a four-year commitment for a further 1,400-1,800 posts to fill projected staffing gaps. A diplomatic reserve corps, also on the military model, would create a surge capacity for international crises.

Second, another appetiser, would come a sweeping professionalisation of the top ranks of diplomacy. The Harvard team recommends that, by 2025, 90% of ambassadors, and 75% of all assistant secretaries of state, should be career diplomats. Far lower proportions of political appointees would bring the foreign service into line with the military and intelligence services.

The calorific main course would consist of a transformation of the State Department's culture. It would involve slashing layers of bureaucracy (policy recommendations can collect 15 or more sign-offs on

their way to the secretary of state). It would recreate mid-level entry-points to the foreign service. Actions to make America's diplomats more closely reflect the country they represent would include appointing a chief diversity officer and tackling structural bias in recruitment and promotion.

And for dessert? Both reports argue that the foreign service's mandate for the future should be enshrined in legislation. This has happened three times in the past century—most recently in 1980, at the height of the cold war. Discussions with military and intelligence experts informed this recommendation, too. "Unless you have some of these things in the law, they won't last," says Nicholas Burns of Harvard, an ex-diplomat. He detects "considerable interest" on Capitol Hill. But to get reforms through a polarised Congress would require diplomatic skills of the highest order. ■

frequently been accused of wrongdoing—over a scandal at a commuter rail system in Chicago, and a sexual-harassment case that took down his chief of staff—yet he always slipped away unscathed.

This time could be different. As in Ohio, federal investigators appeared this summer. They pressed charges setting out how an energy company, Commonwealth Edison (ComEd), handed jobs, cash and contracts to pals of the politician. Their investigation spanned eight years to 2019. In a plea bargain ComEd has already admitted to paying \$1.3m in return for two laws that weakened regulators' checks on how it set rates. That earned the company, at customers' expense, an estimated \$150m. It has already agreed to pay a \$200m fine and Fidel Marquez, who ran its government affairs office until last year, pleaded guilty to bribery in September.

That leaves Mr Madigan vulnerable. He has not been arrested or charged and he denies any wrongdoing. But a 38-page deferred prosecution agreement between prosecutors and ComEd sets out in detail how federal investigators see the dubious role of "public official A" who is bluntly identified as the speaker. Voters, especially beyond Chicago, sound fed up with the whiffs of scandal around him. After they delivered a relatively poor result for Democrats in elections this month the governor, J.B. Pritzker, and both senators for the state, Dick Durbin and Tammy Duckworth, all Democrats, rounded on the speaker. Mr Durbin called the Democratic party in Illinois a "corrupt organisation" and said the speaker and his allies must go. Forcing him out, however, depends on swaying Democratic state legislators, many of whom dread any idea of crossing Mr Madigan.

Rich Miller, a well-connected journalist in Springfield, is a veteran watcher of failed plots against Mr Madigan. This is "by far the closest it's got for him, politically and legally", he says, especially after investigators bugged phones of his close officials. As for politics, Anne Stava-Murray, a newish Democrat representative who led a lonely rebellion against Mr Madigan two years ago, says that she has rallied 13 colleagues, notably many women, to defy the speaker. If true, and they hold their nerve, that is enough to remove him.

One puzzle is why energy companies are mired in dirt in both states—after all, machine politicians used to work through unions and local government departments. Today energy firms have costly old assets to maintain, such as nuclear plants, while demand for electricity is flat at best. Their fortunes thus depend on regulatory change and getting subsidies or tax breaks, in the gift of politicians. In return, they can offer jobs and favours for friends in office. Power may corrupt, but in the Midwest it is power firms that corrupt absolutely. ■

Corruption in the Midwest

All about power

CHICAGO

Parallel political scandals embroil leading politicians in Ohio and Illinois

LARRY HOUSEHOLDER sounds unrepentant. Until July the Republican was speaker of Ohio's state assembly—a politician best known for his prodigious fundraising and helping his party colleagues raise cash. Then in July the feds came knocking. Along with his campaign strategist and three lobbyists, he was arrested and charged with racketeering. Federal investigators say the men took \$60m from a power company, widely reported to be FirstEnergy. It was transferred via a charity set up as a front. In return they passed a bill by which the state was to dish out over \$1bn for two failing nuclear plants.

On his arrest Mr Householder lost the speakership but he fights on, denying any wrongdoing. He is said to have spent \$1m already on lawyers. This month he was re-elected, getting more votes and a bigger majority than two years ago. Voters were unbothered by news, late in October, that two of his co-accused had already pleaded guilty (and both pointed fingers at the ex-speaker). Nor did voters fuss that he could face 20 years in prison if convicted. As for the wider political impact, Mark Weaver, a political operative in Ohio, calls it a murky tale but says Mr Householder's relative lack of fame means the impact will be slight.

That is not the case in a parallel case unfolding in Illinois. This week Democrats there—plotting by phone and Zoom, as the virus kept them from Springfield—looked ready to topple their own speaker. Mike

Madigan is a wisp of a man compared with barrel-chested Mr Householder. But he is the more powerful, indeed legendary, character. Known as the Velvet Hammer, Mr Madigan is reckoned to be the state's most powerful politician, one who has seen off many governors of both parties. First elected in 1970, when Nixon was president, he has been speaker since 1983 (apart from a brief interlude in the 1990s). A relic of the era of Democratic machine politics, he has



Mike Madigan and his fascinating rhythm



Cemeteries

Black tombs scatter

WASHINGTON, DC

Should development be prevented to preserve African-American cemeteries?

WHEN CHARLOTTE TROUP LEIGHTON first looked around her house, in the Maryland suburbs of Washington, DC, she was drawn to the small wooded meadow that lay behind it. Brambly and overgrown, it formed a picturesque buffer between the house and the thundering multi-lane Capital Beltway beyond. Looking closer, she saw it was dotted with small stones, some engraved by hand, and periwinkle, which is often planted as a ground cover in cemeteries. Though it was not listed, it was an African-American cemetery, established by former slaves in the 1890s.

America has innumerable old African-American burial grounds that have been largely forgotten. The one at the back of Ms Troup Leighton's garden, which she is now trying to protect from a plan to widen the highway, was established by Morningstar Tabernacle No. 88, the local chapter of a benevolent society set up by former slaves after the civil war. During segregation, it used members' fees to provide services, from care of the ill and destitute to education and burial. Along with a meeting hall, the foundations of which are still visible, and a church, it formed the heart of a tight-knit black neighbourhood known as Gibson Grove, named after Sarah Gibson, who was enslaved in Virginia before buying land that she donated to the community. She is one of at least 80 people thought to be buried in the cemetery.

By the middle of the 20th century, as the

suburbanisation of a once-rural area pushed up property taxes, many had left; today the area is almost entirely white. The community was dealt a decisive blow in the early 1960s when the highway, built to link the capital's fast-growing suburbs, separated the cemetery and hall from the church. Alexandra Jones, an archeologist who has studied the remnants of the Gibson Grove community, says this pattern, in which highways were driven through the middle of black neighbourhoods, was repeated in many places during the building boom of the 1950s and 1960s.

Today, developers are required to assess whether they are building on graves or historic sites. Yet often they do not. In 2018 the Maryland State Highway Administration published a plan to widen the beltway, potentially disturbing a slice of cemetery land, including parts of the hall's foundations. Its map did not list the cemetery as a burial or historic site, prompting Ms Troup Leighton and Ms Jones to form a group to protect it. The state is now planning to undertake a survey to establish whether the expansion would destroy any graves.

Across America, the fate of African-American burial sites depends upon the ef-

Charters and covid-19

Crash courses

NEW YORK

Successful charters are outperforming traditional public schools in virtual learning, too

NEW YORK CITY'S schools may be closing, but the pupils at Success Academies, a network of charter schools which has placed all of its 20,000 pupils in remote learning, will still be wearing their uniform (vivid, pumpkin-orange shirts with navy trousers) every day of the week. Unlike traditional public schools in the city, which reopened eight weeks ago but are now closing as covid-19 cases spike, Success has remained all-virtual. Just as with their in-person offerings, high-performing charter networks have managed to create an exemplary virtual programme that other schools are starting to learn from.

Eva Moskowitz, the founder of Success, compares the logistics of arranging high-quality remote learning to the D-Day operation. Children needed laptops, science kits, and noise-cancelling headphones. The 7% of her pupils who live in homeless shelters needed internet hotspots. "Remote 2.0's" curriculum is continuously refined. Ms Moskowitz tweaked the school schedule, usually sacrosanct, to make more time for small-group learning. Unlike many schools, Success did not abandon learning standards or live teaching after closures

started in the spring. It required pupils to snappily start school on time and in uniform. If a child is not at her screen by 9am, parents are called.

This approach has achieved "striking success in the face of the viral challenge," notes a report from the Thomas B. Fordham Institute, an education think-tank. Like Success, Uncommon Schools, another high-performing network with 21,000 pupils, has now made much of its virtual curriculum available free online. At least 227,000 people from every state in America and 92 countries have used the materials. Anyone can log in to download lessons given by its best teachers. One family in Washington, DC, even sought to enroll their child virtually, despite being hundreds of miles from the nearest Uncommon school.

As much as Success, which also shares virtual lesson plans and webinars, and Uncommon are engineering a new model for remote learning, virtual learning is still a pale imitation of in-person instruction. "I want to get back on campus so badly, says Ms Moskowitz. "It's just not the same on Zoom." With covid-19 infections accelerating, though, that might not happen for a while.

forts of local campaigns such as this. That may change if Congress passes the African-American Burial Grounds Network Act, which would create a database of historic black burial sites, managed by the National Park Service, and provide funding to research and protect them. It was introduced last year by A. Donald McEachin, a congressman from Virginia, who discovered that his great-grandfather was buried in an African-American graveyard in Richmond which, until a few years ago, was overgrown and strewn with rubbish. The act may become law in 2021.

For an unknown number of burial grounds, the law will have come too late. Earlier this year Richard Stuart, a state senator in Virginia, spotted a headstone in the river that runs alongside the farm he had just bought. He discovered that a two-mile stretch of a barrier, constructed in the 1960s by a previous owner, contained innumerable others. They came from Columbian Harmony, once one of the biggest African-American cemeteries in Washington, DC. It was dug up in the 1960s to make way for development. Many of the graves were moved to a new burial ground in Maryland. But the headstones were sold as scrap. ■

Lexington | Audacious and obstructed

Barack Obama's new memoir, "A Promised Land", will give his former deputy little comfort



THE ONLY racist epithets Barack Obama recalls from his first presidential campaign, in his engrossing new memoir, "A Promised Land", were uttered by the rural white folk who declared they were "thinking of voting for the nigger". He would go on to win the biggest majority of any Democrat since 1964, including by unexpectedly bagging white, working-class states such as Iowa and Ohio. "Race doesn't matter!" chanted the crowds that celebrated his victories. Yet two years later Tea Party protesters were waving banners of Mr Obama with a bone through his nose. The proportion of Republicans who said he was Muslim soared—to around half by the end of his presidency. Whereupon millions of those same rural supporters elected the main spreader of racist lies about Mr Obama to be his successor.

As that chronology should suggest, the white backlash to Mr Obama, which Donald Trump rode to the White House, was not inevitable. It was engineered, a product of unprecedented obstruction from the Republican establishment in combination with relentless slander of the president and his adored, politics-loathing wife by the conservative media. "It's a trip, isn't it?" murmured Michelle Obama, after glimpsing a Tea Party rally on television. "That they're scared of you. Scared of us."

The hate-mongering on Fox News was the channel's stock-in-trade. But what were Republican elites so afraid of? They said Mr Obama was dictatorial or radical. Yet the record he describes in his dispassionate yet fluid style suggests how untrue that was. Though he had shortcomings—a tendency to vacillate, a distaste for political cut-and-thrust that bordered on aloofness—Mr Obama was a relatively unassuming chief executive. He rehired his Republican predecessor's defence secretary, awarded a plum cabinet job to his resentful Democratic rival and considered his celebrity status absurd. (On learning he had been awarded the Nobel peace prize, less than a year into his term, he retorted: "For what?")

He was also intrinsically moderate. Indeed his presidency, to use a term it popularised, looks in retrospect like a stress-test of the system's ability to embrace that consensus-forging quality.

Consider that Mr Obama's signature health-care and climate policies were based on Republican initiatives. And he diluted the former in a failed bid to get a single Republican vote for it in the

Senate, though his party had a supermajority there. A veneer of bipartisan support would make the law more resilient, he thought. And he had no time for those on the left who griped at such compromises. He and his advisers adopted the phrase "public option" (which these days counts as the most modest health-care reform Democrats will consider) to refer to any left-wing unicorn.

His moderation was part-learned: he notes that most of the big social reforms started incrementally. But mostly it reflected his background. Raised in Hawaii by his white, Kansan grandparents, he retained a strain of their cultural conservatism—cautious, with a reverence for tradition and community—even after he acquired a more unambiguously black self-awareness and hunger for social justice. Uniting those disparate parts, by acting "as translator and bridge among family, friends, acquaintances and colleagues", became at once an identity and a political mission. It also explains his characteristic political traits.

They were the idealism and fine sense of empathy he showed on the trail (though his novelty—"a blank canvas upon which supporters across the ideological spectrum could project their own vision of change"—also helped). His pragmatism and restraint were related qualities. Together they defined his vision of change.

Thus, for example, the constrained idealism of his foreign policy, which is considered less heretical in the DC think-tank realm these days. Thus, too, his nuanced pronouncements on race, including his greatest speech, in 2008, in which he claimed that his grandmother's petty chauvinism was as much a part of him as the overheated America-bashing of his black pastor. ("That was a very nice speech, Bar," she responded.) Restrained to a fault, Mr Obama is even unwilling to castigate his enemies. He confesses to a sneaking regard for the Tea Party's organisation. But he comes close to letting Chuck Grassley have it. He was the Republican senator who kept Mr Obama guessing on his health-care bill only to admit that, for all his prevarication, he was never going to back it.

It seems likely that Republican leaders and donors obstructed Mr Obama so feverishly not because they genuinely thought he was an extremist, but because they knew that he was not. It was precisely his attempted bridge-building that was so threatening to them. Because it was at odds with the story they had been telling their voters about the left for a decade. And because, had Mr Obama pulled it off, it would have made his already powerful government hugely popular. Paradoxically, it was by spurning his offer of bipartisanship that the Republicans made him seem, true to the right-wing caricature, overbearing and partisan. It also helped them stymie his plans and thereby dismantle the powerful Democratic trifecta he had assembled at the mid-terms in 2010.

The conventional wisdom, which usually exaggerates individual dramas and downplays structural flaws, still blames Mr Obama for much of that failure. But, notwithstanding his imperfections, it is hard to think what he could have done to avoid it. His presidency represented a genuine effort to break through partisan polarisation which mainly showed what an impossible ambition that was.

Barack to the barricades

This is not a great lookout for Mr Obama's former vice-president—about whom he is scrupulously complimentary and unrevealing. Joe Biden will soon return to the White House for his own stab at restoring bipartisan comity, but with a far weaker mandate than Mr Obama had, and at a more brutally divided time. He will make mistakes. He will be slammed for them. But if his government fails to ease the rancour, he may not be the reason why. ■



Mexico

Smoke and legislators

MEXICO CITY

Will Mexico become the third country to legalise cannabis for recreational use?

IN THE PUBLIC park outside Mexico's Senate is a small forest of cannabis. Volunteers are staging a *plantón* (a punning way to say "sit-in") to spur lawmakers to legalise weed. They tend to the 1,000 or so plants on Tuesdays and Thursdays, spraying organic insect repellent and picking up leaves. One volunteer, Leopoldo Rivera, calls it "the first non-clandestine plantation" of marijuana in Mexico since the government banned it a century ago. The police did not uproot the seedlings in February, when the *plantón* began. Some plants are now three metres (ten feet) tall.

As *The Economist* went to press the Senate was due to debate a bill that would make Mexico the third country in the world, after Uruguay and Canada, to legalise cannabis for recreational use nationwide. For Mexico, the change seems riskier. It was once the world's largest producer of cannabis. Campaigners for legalisation are watching how it will go in a country where organised crime is strong, the rule of law is weak and

much of the economy is undocumented.

Mexico's route to legalisation has been unusual, and its arrival may yet be delayed. The president, Andrés Manuel López Obrador, has so far been a bystander. In contrast to the United States, where voters have endorsed reform in state referendums, legalisation has little popular support in Mexico. Surveys suggest that just over a third of voters favour it.

Campaigners have used the courts rather than popular pressure to advance their cause. Anti-discrimination advocates created an opening in 2001 by arguing successfully for adding to the constitution a right to "human dignity". The Supreme Court cited it in 2008 when it ruled that all Mexicans have a "right to the free develop-

ment of personality". The principle has been used to protect unfaithful spouses and posh schoolboys who refuse to cut their hair. Now dope-smokers may benefit.

In Mexico it takes five separate rulings by the Supreme Court to establish a precedent that citizens can invoke to disregard unconstitutional laws. Since 2011 the court has been able to invoke its fifth ruling to instruct Congress to rewrite laws by a certain date. In 2019 it used that power for the second time, directing Congress to revoke laws banning cannabis. The deadline has been extended twice, first because lawmakers could not agree, then because of covid-19. The new one is December 15th.

The jolt of legalisation could provoke gangs to behave even more violently than now. Mexico's murder rate, among the world's highest, reached a record last year. Gangs could diversify faster into such activities as kidnapping and cooking fentanyl. But the shock will be smaller than it would have been four decades ago, when cannabis exports were their core business. Americans in 11 states buy cannabis legally for recreational use and will soon be able to do so in four more. They have less need to import illegal Mexican weed. Mexico's domestic market is relatively small. In 2016 just 2% of Mexicans surveyed admitted to smoking marijuana in the previous year.

The United States' hard line on narcotics prevented previous attempts by Mexico ▶

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▶ to liberalise. When, in an early experiment with harm reduction, President Lázaro Cárdenas legalised heroin and opened injecting rooms in 1940, the United States cut off supplies of morphine, a heroin substitute. Cárdenas retreated. In the 1970s the United States began training Mexican pilots to drop Paraquat, a herbicide, on farms growing cannabis. Now, if Mexico legalises, the United States is likely to shrug. President-elect Joe Biden supports decriminalisation (though not legalisation).

The task of complying with the court's order is being led by Mr López Obrador's Morena party, an assortment of leftists, liberals and evangelicals that controls Congress. Rather than simply removing the cannabis ban, it has opted to establish a framework to regulate its cultivation and sale. Its details are almost as controversial as the principle of legalisation itself. The bill, which might still be amended, would liberalise cautiously. It would ban advertising and smoking in public. Tokers could possess no more than 28 grams (one ounce), as in California. They would be able to grow up to six plants at home with a permit from a new Cannabis Institute.

The draft law creates a framework for exporting the stuff: as a producer of cheap ganja, Mexico could eventually become a big legal supplier to the United States and Canada. Legal weed would provide the Mexican government with tax revenue. But tax and regulation cannot be too burdensome, lest they drive consumers back to the illegal market.

Regulations, such as requiring sellers to be able to trace the product's origin, will confine the market to enterprises with the money and expertise to obey them. That will give an edge to big Canadian firms, and keep out informal sellers, who make up the bulk of commerce in Mexico. The proposed reform is "totally neoliberal", says Tania Ramírez, who helped shape the lawsuits that paved the way for legalisation.

Proponents point to social-justice measures in the bill. For five years two-fifths of cultivation licences will be reserved for farmers in municipalities that were subject to weed-eradication schemes. But to get those licences growers may have to install security cameras, barbed wire and the like. That would keep out poor farmers, says Catalina Pérez Correa of CIDE, a think-tank.

Morena's leaders expect the bill to pass quickly through the Senate, and then the lower house. A possible obstacle is Mr López Obrador, who opposes legalisation for recreational use. Although he has said he will let the legislature decide, he could end Mexico's marijuana dream, for a while, with a disapproving glance. The obligation to legalise would remain, but the deadline might be pushed into next year. Until Congress acts, cannabis will sprout outside its upper chamber, and outside the law. ■

Ecuador

Piscine plunder

The country is often seen as a victim of predatory fishing. It is also a culprit

ON MAY 4TH customs officials in Hong Kong impounded the largest illegal haul of shark fins in the territory's history. The documents declared the cargo to be dried fish, but they were in Spanish, not English, which aroused suspicions. Officials found 24 tonnes of fins, most from endangered species such as thresher sharks, with a retail value of \$1.1m. They came from Ecuador.

Ecuador portrays itself as a victim of illegal, unregulated and unreported (IUU) fishing by Chinese trawlers near the Galapagos islands. In fact, its fishing industry is just as bad, says Max Bello of Mission Blue, an NGO based in California. Ecuadorean vessels fish illegally in protected areas such as Colombia's Malpelo sanctuary and Costa Rica's Cocos island. Since 2018 at least 136 large Ecuadorean fishing vessels have entered the Galapagos islands' reserve, which covers 133,000 square km (51,000 square miles), says the director of the archipelago's national park.

Consumers in Quito and other inland cities buy shark meat thinking it is sea bass. Many boats illegally transfer their catch on the high seas to larger vessels, which carry them to other markets. Under Ecuadorean law fishermen can sell endangered species like sharks or turtles if they catch them unintentionally. Some boats report half their catch as by-catch.



Headed for Hong Kong?

The world is taking notice. Last year the National Oceanic and Atmospheric Administration, an American government agency, accused Ecuadorean fishing companies of violating international conservation agreements. The European Union, the biggest buyer of Ecuadorean tuna, has told the country to step up action against IUU or risk losing access to its market. In 2018 a committee within CITES, an international convention on trading in endangered species, recommended that its 183 members suspend trade in fish with Ecuador.

Its government is incapable of reigning in a powerful industry. Fishing companies employ 100,000 people, and contribute \$1.6bn a year, 1.5% of GDP, to the economy. Ecuador's tuna fleet, the largest in the eastern Pacific, has around 115 large mechanised ships. The rest of the fishing industry consists of more than 400 semi-industrial vessels and *nodrizas*, small boats with no machinery that catch a greater variety of fish. Fishing gets special treatment from the government. It often issues permits for export of shark fins to Peru that do not comply with CITES standards, says Oceana Peru, an NGO. Allies of the industry hold important posts at the vice-ministry of aquaculture and fishing. Some have seats in the legislature.

Operators of Ecuadorean-flagged tuna boats say it is fleets from other countries that are responsible for IUU fishing in or near Ecuadorean waters. They say their by-catch is just 2%. Observers, on board under rules issued by the Inter-American Tropical Tuna Commission (IATTC), a regional organisation, vouch for that claim. Conservationists do not believe them. Purse seining and longlining, the fleet's main ways of fishing, often result in high levels of by-catch. The IATTC is a weak organisation, aligned with fishing companies, conservationists say. "It's like trusting a wolf to be honest about how many sheep it ate," says an adviser to legislators who want to tighten regulation. Even if by-catch is as low as the industry claims, it is enough to massacre some species.

Still more controversial than purse seining and longlining is the use of fish aggregating devices (FADs). Industrial ships release these into the current that passes through the Galapagos islands' protected area to attract prey, say green groups. Sometimes they fix goats' heads on the devices to lure sharks, say Galapagans. Crews track them with GPS and surround them with nets when they leave the protected zones, entrapping turtles, sea lions, manta rays and sharks. Ecuadorean ships deploy more FADs than those of any other country, according to a study in 2015 by the Pew Charitable Trusts.

Nodrizas boats are even harder to regulate. They are not required to sail with observers. They smuggle not only shark fins, ▶▶

▶ but also cocaine. Last year Sea Shepherd, a vigilante conservation group, filmed fishermen aboard a *nodriza* beheading a shark, a practice that is illegal in Ecuador. The fishermen then played with the head for Sea Shepherd's cameras.

Ecuador's government tried to crack down, especially after the EU's "yellow-card" warning. In April the legislature passed a law that increases fines for illegal fishers. Vessels are now prohibited from selling three endangered species of shark, even if they are by-catch, says Jeff LeBlanc, a government adviser. The government has

started an advertising campaign to discourage Ecuadoreans from eating shark.

Conservationists say these measures will not work. Ecuador's coast guard and navy do not have enough money to patrol its seas effectively. Ecuador must improve its rules and enforcement before the EU lifts its yellow card, says an EU official.

Conservationists are urging the government to double the size of the Galapagos reserve. That would cripple Ecuador's fishing industry, which competes with China's modern, government-subsidised fleet, says Bruno Leone, president of the Nation-

al Chamber of Fisheries, a pressure group.

The pain would be temporary, respond advocates of the expansion. Eventually it would lead to an increase in fish stocks and thus to bigger catches. The Galapagos reserve, even though it is poorly policed, has rescued species threatened by overfishing. A bigger one would help the threatened yellowfin tuna population. The critically endangered scalloped hammerhead shark, which mates and lays eggs in the Galapagos reserve, might survive. If Ecuador wants to continue profiting from its marine riches, it will have to protect them. ■

Bello The politics of destruction



Peru has overcome its immediate crisis, but faces a bumpy ride

TIME WAS when investors believed that Peru's fast-growing economy was immune to its politics. That contention, always questionable, was tested almost to destruction this month. With the country suffering a power vacuum and on the brink of descending into violent chaos, on November 16th a shamefaced Congress chose Francisco Sagasti, a 76-year-old centrist academic, as the country's caretaker president. He is the fourth man to hold the top job since the last presidential election in 2016.

In Mr Sagasti Peru has come up with a winning ticket in its political lottery. His are the safest hands imaginable, but his task is not simple. It is to tackle the pandemic and the economic slump, both particularly severe in Peru, while steering the country through a general election due in April. His anointing followed the failure of a power grab by elements in Congress, who on November 9th voted by 105 to 19 to oust Martín Vizcarra, the president since 2018, on grounds of "moral unfitness".

Power passed to Manuel Merino, the speaker of Congress. Rightly or wrongly, many Peruvians saw in this a plot to postpone the election and to advance murky private interests. Mr Merino named as prime minister Ántero Flores-Aráoz, a 78-year-old of the hard right who won just 0.4% of the vote in the 2016 presidential election. His law practice represents substandard private universities that are trying to overturn a university reform. His backers wanted to raid the treasury through populist giveaways.

This takeover prompted the biggest street protests in Peru for 20 years, mainly by young people and in defiance of a pandemic-related state of emergency. They met a brutal police response. Two protesters were killed and scores injured.

With his gambit collapsing, Mr Merino resigned and promptly vanished. His putsch highlighted the way that political parties in Peru have become vehicles for private interests and for evading justice. Some legislators pay for places on party lists and expect a return. Although 68 of Congress's 130 members face criminal charges of various kinds, the legislature protects its own from prosecution.

This month's episode marked the climax of years of conflict that runs along several axes. One dates back to Alberto Fujimori, who ruled as an autocrat from 1990 to 2000. He defeated the Shining Path terrorist movement and reformed the economy, but his regime was corrupt. His daughter, Keiko, narrowly failed to win the election in 2016 because anti-*fujimoristas* of all stripes united against her. Her party used its majority in Congress to thwart the governing programme of the winner, Pedro Pablo Kuczynski.

Another source of conflict involves corruption and its weaponisation. Mr Kuczynski resigned in 2018 to avoid impeachment over conflicts of interest. He

remains under house arrest. His three predecessors are all accused: one is awaiting extradition from the United States, one killed himself and a third spent time in jail. Corruption is indeed systemic in Peru, and Peruvians know it. But the presumption of innocence and a sense of proportion have been lost. No leader has been tried. Ms Fujimori spent 16 months in jail for alleged campaign-finance violations. Prosecutors are seeking to drive her party out of existence. Mr Vizcarra was popular, despite a mediocre record and woeful management of the pandemic, because he championed the cause of anti-corruption. But the pretext for his summary ousting was evidence that he had been corrupt when he was a provincial governor (an allegation that he denies).

The third faultline is the battle between the executive and Congress, which Mr Vizcarra exacerbated. He tried to push through political reforms. One of the few that was approved unwisely barred legislators from consecutive terms. Last year he dissolved Congress in a battle over appointments to the Constitutional Tribunal. The new Congress, elected in January, is even less biddable. Since its members will serve for only 19 months and cannot stand next year, they have no incentive to behave decently.

More useful reforms are coming into effect for April's election, including a cull of minor parties and a bar on candidates charged with serious crimes. Several presidential hopefuls are populists, some of them dangerous ones. Those who are not will find it hard to assemble a reformist coalition in the next legislature. One thing is clear: the crowds of millennials out on the streets want a better democracy. Getting it will be a lot harder than chasing out Mr Merino.





Afghanistan

Guns and poses

HERAT AND KABUL

As American forces leave, the Taliban seem keener on fighting than talking

TO REACH THE front line in Afghanistan's civil war, you do not need to go far from the capital, Kabul. At a police outpost in Wardak province, about 20km outside the city on the main highway leading south, the Taliban's encroachment is evident. The outpost is little more than a ring of concrete blast walls perched on a hill overlooking the road. Around a dozen men, mostly dressed not in fatigues but in *shalwar kameez* and trainers, stand around. Some hold guns; most do not. A few look like teenagers. The 25-year-old in charge, Omedullah Khanjar, who commands six outposts along the highway, explains that, by day, things are mostly quiet. But at night, he says, the local Taliban shoot at the post from a nearby ridge. Unlike the cops, they have night-vision goggles and laser sights.

Not everything goes the insurgents' way, says Mr Khanjar. Recently they tried to blow up another outpost along the road, but the police got wind of the plan in ad-

vance. They retreated and then ambushed the fighters. On his phone, Mr Khanjar shows your correspondent a picture of the unexploded bomb and the phone the Taliban would have used to detonate it. But such victories are rare. The local Taliban live in the villages nearby, which they run as fiefs, unmolested by the troops. Mr Khanjar complains that the locals protect them, but he understands why. "There is so much unemployment," he says. "The government here provides no opportunities."

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In September negotiations started in Doha, the capital of Qatar, between the Taliban's political leadership, envoys from the Afghan government and leaders of civil society. The talks have been years in the making. They followed the conclusion in February of an agreement between the United States and the Taliban, under which America was to withdraw its forces from Afghanistan provided the Taliban cut all ties with international terrorists and started a sincere dialogue with the government on a ceasefire and a political settlement. The Afghan government did its part by releasing 5,000 Taliban prisoners.

The sight of bearded, turbaned insurgents at a negotiating table sparked hope that 40 years of conflict might be coming to an end. But progress has been slow. The two sides are still arguing over the agenda and format of the talks. Big questions, such as what form of government Afghanistan should have, have not yet been broached.

Meanwhile, the number of American soldiers has fallen by more than half over the past year, from over 9,000 to around 4,500 now. Although the agreement foresaw a complete withdrawal only by June of next year, and only if the Taliban kept its side of the bargain, President Donald Trump is in a hurry. In October he said he wanted all American troops "home by Christmas". This week the Pentagon an- ▶▶

► nounced plans to cut the American force to 2,500 by the end of Mr Trump's term, in mid-January, over the objections of NATO. Air strikes, which in 2019 reached the highest level in the two decades of the American intervention, have since been limited.

Yet instead of stepping back to foster dialogue, the Taliban have seized the opportunity to strengthen their position militarily. On October 27th the United Nations announced that civilian casualties have not fallen since the start of talks. In some parts of the country violence has escalated. In recent weeks the Taliban have launched attacks to try to take control of districts such as Panjwai, near the city of Kandahar (see map). On October 12th insurgents attacked Lashkar Gah, the capital of Helmand province, the first big assault on a city in over a year. The Afghan army retreated en masse, and the Taliban were eventually beaten back only by American air strikes—the first in months. Several hundred Afghan soldiers have died just in the past month (and probably a similar number of Taliban). The Taliban have also been assassinating more government officials.

Death and taxes

The sense of siege comes from more than the violence. The Taliban first took power in the 1990s, when Kandahari merchants paid them to provide security on the roads, for which they charged less than the warlords of the day. They seem to be applying that method again. At the edge of Kabul, the boss of a company that imports cooking gas says the security of his tankers has actually improved over the past year, because the Taliban control more roads. They charge 35,000 afghanis (\$455) for every lorry travelling from Herat, on the Iranian border, to Kabul. "In the past there were no Taliban taxes," he says. "But they used to shoot us with RPGs [rocket-propelled grenades]. So we are happy with the taxes."

In Taliban territory there is a shadow government. Per Muhammad, a 38-year-old farmer who lives in Zabul province, in the south-east, says that the 134 families in his village each pay a flat tax of 2,500 Pakistani rupees (\$15) to the Taliban annually, as well as *zakat*, which is proportional to wealth. In exchange, they get access to the Taliban's brutal but efficient justice. Local Taliban leaders solve most disputes. Bigger ones—over land, say—go to the district chief. He does not have an office, says Mr Muhammad, but can be reached easily by phone. "He is always with five mullahs and some armed Taliban." They hear both sides' claims and make a decision immediately. "Nobody can reject a ruling," he says, because it is enforced by armed men.

In Taliban-held territory, government-funded schools and clinics often continue to operate, says Ashley Jackson, a researcher at the Overseas Development Institute, a

British think-tank, especially if local residents are keen on it. In some areas the Taliban insist that teachers, who are paid by the government, actually turn up to work. Some NGOs operate in Taliban territory quite happily, working with "NGO co-ordinators" appointed by the local commander. "It is the government we are afraid of," says one employee of an aid agency. "With the Taliban, we can co-ordinate."

This ambiguous arrangement means that boys, at least, can still get an education and the sick can receive health care in areas occupied by the Taliban. But it also helps to legitimise the insurgents, who take credit for providing services paid for by foreign donors. On October 14th Britain's Foreign Office had to remind NGOs not to pay taxes to the Taliban.

What might happen next? Afghan government officials say that the Taliban think they have defeated America and see the talks in Doha as the negotiation of the government's surrender. Yet outright military victory is unlikely. The Afghan army is demoralised but not yet defeated. It has a new air force of its own. Trying to conquer big cities would be risky for the Taliban. Indeed, it could well bring America back into the war. The attack on Lashkar Gah, many in Kabul suspect, was not approved by the Taliban's political leadership in Doha.

The longer talks go on, however, the weaker the Afghan government gets. Attrition—from deaths, injuries and desertion—is sapping the army. In August Ashraf Ghani, the president, revealed that in the preceding six months over 12,000 soldiers, police and civilians had been killed by the Taliban. American estimates published last month showed that Afghan casualties increased by 5% in the third quarter of the year compared with a year earlier. The siege is accentuating political divisions within the Afghan state, says Timor Sharan, who served as a deputy minister until last year.

That heightens the likelihood that the talks in Doha will produce a deal that favours the Taliban, especially given Mr Trump's precipitous withdrawal. With

their shadow government and growing assertiveness, the Taliban act as, and would like to be seen as, a government in waiting. In Doha they style themselves the "Islamic Emirate of Afghanistan", as they did when in power in the 1990s.

In urban Afghanistan, their return would be fiercely unpopular. Najia Sadat, a doctor who works at a government clinic in Herat, a thriving city near the Iranian border, says she is deeply concerned that the Taliban might return. She remembers their rule: "We were not allowed to go out of the home." Their fall made her training and career possible. The clinic where she works is supported by foreign donors, including USAID and International Rescue, a charity. If the Taliban came back, all that could disappear. It seems increasingly likely. ■

Health care in Japan

Technological stunting

TOKYO

The pandemic is at last prompting doctors to go digital

AS COVID-19 SPREAD through Japan this spring, a doctor despaired. What appalled him was not the pace of infection, or a lack of protective equipment, but the archaic systems used to tabulate test results and so track the course of the epidemic. "Even with corona, we're handwriting and faxing," he groaned on Twitter.

Japan has excellent health care. Life expectancy at birth is 85 years, the highest in the world. But doctors have been slow to embrace the efficiencies of information technology, despite Japan's reputation for technical wizardry. The OECD, a club mostly of rich countries, ranks it last among its members for its management and use of data in health care. A commission of experts convened by the Asia-Pacific Initiative, a think-tank in Tokyo, declared Japan's response to covid-19 a "digital defeat".

But the coronavirus is also providing a sharp spur for change. The new prime minister, Suga Yoshihide, has made digitising Japan the centrepiece of his economic agenda. The potential benefits are especially big in health care, because costs are rising as the population ages. Spending on health accounted for 11% GDP last year, up from 7% in 2000.

Telemedicine could help cut costs. But the Japan Medical Association (JMA), a powerful lobby, has long opposed online consultations, citing concerns about safety and privacy. Resistance is in part generational. Japan's 327,000 doctors are ageing alongside their patients: nearly half are over 50. In small clinics, the average age is ►►



▶ 60. Toyoda Goichiro of Medley, a telemedicine firm, says his colleagues often have to help new clients with digital basics, such as choosing computers and setting up Wi-Fi networks. But there is also an economic disincentive. As a government official puts it, “There are people in the JMA who are afraid of competition from telemedicine.”

In 2015 the government allowed telemedicine to treat a few conditions, albeit for less compensation and with more paperwork. Predictably, it did not take off: less than 1% of all medical institutions offered online consultations in 2018. But many restrictions on telemedicine were suspended in April because of the pandemic, sending patients and doctors flocking to their screens. The situation “changed radically”, says Hara Seigo, the boss of MICIN, another telemedicine firm, which saw monthly registrations jump ten-fold. Government surveys show the share of institutions using telemedicine has risen to nearly 15% this year. Mr Suga hopes to make the changes permanent.

Mr Toyoda, who gave up a career in brain surgery to work in digital health care, hopes that wider adoption of telemedicine will also promote the use of electronic medical records. Japan’s medical system is overwhelmingly paper-based, laments Tsuchiya Ryosuke, a former head of the National Cancer Centre Hospital. (Mr Tsuchiya uses a smartphone, but keeps “a fax machine ready just in case”.) Only 42% of clinics have digitised their data on patients. Big hospitals do better: 85% keep at least some digital records. But information tends to sit on proprietary systems that are often incompatible with each other.

Linking and analysing those data could help to reduce costs. Duplicate procedures would be easier to avoid. The effectiveness of treatments could be measured. Having a clearer picture of patients’ history is also essential if Japan is to shift from its fee-for-service system, whereby doctors get paid more for ordering more tests, to a system in which their pay is based on outcomes, as the health ministry wants. “To fix problems, you need to have records,” says Shibuya Kenji of King’s College London. “It’s not about just abolishing stamps or faxes, it’s about integrating data sources.”

For Koizumi Keigo, a doctor who serves two remote islands in Mie prefecture, the expansion of telemedicine has been a huge boon. Previously, when he was visiting one of the islands, patients on the other were left without a supervising physician. This year he began keeping tabs over video chat. Nurses hold up an iPad at patients’ bedsides, while Bluetooth devices monitor blood pressure. That is enough to give him a sense of how his charges are doing. They are pleased with the extra attention, too. Now, he says, “even the grandmas” would like to see more doctors go online. ■



Politics in Pakistan

A mountain to climb

ISLAMABAD

The opposition takes on not just the government, but the army

ELECTIONS AMID the craggy splendour of Gilgit-Baltistan are usually of interest only to its residents—if them. The region at the northern tip of Pakistan is home to five of the 14 mountains in the world that exceed 8,000 metres, but contains only 1% of Pakistan’s population. The pragmatic locals tend to vote for the party that runs the national government. Moreover, the local assembly has limited powers, since the region is not a province, but merely a territory, being part of Kashmir, which India and Pakistan both claim and which they divided by war in 1947.

It was odd, therefore, to see Pakistan’s political elite campaigning furiously in Gilgit-Baltistan ahead of elections to the assembly on November 15th. A new opposition alliance was hoping that the vote would prove its mettle. The prime minister, Imran Khan, was eager to show that his Pakistan Tehreek-e-Insaf party (PTI) retained public support.

To curry favour with the locals, Mr Khan announced at a campaign rally in the town of Gilgit on November 1st that his government would confer provincial status on the region. Maryam Nawaz, daughter of Mr Khan’s predecessor, Nawaz Sharif, spent a week in the region trying to drum up support for his party, the Pakistan Muslim League (Nawaz) (PML-N). While there, she met her fellow dynast and leader of the Pakistan Peoples Party (PPP), Bilawal Bhutto-Zardari. So fierce was the scrum of national grandees, in fact, that a local court ordered many of them out of the region,

saying they were breaking a rule against electioneering by senior officials.

The PML-N and the PPP are the mainstays of the new opposition alliance, the Pakistan Democratic Movement (PDM). Its goals include curbing the army’s meddling in politics and sending Mr Khan packing. The two ambitions are related in the eyes of the PDM, since it accuses the army of helping to rig national elections in Mr Khan’s favour in 2018.

Mr Sharif, who is in exile in London, has been giving incendiary speeches, accusing the army of operating as a “state above the state”. Although this is true, Pakistani politicians tend not to say it, for fear that the army will arrange their downfall. Within Pakistan the PDM has held a series of rallies to demonstrate its support.

Widespread public anger at the rising cost of such staples as flour, sugar and tomatoes has given the PDM ammunition. At a rally in Gujranwala in the province of Punjab last month, it was this that seemed to exercise participants most, rather than the army’s assertiveness. “We are here to send Imran Khan home!” shouted one of them, Muhammad Rafique, above the din of the protest. “It’s the price rises. Everyone is fed up.”

The vigour of these events appears to have rattled Mr Khan and the army. After a gathering in Karachi, Ms Nawaz’s husband was arrested at the insistence of military officials. The local police chief was allegedly kidnapped by soldiers to force him to sign the warrant. The brazen nature of the ▶▶

Islamophobia in India

Can you foil the love tonight?

DELHI

Hindu nationalists stir up groundless fears about Muslims

THE *ORGANISER*, an English-language weekly that is a mouthpiece for the Rashtriya Swayamsevak Sangh, the century-old flagship of India's swelling armada of Hindu nationalist groups, is in no doubt about the dangers of "love jihad". The luring of good Hindu girls into marriage and conversion is only the first phase of a broader Muslim plot, asserts a recent article. The second stage is rape jihad, "a more unequivocal operation in which non-Muslim girls or women are raped and subsequently killed in many cases". The third and final stage? Mass rape and ethnic cleansing.

Such ravings are not confined to the fringes of politics. Yogi Adityanath, a Hindu priest whose day job is running Uttar Pradesh, India's most populous state, proclaimed in October that those who practise "love jihad" should mend their ways or plan their funerals. So far five Indian states, all ruled by the Bharatiya Janata Party (BJP), have enacted or are considering laws against love jihad. On November 17th, for instance, the government of Madhya Pradesh announced a "Freedom of Religion" bill. This would punish any form of matrimonial trickery for the purpose of conversion to Islam with five years in prison.

The spectre of "our" innocent womanhood being preyed upon by "their" boys is not new. Hindu nationalists depict the long period of Muslim rule as a prolonged violation of "Mother India". During national elections in 2014, the head of the BJP in Uttar Pradesh repeatedly asserted, entirely falsely, that Muslims, who make up 19% of the state's 225m people, were responsible for 99% of rapes. The Election Commission chastised another BJP leader, Amit Shah, for describing the vote as a chance for Hindus to avenge violations of their women. He is now India's home minister.

Replying to a parliamentary question in February, one of Mr Shah's deputies

admitted that there were no known cases of "love jihad" in the state of Kerala, at least. Journalists with NDTV, a news channel, found that even in Uttar Pradesh, a police team created in August to crack down on "love jihad" had already dropped seven of the 14 cases it had opened, for lack of evidence. Yet Tanishq, a fancy jewellery brand owned by the Tata group, one of India's biggest firms, recently felt obliged to withdraw a television commercial portraying a happy interfaith marriage.

Indians rarely marry outside their caste, let alone their religion. The law that allows interfaith marriages is hedged with clauses that permit parents, bureaucrats and other outsiders to interfere. Courts have often seemed keener to uphold patriarchal ideas than to apply secular laws or give women freedom to choose. For India's 200m Muslims, it is another affront. As one lamented on Twitter: "You can't criticise, you're anti-national...You can't protest, you're terrorists. You can't fall in love, it's 'Jihad'."



As long as he's not Muslim

► army's intervention caused a public outcry. The army blamed "overzealous" officers.

But the PDM's leading lights make unlikely champions of democracy. Both the PML-N and the PPP have happily cosied up to the top brass to secure power in the past. Moreover, the army is unlikely to wilt in the face of a few rallies. "Ultimately if there is a change, the momentum is not going to come so much from opposition pressure, as from a reassessment of the situation

from within the military-security establishment," predicts Farzana Shaikh of Chatham House, a British think-tank.

As results rolled in from Gilgit-Baltistan's valleys, the PTI appeared to have won the most seats. The other parties allege vote-rigging. The PDM has promised more rallies, culminating in a march across the country in January to call for the ousting of Mr Khan. It has yet to say whether there will be any stops in Gilgit-Baltistan. ■

Abortion in South Korea

Pleasing no one

SEOUL

A proposed liberalisation riles both sides of the debate

THE WORST thing about it was the shame. "I worried about how other people would judge me for doing something illegal, what my parents and my friends would say if they found out," says Kim Min-kyoung, a 24-year-old student from Seoul who decided to terminate a pregnancy last year. The second-worst thing was paying: how to find \$1,000 without prompting awkward questions.

Both these problems should soon be slightly less severe for women in South Korea. If a bill under consideration by the National Assembly becomes law, a woman will be able to obtain an abortion up to 14 weeks into a pregnancy with ease. From 15 to 24 weeks in, she will still be able to do so provided she attends a counselling session and waits 24 hours before making a final decision. Her reason for ending the pregnancy must also fall into one of a series of approved categories. This regime would greatly expand access to abortion and thus put an end to expensive illicit procedures. It has prompted an unsurprising backlash from anti-abortion activists, but feminists are not entirely happy either.

A new law became necessary last year after the constitutional court struck down the existing one, which allows abortion only in exceptional circumstances, such as for pregnancies resulting from rape or incest. Otherwise it stipulates prison terms or hefty fines for women seeking abortions and for doctors providing them. That is out of step with public opinion. Ten years ago more than half of South Koreans wanted to keep the old law. Nowadays nearly 60% of the population and more than three-quarters of women under the age of 45 want to scrap it. The authorities have hardly enforced it for years.

The court set a deadline of the end of this year for new legislation. But the bill is under attack from two sides. Feminists think it does not go far enough in its affirmation of women's rights. Opponents of abortion, meanwhile, claim it "promotes" the termination of pregnancies.

Kwon In-sook, a prominent feminist and lawmaker for the ruling Minjoo party, thinks the law falls short because it would continue to treat abortion as a criminal matter, retaining too much of the spirit of its predecessor. "The old law was centred around the idea that abortion is a shameful, sinful thing," she says. "The point of the new law is to put women's reproductive ►►

rights at the centre and treat abortion as the medical procedure that it is." She worries that the "socio-economic reasons" for which abortions are permitted after 14 weeks are too vaguely defined, and that the counselling requirement, the 24 hours of "thinking time" and doctors' right to refuse to perform the procedure if they have personal qualms will provide scope for opponents of abortion to restrict access.

That is precisely what they are trying to do. "The point is to balance the woman's right to choose with the fetus's right to live and to create an environment where wom-

en will feel safe in their choice to have the baby rather than an abortion," says Jeong Eun-yi, a 27-year-old activist who says she took up the cause after seeing a plastic model of a ten-week-old fetus. She would prefer to retain the old law, but says the bill has some potentially helpful features. "The mandatory counselling session shouldn't be neutral, but push women to have the baby," she says, for instance by making women listen to the fetus's heartbeat or making them watch videos of abortions.

To feminists, the fact that such measures may be possible suggests that the

government is pandering to conservatives. "They have to focus more on the right to choose," says Kim Ye-eun, a 25-year-old student and activist. "Keeping all these ancient provisions is a bad sign that they're not taking women's rights seriously."

Ms Kwon, for her part, is concerned by the conservative backlash the bill has prompted. She worries that it may revive the authorities' appetite to enforce whatever restrictions remain in law. But she is glad that the debate has at least made women less ashamed to discuss their experience with abortion. ■

Banyan Quad stretches

A four-country Indo-Pacific grouping is beginning to gain some heft

WHEN AMERICA, Australia, India and Japan met in 2007 for a "quadrilateral dialogue" on security matters, many bet the new grouping would fizzle, despite acquiring the much snappier title of "the Quad". Once non-aligned India, still suspicious of anything that smacked of an alliance, was non-committal, but in the end it was Australia, discomfited by China's prickly reaction, that was the first to break ranks. What has changed, says Kevin Rudd, a former prime minister of Australia, is that President Xi Jinping has since "fundamentally altered the landscape" by projecting Chinese power across Asia and the Pacific.

And so, since 2017, the Quad is back. All four members have seen their relationship with China deteriorate. Chinese incursions around islands that Japan controls but that China claims in the East China Sea have grown ever more frequent and forceful. Australia faces Chinese restrictions on all manner of exports, from punchy Barossa Shirazes to coking coal, following its call for an independent inquiry into the origins of the coronavirus pandemic. Indian and Chinese troops have been locked in a high-altitude border stand-off since the spring, resulting in the first fatal clashes in 45 years.

Last month, in Tokyo, foreign ministers from the Quad met for the second time. The public statements are anodyne. Who could object to a "free, open, prosperous, rules-based and inclusive Indo-Pacific"? Behind the bromides, though, the spectre of China and its growing muscle is obvious.

Defence ties are strengthening fast among the four countries. This week their navies came together for the second phase of India's annual "Malabar" exercises—Australia's after a 13-year absence.

In principle, the exercises have nothing to do with the Quad. In practice, they mark growing naval priorities among the four. Submarine-hunting drills were prominent. Chinese subs are extending their reach into the Indian Ocean.

Malabar is just the start. America and India have signed agreements on logistical support, encrypted communications and the exchange of geospatial intelligence, such as secret maps. America, Australia and Japan are all preparing to operate America's new F-35 fighter jet, allowing better integration among their forces. On November 17th Scott Morrison, Australia's prime minister, agreed to a defence pact with his Japanese counterpart, Suga Yoshihide, facilitating joint operations. Even India is "veering towards some sort of an alliance relationship" with the Quad countries, says Gurpreet Khurana, an Indian naval officer and think-tanker.

The Quad does not convince everyone. Nick Bisley of La Trobe University in Melbourne says the emphasis on a "free and open Indo-Pacific" papers over big differences between the two halves of that vast

region. In the western Pacific, China is challenging the longtime hegemon, the United States. In the Indian Ocean, the problem is not strong states but weak ones. Other critics say the Quad is too exclusive a club.

The Quad's defenders retort that it embodies the grammar of modern diplomacy. It is a compact bloc, rather than a sprawling multilateral organisation. Yet it is capable of broadening its agenda, from disaster relief to cyber-security to ensuring supply chains for critical minerals. And it is suitably elastic, for instance embracing New Zealand, South Korea and Vietnam during the early weeks of the pandemic to discuss economic recovery. Advisers to President-elect Joe Biden have suggested that his administration will emphasise the formation of flexible coalitions of the willing on different issues, including pushing back against China. That fits with the Quad's catholic interests.

Tanvi Madan of the Brookings Institution in Washington predicts that, in security terms, the Quad countries will do "a lot of the heavy lifting in Asia". But even Mr Rudd, a supporter of the Quad, warns that anyone who thinks that these powers can ever be coequals to America "has got rocks in their head". This week America's navy secretary, Kenneth Braithwaite, called for a new American fleet based in the Indian Ocean, akin to the Seventh Fleet in Japan.

And China? At times, it claims that all the talk of a free and open Indo-Pacific is, as its foreign minister, Wang Yi, once put it, so much ocean spume. But if that is off the mark, so too is the claim of an Asian NATO-in-the-making. Instead, in the region's turbulent seas, the Quad, once adrift, is now shaping an increasingly confident course.





Joe Biden's China policy

To a different tune

NEW YORK

For America's president-elect, handling China may be the biggest foreign-policy challenge. Two stories look at his likely response and those who will guide it

EARLY IN HIS campaign for the presidency, Joe Biden rejected the notion that China was much of a worry. He argued that no leader in the world would trade the challenges facing China for their own. "China's going to eat our lunch? Come on, man," Mr Biden scoffed. "I mean, you know, they're not bad folks, folks. But guess what? They're not competition for us." He was speaking in May 2019. Tempered by his contest with Donald Trump, who tried to rally support by highlighting the threat posed by China, Mr Biden now avoids such words. But as president, will his policy towards China be very different from Mr Trump's? He has yet to spell out his plans, but he will throw fewer wild punches.

Mr Biden's political rivals attacked his remarks in Iowa City, accusing him of being naive about China. Even some of his own advisers were troubled. At the time, Mr Biden was still bragging about the many hours he had spent with Xi Jinping when he

served as vice-president under Barack Obama (he is well remembered in Beijing for dropping in at a neighbourhood eatery in 2011—see picture, next page). He was also being less blunt about China's hard authoritarian turn under Mr Xi. Since Mr Trump became president in 2017, relations between China and America have become much more hostile. But Mr Biden seemed stuck in the mindset of the Obama administration, which described its co-operation with China as "unprecedented" in scope. During the campaign Mr Biden had to be "reprogrammed" on China, says an adviser.

It seems to have worked. Mr Biden has since called Mr Xi "a thug". He has criticised Mr Trump for praising Mr Xi (for ex-

ample, during the early days of the covid-19 outbreak) and being indifferent towards, even tolerant of, China's human-rights abuses. In August his team accused China of "genocide" against ethnic Uyghurs in the far-western region of Xinjiang. Mr Biden finished his campaign sounding nothing like the candidate who started it or the administration he had once served. He was vowing to be "tough on China".

China may be wondering whether all this is bombast. Before Mr Trump's presidency, there had been a long tradition of candidates berating China on the campaign trail, only to tone down their rhetoric and try to keep relations on an even keel once in office. Mr Biden's remarks give him wriggle-room to do the same. Despite referring to China as America's "biggest competitor", he has not called it the biggest threat. That, he says, is Russia (although the Biden administration is expected to keep the label of "strategic competitor" used under Mr Trump to describe China). Advisers to Mr Biden's team say there will be "no reset" in the relationship. But the president-elect does talk about co-operation with China on issues such as climate change and global health, which Mr Trump eschewed.

What can be discerned of Mr Biden's China policy looks like an amalgam of Mr Trump's and Mr Obama's: a Trumpian wariness of China combined with a preference ▶

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► for caution in handling strategic matters. He will be constrained by a Congress that has become far more hostile to China in recent years. A Senate that may remain in Republican control will restrict his freedom to appoint people whom hawks fear will favour more engagement with China (see next article). Public opinion may affect his policy, too—negative views of China have reached an historic high.

Of the many disputes between China and America that have grown more fraught under Mr Trump, trade is among the most bitterly contested. Mr Biden will inherit a smouldering trade war with China that was launched by Mr Trump in a vain attempt to reduce a soaring bilateral trade deficit. Unlike Mr Trump, America's leader-in-waiting is no fan of using tariffs to achieve such goals. But he is unlikely to move swiftly to dismantle Mr Trump's tariffs on Chinese goods—even though they are, in effect, a tax that is mostly paid by American consumers. Some of Mr Biden's advisers hope that retaining them, at least for now, will give America leverage in negotiations with China over trade and other matters.

In the Obama era, Mr Biden supported efforts to forge a trade deal among 12 countries, including America, around the Pacific—hoping it would eventually draw in China and bind it to Western trading norms. Mr Trump withdrew from that project. There is little chance that Mr Biden will resume interest in it. Winning approval from the Senate for multilateral trade pacts would be daunting, if not impossible.

Avoiding a hot war with China will also be a priority for Mr Biden. In recent months the China has stepped up exercises in the Taiwan Strait and sent fighter jets on numerous sorties into Taiwanese airspace. Mr Biden will continue arms sales to Taiwan, which have picked up pace under Mr Trump. But he may scale back symbolic shows of support, such as high-level trips to Taiwan by cabinet members (in August Alex Azar, the health secretary, became the highest-ranking American to visit the island since America severed official ties with it in 1979). Some of Mr Biden's advisers see these as needlessly provocative.

But Mr Biden is likely to retain some of Mr Trump's toughest measures against China related to national security. He will persist with efforts to strangle Huawei, a Chinese telecoms giant that America regards as a security threat, by keeping Trump-era restrictions on doing business with the firm (see Briefing). Mr Biden will stress the need for America to keep ahead of China in technology. "Decoupling" in high-tech areas will remain the trend. This may involve government support for making semiconductors in America to avoid reliance on ones made in China.

Despite its disregard for multilateral forums, the Trump administration did try to



Back when dumplings made a difference

build the Quadrilateral Security Dialogue, a group of four China-sceptic countries—America, Australia, India and Japan—into something sturdier. A military exercise involving all four members of the club took place this month in the Bay of Bengal. Mr Biden can be expected to continue efforts to beef up the Quad, as it is known (see Banyan). He will also maintain "freedom of navigation" patrols by the American armed forces in the South China Sea and Taiwan Strait. Mr Obama was reticent about these, but they became routine under Mr Trump. Mr Biden will assure China's neighbours that America will be active in Asia; some allied diplomats in the region had grumbled that Mr Obama's "pivot" to Asia was too half-hearted.

Making values great again

Unlike Mr Trump, Mr Biden is expected to take a personal interest in the challenge posed by human-rights abuses in China, including repression in Xinjiang and Hong Kong. He may make more effort to contest China's influence in the UN, where Mr Xi has sought to insulate himself from criticism of his human-rights record. Mr Biden is likely to maintain sanctions on China imposed by the Trump administration, including those on officials and companies deemed complicit in violating human rights. Soon after taking over he may stage an international "Summit for Democracy" to make his values clear.

But the next president will avoid giving the kind of fiery ideological speeches favoured by the likes of Mike Pompeo, Mr Trump's secretary of state, and William Barr, his attorney-general, who have described the Chinese Communist Party as an existential threat to the free world. Such rhetoric does not mesh well with his belief

that America can still co-operate with China in some areas.

Mr Biden will abandon aspects of Mr Trump's China policy that he views as harmful to openness and tolerance. He may remove visa-related impediments, introduced by the Trump administration, to study in America by people from China. Mr Biden believes that more foreigners should be recruited to American campuses, and that America gains from their presence. Investigations will continue into suspected espionage involving Chinese researchers, but Mr Biden's administration may tone down Trumpian rhetoric that instilled fears among ethnic Chinese living in America of a "red scare" fuelled, in part, by racial hostility towards them.

Mr Biden will certainly avoid Mr Trump's use of racially charged language to describe covid-19's links with China. He can also be expected to rejoin the World Health Organisation and try to resume the stationing in China of specialists from America's Centres for Disease Control, who used to work with their Chinese counterparts on public health.

In the battle against climate change, Mr Biden may seek to persuade China to stop building carbon-belching projects such as coal-fired power plants in other countries. Such efforts will be made easier by America's rejoining, under Mr Biden, of the Paris agreement on climate change. In September Mr Xi announced a goal of reaching net-zero carbon emissions by 2060. Some climate experts say Mr Biden should announce an even more ambitious climate target, and encourage a race with China to develop a green economy. That would mesh well with what Mr Biden's advisers believe should be a pillar of his China strategy—strengthening America itself, including by spending more government money on renewable energy. But the Senate, if it remains in Republican control, could frustrate such ambitions.

It is not only Republicans who will limit Mr Biden's room for manoeuvre on China. Much of the machinery of government—from the Commerce Department to intelligence agencies—has been recalibrated in response to China's growing challenge, with more staff and energy focused on the country and its transgressions than ever before. New laws, sanctions and other policies specifically targeting China are in place. This helps to keep China at the forefront of political debate and makes it more difficult for leaders to turn a blind eye to the Communist Party's bad behaviour. "It's very different from the past when a new president came in and could very quickly if they wanted make significant changes," says Bonnie Glaser of the Centre for Strategic and International Studies, a think-tank.

In keeping with the new mood, Mr Biden is expected to send early signals that he ►►

intends to stand firm against China. Advisers suggest that he wait longer than usual to take a congratulatory call from Mr Xi, and not fall for any language Mr Xi may use to suggest a new framework for the relationship. Initially, at least, Mr Biden will focus on domestic issues like covid-19 and the economy, as well as on strengthening ties with allies. He will want their support when he turns his attention China-wards.

Mr Xi will surely look for a chance to test Mr Biden's mettle. In the build-up to a crucial Communist Party gathering in 2022, he will not wish to appear weak. How Mr Biden responds to any provocation will de-

pend, in part, on the advice he receives from his senior officials. Some of those whom he is expected to pick as his national-security advisers are veterans of the Obama administration who shied away from confrontation with China. Others believe in more muscular responses to its increasingly assertive behaviour, including a clearer commitment by America to defend Taiwan against any Chinese attack. As vice-president Mr Biden displayed caution about the use of American force. In his dealings with China, the risk of a dysfunctional relationship turning into a violent one will loom large in his calculations. ■

If Mr Blinken does not get the job at the State Department, he would probably serve as national security adviser, a White House role that would suit him well given his close work with Mr Biden over the years. It is also possible that Ms Rice may be offered the national-security role as a consolation, because it does not require Senate approval. It is unclear whether she would be willing to take a post that she has already held.

Obama veterans are sure to get other senior jobs. Michèle Flournoy, an undersecretary of defence under Mr Obama, is likely to lead the Pentagon. In an article in June in *Foreign Affairs* she said America needed to do more to deter China, such as by beefing up military capability and sending clear signals of American support for regional allies. Ely Ratner, one of the most respected China hawks in the Democratic ranks, may serve Ms Flournoy as an assistant secretary.

For the post of treasury secretary Lael Brainard, a member of the Federal Reserve's board of governors and a former undersecretary at the Treasury Department, is a front-runner (see Free exchange). A former Obama official describes her as a "silent hawk" on China. (Her husband, Kurt Campbell, helped guide China policy as assistant secretary of state for East Asia during Mr Obama's first term.)

A department that has become increasingly influential on China is Commerce, which oversees export controls and an "entity list" of blacklisted companies—tools that the Trump administration has employed with gusto against Chinese tech firms. Some tech-industry leaders, eyeing the market in China, want someone to lead the department who will loosen the screws a bit. Meg Whitman, a former CEO of Hewlett Packard Enterprise, a giant tech firm with dealings in China, is one of several rumoured candidates who would please Silicon Valley titans. Kevin Wolf, who worked on export controls under Mr Obama and is seen (by China hawks, at least) as friendly to the tech industry, has been mentioned as a contender for another powerful role at Commerce: head of the Bureau of Industry and Security. Those who fill these posts may have as much impact on China policy as other senior appointees.

It is far less certain who will fill lower-profile positions. But these can also be crucial in shaping China policy. Matthew Pottinger, Mr Trump's deputy national security adviser, started in 2017 as senior director for Asia, a couple of rungs below Ms Rice's old job. Mr Pottinger played a big part in steering the administration's hard turn on the Communist Party. His successor in the Asia role could be someone like Mr Ratner (if he does not serve at the Pentagon). The choice will necessarily come later than the selection of principals in the national-security team. But it could matter a lot. ■

The next China team

Second-chance saloon

NEW YORK

Veterans of the Obama administration will shape Joe Biden's China policy. They are far less sanguine about China's rise than they used to be

SEVEN YEARS ago Susan Rice, then Barack Obama's national security adviser, said America wanted "a new model of major power relations" with China. Her words echoed a term used by China's president, Xi Jinping—"a new type of great-power relations"—to describe what he hoped would be a more accommodating American view of his country. Within a year Ms Rice (pictured, with Joe Biden) and her boss stopped using the phrase as it became ever more clear that Mr Xi had no plans to be accommodating himself. Now Ms Rice and her then deputy, Antony Blinken, are among leading contenders to become secretary of state under Joe Biden, America's next president. Some of Mr Obama's most trusted advisers on China are looking forward to a second chance. This time they have few, if any, illusions about China's strongman.

As the president-elect selects people for his national-security team and other key China-related jobs, he will draw heavily from Mr Obama's former staff. Most of those likely to be chosen come from a traditional school of foreign policy that places trust in alliances, treaties and multilateral institutions. Their breed is very different from that of Mr Trump's China team.

Fears that Republicans may retain control of the Senate (to be decided in January by two special elections in Georgia) could dim Ms Rice's prospects. She is widely disliked among Republicans. Some of them see her as partly to blame for what they view as the failings of Mr Obama's China policy. Republican China hawks would be happier to see the job go to Mr Blinken, a genial, well-liked longtime aide to Mr Biden. Another candidate less controversial than Ms Rice is Christopher Coons, a cen-

trist Democratic senator from Mr Biden's home state of Delaware.

Advisers to Mr Biden say that the views on China of all three of these potential choices for secretary of state have hardened in the past two years, as have those of most other members of Washington's foreign-policy establishment. Last year Ms Rice spoke tough about Huawei, urging Canada to keep the telecoms giant out of its 5G networks. Mr Blinken has said that some assumptions about engagement with China have turned out to be wrong. But he has also said that, as a believer in international agreements like arms control and climate treaties, there is scope for co-operation.



No more need to whisper about China

Chaguan | No more love letters

A fresh crisis over North Korea will reveal the limits of China's willingness to co-operate with America



OPTIMISTS ABOUT American relations with China should consider the following scenario. At some point in early 2021, perhaps as President Joe Biden is sworn into office, hand on Bible, North Korea sees an incentive in testing a potent new weapon. In a worst case, that may mean launching one of the monstrous intercontinental ballistic missiles (ICBMs) that it unveiled at a parade in Pyongyang in October. Each may be able to carry enough nuclear warheads to overwhelm anti-missile defence systems.

The military implications of an ICBM test would be bad. The political fallout would be worse. With its first breath China, North Korea's indispensable patron and protector, may condemn the regime in Pyongyang for a reckless act, carried out in defiance of resolutions by the UN Security Council. China may note that it is obliged to enforce UN sanctions, hinting at a clampdown on (currently rampant) Chinese smuggling of oil into North Korea, and sanctions-busting by North Korea with its exports of coal and the sale of fishing rights. Alas, in its next breath China would probably opine that—if North Korea feels a need to test advanced weapons, or simply to attract the world's attention—America has itself to blame. For it was America, China would insist, that churlishly rejected peace offers made by North Korea's leader, Kim Jong Un, during his meetings with Donald Trump in 2018 and 2019. Worse, should Mr Biden urge China's president, Xi Jinping, to join America in imposing crippling new sanctions on North Korea unless it abandons nuclear weapons, the near-consensus among Chinese scholars and foreign diplomats in Beijing is that Mr Xi will refuse.

China and America disagree about so much, nowadays, that divergent views of North Korea may seem an afterthought. But seen from Beijing, this gulf in understanding over Korea is unusually revealing, and troubling. In essence, Mr Kim's nuclear ambitions are a nuisance for China. But in the risk-calculations of Chinese leaders, the collapse of the grim, impoverished North Korean regime is a far more alarming prospect. It could lead to a rapid, chaotic reunification with South Korea, an advanced democracy and treaty ally of America which keeps more than 20,000 troops there. Still more cynically, as an Asian diplomat puts it, China does not think that it is the target of North Korea's nukes.

Chinese officials stress the generosity of North Korea's moves

to reduce tensions since the crisis of late 2017 and early 2018. That flare-up involved repeated missile tests and nuclear blasts by the Kim regime, prompting Mr Trump first to threaten to rain "fire and fury" on North Korea, and then to pivot abruptly to an approach based on personal diplomacy with Mr Kim. China notes that North Korea returned the remains of long-lost American servicemen, destroyed some nuclear test facilities and that it has refrained from testing long-range missiles and nuclear devices since 2018.

No matter that American officials call North Korea's offers inadequate. China blames America for a diplomatic stalemate since the Trump-Kim summit in Hanoi ended without a deal in February 2019. This is more than a talking point, insists Li Nan, a researcher at the Chinese Academy of Social Sciences, a government research institute. Chinese leaders "really believe that because of cold-war thinking, the us never trusted North Korea to give up its nuclear weapons," so never dropped any sanctions in response to North Korean concessions, he says. Before fears of covid-19 prompted North Korea to seal its borders, Mr Li was a frequent, well-connected visitor to Pyongyang. He is pessimistic about substantive Sino-American co-operation during any fresh Korean crisis. "America can't make concessions to North Korea, and China can't put more pressure on North Korea," is his blunt assessment.

Hardline Chinese nationalists see a conspiracy in America's rejection of North Korean demands. These include dropping sanctions and ending American military exercises with South Korea that Mr Trump calls expensive and provocative, and has suspended. Some Chinese scholars write that their country must face the reality of a nuclear-armed North Korea and balance its geopolitical interests accordingly, says Zhao Tong, a disarmament expert at the Carnegie-Tsinghua Centre for Global Policy in Beijing. To such scholars, progress towards peace is blocked by America's refusal to offer North Korea economic and security incentives. Their explanation is that America does not want to leave the peninsula "because the long-term us goal is to contain China," reports Mr Zhao.

American experts on Korea are just as sceptical about China's motives. Jung Pak is a former CIA analyst in Mr Biden's transition team. Expressing her own views rather than the next administration's, she writes in a forthcoming paper for the East Asia Institute, a Seoul-based think-tank, that China sees chances to advance its goal of regional dominance in deadlocked American talks with North Korea. It sees similar potential gains from America's disputes with the South (Mr Trump told it to pay five times more towards the cost of American garrisons). China's assertiveness may "embolden, not rein in, Kim Jong Un", worries Ms Pak.

Pausing tests: useful but not the same as denuclearisation

Until June this year, Markus Garlauskas was America's national intelligence officer for North Korea. "We have reached a natural limit in terms of what we can get out of China on North Korea," says Mr Garlauskas, now with the Atlantic Council, a think-tank. Pressing North Korea to stop testing its most dangerous weapons is probably the most that China will do, he suggests by telephone from Washington. A moratorium on tests is not nothing: a new model of ICBM is not credible until it has flown. But pausing tests alone is a thin basis for co-operation with China.

North Korea will provoke America's next president, triggering domestic headaches for Mr Biden as Republicans call him weak on China and North Korea, which they surely will (forgetting Mr Trump's talk of love letters from Mr Kim). That crisis will in turn test America's ties with China. The results will not be cheering. ■



Ethiopia's civil war

The march to Mekelle

ADDIS ABABA

Two weeks in, the conflict is spilling across borders as atrocities mount

I SAW THE dust clouds covering the sky," says a young university lecturer, describing the bombing by a government warplane of a resort on the outskirts of Alamata, a small town in Ethiopia's northern region of Tigray. In normal times Alamata is known for its beautiful green mountains. Now it is a battleground in Ethiopia's civil war, which broke out on November 4th between the federal government and Tigray's rulers, the Tigrayan People's Liberation Front (TPLF).

As he fled towards Afar, a neighbouring state (see map on next page), the lecturer saw lorries carrying federal soldiers driving the other way. By the time the convoy reached Alamata, the town was almost deserted. Most Tigrayan civilians had already left and Tigrayan armed forces were retreating into the mountains.

On November 16th the federal government announced that its forces had captured Alamata, which is on Tigray's south-eastern border, about 120km from the re-

gional capital of Mekelle. It also appears to have captured a town farther north, as well as key territory in western Tigray. This suggests the Ethiopian army has made some important gains since it was ordered into action by Ethiopia's prime minister, Abiy Ahmed, to put down what he claimed was an armed revolt by the TPLF. On November 17th Abiy said the battle was entering its "final phase" and that his troops were making brisk progress towards Mekelle.

But it is far too soon to suggest that these early victories herald a short or easily contained war. On the contrary, as the TPLF has faced setbacks on its borders, it appears

to have tried to widen the conflict, perhaps in a gamble that this will increase international pressure on the federal government to agree to peace talks, and that it will give the TPLF cards to play once the negotiations start. On November 14th it fired rockets over the border at Asmara, the capital of neighbouring Eritrea.

The attack threatens to drag Eritrea into a conflict in Ethiopia barely two years after the two countries made peace. "It was a legitimate target," says Debretsion Gebremichael, Tigray's president. He claims Ethiopian forces were using Asmara airport—which is probably true—and says Tigrayan forces are fending off 16 Eritrean divisions on several fronts.

The Eritrean government denies any involvement in Ethiopia's conflict. But few doubt that its president, Issaias Afwerki, would like to see the Tigrayans routed. Between 1998 and 2000 the newly independent Eritrea fought a bitter border war against Ethiopia, then dominated by the TPLF, that cost perhaps 100,000 lives. Debretsion (as well as some eyewitnesses) claims that Eritrean soldiers in recent days have been involved in fighting near the border. At a minimum, retreating Ethiopian troops have been allowed to regroup on Eritrean soil before returning to battle.

The TPLF has also struck inside Ethiopia, firing rockets at two airports in Amhara, the second-most-populous of Ethio- ▶

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▶ pia's ten ethnically based regional states. Thousands of Amhara militiamen, mostly farmers with rusty Kalashnikovs, have marched towards Tigray. They are fighting alongside the federal army to push Tigrayan forces out of disputed towns near the state border. The involvement of these regional militias in a country as divided as Ethiopia is a recipe for ethnic bloodletting.

Possibly hundreds of civilians, many of them Amharas, were hacked to death with machetes and knives in Mai Kadra, according to Amnesty International. Some witnesses said that forces loyal to the TPLF were responsible for the killings, though Amnesty was unable to confirm this. Tigrayan refugees fleeing into Sudan told Reuters that they had been attacked by people from Amhara. As many as 36,000 people have sought refuge in Sudan.

Fears of an ethnic conflagration have been heightened by the harassment of Tigrayans in the national capital, Addis Ababa, and elsewhere. Many Tigrayans in the security services or civil service have been told not to come in to work. Possibly hundreds have been detained. Some 200-300 Tigrayan soldiers serving in Ethiopia's peacekeeping force in Somalia have been disarmed. People boarding international flights leaving Addis Ababa are being asked to show local IDs, which typically reveal ethnicity. Tigrayans are turned back and told they may not leave.

Both sides to the conflict may have hoped it would be over quickly. After the TPLF ordered its troops to fire the first shots, it described the war as an act of "anticipatory self-defence". Abiy's government insists it is involved in a policing operation aimed at "enforcing the rule of law". Although Ethiopian forces say they are marching on Mekelle, few think they will easily subdue Tigray, whose fighters may wage a guerrilla war from the hills.

Bad blood and a lack of trust between the two sides will hamper efforts to end the fighting through talks. The TPLF, which called the shots in the federal government for almost 30 years, has yet to come to terms with its dethroning in 2018 after massive protests brought Abiy to power. After his appointment, Abiy sidelined the TPLF and began removing Tigrayans from state institutions, in particular the army and intelligence agency.

Tensions worsened when the central government postponed elections earlier this year, citing covid-19. The TPLF accused Abiy of flouting the constitution in order to stay in power and went ahead with its own regional election in September. The federal government deemed it illegal and slashed federal funding to the region. The TPLF called this a "declaration of war".

Two weeks into the actual war, the TPLF seems a little less keen on fighting it. Debrezion has called on the African Union



and the UN to condemn the Ethiopian offensive and says he wants talks. But he also insists on Abiy's head, saying: "We will not negotiate with this criminal tyrant." Abiy is no less intransigent and says he will not talk until the TPLF has been defeated and disarmed. And so the fighting continues. ■

Cattle rustling in South Africa

Where's the beef?

BETHLEHEM

Stealing animals is becoming more common—and more sophisticated

LIVESTOCK THEFT has been around since Biblical times," says Herkie Viljoen, a farmer on the outskirts of Bethlehem, a suitably named town in the Free State. But in recent years it has reached ungodly proportions. Standing next to a huge map of the province he points to small red circles with black dots that represent stolen animals. In some places it looks as if the farms are covered in poppy fields.



Cows without borders

In South Africa 218,000 farm animals—cows, sheep or goats—were taken in the 12 months to March, up from 180,000 five years earlier. The total loss was worth about 900m rand (\$60m) in each of the past two years, around twice as much as the annual black market value of poached rhino horn. Losses this year will probably be even higher, as the economic effects of the pandemic make it harder to earn a lawful living.

A few decades ago pilferage was "for the pot". Today 87% of cases involve criminal syndicates, says Willie Clack of the University of South Africa. Gangs act differently in different places. In parts of the Free State and neighbouring KwaZulu Natal thieves often load cows onto lorries, then cross into Lesotho. Inside the mountain kingdom, which is encircled by South Africa, syndicates rebrand cattle before taking them back across the border, for sale at auction or to abattoirs. It is like laundering cars, but with cows instead of Porsches.

Livestock theft can be seen through a racial lens. The victims of the largest heists in the Free State are white Afrikaners who run big farms. Perhaps one-fifth of farm murders in the province—allegedly including the high-profile killing of Brendin Horner, a 21-year-old farm manager, on October 1st—are related to syndicates. Yet the victims in most cases of theft are black smallholders. As they own fewer animals, single incidents can ruin entire livelihoods.

Whites and blacks are both victims of a sclerotic criminal-justice system. There are dedicated Stock Theft Units within the police but they are siloed and poorly funded. A lack of arrests and prosecutions means there is "no deterrence", argues Roy Jankielsohn, the leader of the opposition Democratic Alliance in the Free State. After the murder of Mr Horner, Bheki Cele, the national police minister, pledged that he would investigate livestock syndicates. "I've seen the stock-theft figures—it's hell," he said, adding that if police were found taking bribes they would have to swap their blue uniforms for orange jumpsuits.

In the meantime farmers are protecting themselves. For as is often the case in South Africa, people who can afford to do so are finding private solutions to public-sector problems. Mr Viljoen's "command centre", which is funded by 450 local farmers, uses 65,000 CCTV cameras to look for rustlers. Farmers are also deploying drones and GPS-tagging to find purloined stock.

Yet such measures can only go so far. After visiting the command centre your correspondent heads to the Caledon river, which marks the border with Lesotho, passing two empty chairs where soldiers are meant to keep watch. Donkeys and cows quench their thirst while children joyfully splash back and forth from one country to another. "You see!" a young boy cries out. "There's no border!" ■

Mental health in Kenya

Shackling body and mind

Legions of people with mental-health problems are kept in chains

SUNDAY WORSHIPPERS at the Holy Ghost Coptic Church of Africa, where services often last for hours, are used to the racket coming from the pews at the back. But it is not the sound of bells ringing or ecstatic chanting. Rather, the clanking comes from chains that shackle Father John Pesa's "patients". In Kisumu, Kenya's third-biggest city, Father Pesa has built a reputation for "spiritually healing" the mentally ill.

Others have called it "psychological torture". Rose Ojwang's husband sent her 17-year-old son to Father Pesa after the boy began hallucinating and behaving strangely. Like other patients, he was shackled. He grew thin, says Rose, because the church does not feel obliged to feed its wards unless paid to do so. For two years the boy went without proper medical treatment.

Rose's grim story echoes the reporting of Human Rights Watch (HRW), an international watchdog, which found that the church had kept no fewer than 60 people in chains. Kenyan doctors say the practice is common. Their country is not alone. HRW's report, published in October, found evidence of shackling in 60 countries, from Brazil to Indonesia. It reckoned that hundreds of thousands of people who suffer from mental illness have at some point been chained or locked up. In countries where such illnesses are poorly understood, many sufferers never see doctors.

Kenya is anyway short of psychiatrists. In Africa, on average, there is less than one mental-health worker per 100,000 people,



How not to treat mental illness

compared with 50 in Europe. Kenya has 0.19 psychiatrists per 100,000 people and one psychiatric hospital. At the local level, "mental health is a mess and mostly forgotten," says Iregi Mwenja of the Psychiatric Disability Organisation, a Kenyan NGO.

"No family wants to shackle their child," says Kriti Sharma of HRW. But good care is expensive and patients are expected to recover in their community. Often people are ignorant of mental health issues, or fearful that the afflicted person may harm others.

But people seek out the services of Father Pesa for other reasons, too. Mental illness in Kenya, as in many parts of Africa, is often thought to be caused by evil spirits. Traditional healers are called in before health professionals. Father Pesa's church purports to flush out demons. It cites a miracle in the New Testament when Jesus drove demons out of a madman (who was shackled) and sent them into pigs. In Kenya's Somali region, which is mostly Muslim, many believe the mentally ill are pos-

sessed by *jinn*s (supernatural creatures).

It is hard to shake off such deep-rooted beliefs. A health official who worked in Mathari Hospital, the country's sole psychiatric one, tells the story of her mentally ill brother. The last time he had a psychotic episode he chopped off three of his wife's fingers with a machete. Yet the doctor and her sister could not convince their mother that he needed medical care. "Even as a mental-health specialist, I still don't have any influence," she laments.

There is some cause for hope. Kenya has signed up to a World Health Organisation initiative that promotes better care for the mentally ill. Politicians are striving to amend outdated laws, and the health ministry is wrangling for more power to monitor facilities where patients are shackled. A recent High Court ruling found that Rose's son had been tortured and ordered the church to pay him 500,000 Kenyan shillings (\$4,590) in damages. But Father Pesa continues to host patients. ■

Iran in Africa

Looking for the next target

The latest chatter about Iranian plotting across the continent

"I'M NOT IN the business of making threats," said Javad Zarif, Iran's foreign minister, immediately before making one. When asked in September whether Iran was still considering retaliating for America's assassination in January of General Qassem Suleimani, Iran's most prominent military commander, Mr Zarif was clear: "The books are not closed."

Ever since President Donald Trump ordered the drone strike that killed Suleimani, Western spies have been alert to clues as to where and how Iran might retaliate. Some think the blow may fall in Africa, where Iran has spent years building up covert networks and where it faces little scrutiny from local governments.

Iran has a history of plotting on the continent—and failing. In 2013 police in Nigeria arrested three Lebanese men and uncovered an arms dump in Kano, the biggest city in the north. All three reportedly admitted to being members of Hizbullah, the Lebanese militia-cum-political-party that acts as an Iranian proxy. They said they were planning to attack the Israeli embassy and other Western targets.

A year earlier the police in Kenya arrested two Iranians who had hidden a stash of explosives at a golf course in Mombasa, accusing them of planning to attack Western targets. They were sentenced to 15 years in

jail. More amateurish still were the attempts to free them. In 2016 two Iranians were sent to Nairobi to prepare a legal appeal. But they were caught planning an attack on Israel's embassy and expelled. Last year Kenyan police testified that Iran's ambassador had been swindled by two men who told him they could get the convicts released. The ambassador denies this.

The original bit of bungling in Kenya is thought to have been the work of the Quds Force, the foreign wing of Iran's Revolutionary Guard Corps. But the Quds Force may be refining its playbook in Africa and turning to locals for help.

A report to the UN Security Council from December accused Ismael Djidah, who was arrested in Chad in 2019, of having helped the Quds Force recruit and train terrorist cells in the Central African Republic (CAR), Chad and Sudan in order to attack Western, Saudi and Israeli targets. Among Mr Djidah's contacts, according to the report, was Michel Djotodia, a rebel leader who was briefly president of the CAR, from 2013 to 2014. The report accuses Mr Djotodia of meeting Quds Force officials in Iran in 2016 and agreeing to set up a terrorist network in exchange for Iran helping him reclaim power. Mr Djotodia's lawyer denies this.

A Western intelligence source says that police in Niger also recently arrested a man ▶▶

who admitted (under interrogation) to working for the Quds Force's Unit 400, which specialises in covert operations. The suspect said he was recruited while on a pilgrimage to Iran and that he had travelled to the country several times for weapons training. He said he helped build networks, gather intelligence or bribe politicians in the CAR, Chad, Eritrea, Gambia, Sudan and South Sudan. Iran also told him to seek mining licences in the CAR and Niger to help offset the impact of American sanctions on Iran and to fund covert operations.

Other current and former counter-terrorism officials from the West confirm this general pattern of activity. "Iran is clearly trying to spread its wings as far as possible," says one. "It makes sense for them to use locals who can work under the radar." Are those locals working on a plot to retaliate for Suleimani? "They are looking to generate headlines," says another intelligence source. "They have chosen Africa because it's easy to operate there." ■

Doctors in the Middle East

Out of practice

BEIRUT

The Arab world trains a lot of doctors, but not enough of them want to stay

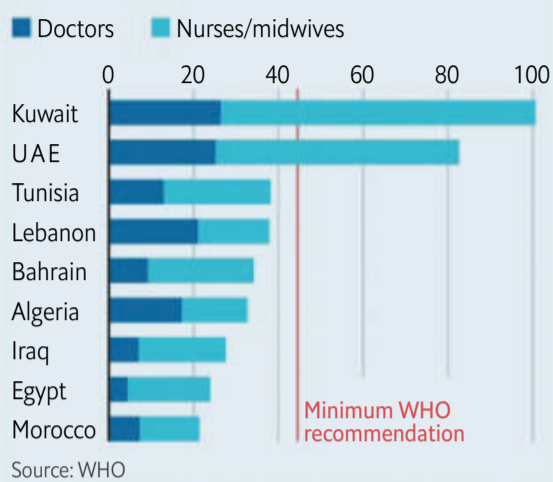
FOR THOSE with money, Lebanon's health-care system was once the envy of the Middle East. Private clinics and hospitals were staffed by doctors trained at top places in the West. Wealthy patients from across the Arab world jetted in for treatment. Today, though, it is the doctors getting on planes. One surgeon says his salary, paid in local currency, is worth about \$200 a month—less than a dollar an hour. Another says his hospital was wrecked in the explosion on August 4th at Beirut's port. Both are applying for jobs abroad, joining a long exodus of Arab doctors.

The Middle East, like much of the northern hemisphere, is hunkering down as covid-19 cases climb. In Lebanon, where more than 80% of intensive-care beds are occupied, the government ordered most businesses to shut on November 14th. Tunisia has imposed a curfew and halted travel between regions. Other countries are considering similar measures. But the closures offer scant relief for doctors forced to fight the virus short-handed.

Though there is no universal standard for a well-staffed health-care system, the World Health Organisation suggests a minimum threshold of 45 skilled personnel—doctors, nurses and midwives—per 10,000 people. At least nine Arab states fall below that benchmark. In some the short-

Not what the doctor ordered

Medical staff per 10,000 people
2018 or latest available



fall is particularly stark (see chart). Egypt had fewer than five doctors per 10,000 people in 2018, down from more than 11 in 2014. The number of doctors in government hospitals, which serve the bulk of the population, fell by one-third during that period.

This is not for lack of talent. Arab universities produce plenty of doctors. In Egypt about 7,000 of them graduate each year—15% more than in America, adjusted for population. Careers in medicine offer prestige and stability. Competition for university places is fierce. (Nursing is a less desirable career, and many Arab states rely on nurses hired from abroad, a problem that is not unique to the Middle East.)

Once they graduate, though, many doctors are eager to leave. Money is the most obvious reason. A newly minted doctor in Egypt can expect to earn just 2,000-2,500 pounds (\$128-160) a month. For a typical family, that is not even a subsistence wage: the average Egyptian household spends more than 4,000 pounds a month on living expenses, a figure that has soared since the pound was devalued in 2016. In Tunisia a specialist with decades of experience,

working in a public hospital, may take home the equivalent of \$15,000 a year. She could earn the same sum each month practising in a rich Gulf country.

Working conditions are better abroad, too. State hospitals in many Arab countries are notoriously crowded and short of equipment. Iraq has just 13 hospital beds per 10,000 people, compared with 22 in Saudi Arabia and 28 in Turkey, its neighbours to the south and north. The Iraqi health-care system was shattered by decades of war and sanctions, and successive governments have invested little in rebuilding it. In 2017 Iraq spent just \$210 per person on health care, estimates the World Bank (the regional average was \$459).

Egypt's constitution, approved in 2014 after a coup, committed the state to spending 3% of annual GDP on health care. That provision has gone ignored: spending in 2018 was just 1.4% of GDP. The constitution also promises free speech, which has not stopped police from arresting doctors who complain about the government's poor handling of covid-19; the disease has killed an estimated 200 medical staff. Underfunded hospitals cannot keep pace with a fast-growing population. In the three years after the constitution was approved, the number of hospital beds per 10,000 people fell by 8%, from 15.6 to 14.3.

In Lebanon an worsening economic crisis means even basic medical supplies are scarce. Chemists are running out of everything from blood-pressure pills to paracetamol. An estimated 400 Lebanese doctors, almost 3% of the total workforce, have left in the past year. The National Council of the Order of Physicians of Tunisia says 40% of its members practise outside their home country. In Egypt the figure is closer to 50%. The exodus has given rich countries a glut of doctors to hire. But it has left much of the Arab world short of them—just when they are needed most. ■



Aching to leave?



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Turkey's economy

On the edge

ISTANBUL

President Recep Tayyip Erdogan starts to face the facts

WHAT A DIFFERENCE a family row makes. Only a few weeks ago, the Turkish lira was plummeting from one record low to another as the central bank sat on its hands, foreigners were dumping Turkish stocks and the country's finance minister, Berat Albayrak, was arguing that exchange rates did not matter. Today the currency is enjoying a big rebound, the stockmarket is soaring, and officials are talking about the need to reform the courts and keep inflation in check.

For more than two years, Turkey's autocratic president, Recep Tayyip Erdogan, had relied on Mr Albayrak, his son-in-law, to run the economy. Mr Albayrak nearly ran it into the ground. With banks dishing out credit at rates below inflation to revive growth, the lira sank by over 40% against the dollar, burning a hole through the savings of millions of Turks. The central bank and state banks wasted at least \$100bn in precious foreign reserves in an abortive attempt to salvage the currency.

Mr Erdogan finally slammed on the brakes. On November 7th he sacked the

central-bank governor and replaced him with one of Mr Albayrak's rivals. A day later, an indignant Mr Albayrak, once touted as his father-in-law's prospective successor, stepped down. Since then the lira has responded with its best weekly performance (a 10% rally) for two decades.

The change in tone has been remark-

able. The new central-bank governor, Naci Agbal, and the new finance minister, Lutfi Elvan, are making all the right noises about stabilising the currency and bringing inflation down to single digits. The justice minister, who has presided over a sweeping crackdown against government opponents since 2017, has discovered a passion for the rule of law, asking judges to comply with constitutional-court rulings and help improve the climate for foreign investors. Those investors are needed: reeling from the pandemic, the economy shrank by nearly 10% in the second quarter.

Even Mr Erdogan, a sworn enemy of high interest rates, now says Turkey may have to swallow "a bitter pill", meaning a dose of austerity. As *The Economist* went to press, the central bank was expected to impose a spectacular rate rise of at least 400 basis points. Anything less might have triggered another run on the lira.

Mr Erdogan had to surrender to market pressure and sack Mr Albayrak. "There was a real chance that the thing would have snowballed and you would have a full-blown currency crash" unless Turkey's leader had changed course, says Paul McNamara of GAM Investments. Another option would have been to seek help from the IMF, something Mr Erdogan had previously ruled out. The president would also have had to pay a political price. A group of 30 to 40 ruling-party parliamentarians is said to have threatened to defect to the opposition unless Mr Albayrak resigned. The overhaul ►►

Losing the lira

Turkey

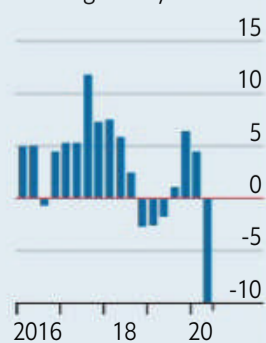
Lira per \$

Inverted scale



GDP

% change on a year earlier



Source: Refinitiv Datastream

▶ of Mr Erdogan's economic team has at least bought him some breathing space, says Ugur Gurses, a Turkish economist.

It may also help Turkey's leader to cope with the loss of a good friend in Washington. For the past four years Mr Erdogan has been able to count on Donald Trump to look away while Turkey evicted American troops from parts of north-eastern Syria, clashed with European allies in the Mediterranean, deployed Syrian mercenaries to Libya and Azerbaijan, and locked up thousands of people on terror charges thinner than baklava dough. Mr Trump also shielded Turkey from sanctions over its purchase of an S-400 air-defence system from Russia. He may have tried to hold up an investigation into a Turkish state bank accused of laundering Iranian money.

Under Joe Biden, who earlier this year referred to Mr Erdogan as an "autocrat" who "needs to pay a price", things will get tougher. America will draw red lines and enforce them more credibly, says Lisel Hintz of Johns Hopkins University. Mr Erdogan will have less room to cut deals with the White House. Sanctions over the S-400 will be harder to sidestep, especially after Turkey tested the system in October. "Ankara will no longer have the kind of protection provided by Trump and has to get its house in order, politically and economically," says Asli Aydintasbas of the European Council on Foreign Relations, a think-tank. "There may be no direct causality, but there's no doubt Albayrak's resignation has to do with Turkey being more prepared for the challenges ahead."

With friends like these

Yet there is a limit to how far Mr Erdogan is willing to go to save the lira and placate the new American administration. For all the recent talk of reforms, he is not about to loosen his grip on national institutions, give up on growth or stop tormenting opponents. His prosecutors recently opened an investigation into Ekrem Imamoglu, the opposition mayor of Istanbul, for criticising one of the president's pet projects, a canal between the Black and Marmara Seas. Whether the central bank makes the right call still depends less on its governor than on the president. Mr Albayrak may be a useful scapegoat, but he is not the true problem in Turkey.

Even if Mr Erdogan were sincere about democratic reforms and the need to patch things up with his Western partners, the coalition he has sealed with his country's ultranationalists, who support him in parliament and in the security forces, will make it difficult for him to take the right steps. "He has locked himself into this path," says Ozgur Unluhisarcikli of the German Marshall Fund, another think-tank. "I can't see how he can make substantial changes without destroying the alliance

structure he has set up."

Mr Erdogan must hope the beginning of the Biden presidency is better than the end of the Trump one. On November 16th Mr Trump's secretary of state, Mike Pompeo, told a French newspaper that America and Europe needed to deal with Turkey's "aggressive actions" over the past few months. A day later Mr Pompeo arrived in Istanbul, where he paid a visit to the Ecumenical Patriarch to discuss religious freedoms in Turkey (and probably bemoaned Mr Erdogan's conversion of the Hagia Sophia, an ancient Christian basilica, into a mosque). He did not meet a single Turkish official. ■

Bosnia-Herzegovina

Dayton at 25

A quarter of a century after peace was brokered, the country is still wretched

THE WAR IN Bosnia-Herzegovina raged for three and a half years. Then, in 1995, after three weeks of being virtually locked up in an American air-base in Dayton, Ohio, the warring leaders struck a deal to end it. Bosnia was devastated, half its population had fled or been ethnically cleansed, and more than 100,000 were dead. The country has been at peace ever since. But on November 21st, exactly a quarter of a century after the Dayton deal, not many Bosnians will be celebrating.

Most are miserable, and it is not hard to see why. Incomes are low, public services are poor and politicians argue about the same things they fought the war over. Bosnians are ageing and emigrating, cities are choked by smog and, says Adnan Cerimagic of the European Stability Initiative, a think-tank, "half of the country's 14-year-olds are functionally illiterate."

Before the war there were some 4.2m people in Bosnia. Today there are probably between 2.7m and 3.3m, though no one

knows for sure. With such a small population, it is sometimes said that all the country needs is a mayor. Instead Dayton created a complex system designed to make sure that none of the country's three main ethnic groups could dominate the others. Twenty-five years on it often defies logic, and seems to serve the interests only of nationalist politicians who have successfully resisted any attempts at reform.

The tiny country has a weak central government, three presidents, two "entities" and an autonomous town. The vast majority of Serbs live in the Republika Srpska (RS), while Bosniaks (a term used to refer to Bosnia's Muslims, who make up around half of the country's population) and Croats live mainly in the ten cantons of what is called the Federation. Most, though not all, main parties are ethnically based, and on the big questions of governance and international relations their leaders rarely agree. An international "High Representative" lingers in the country only so that he could use his far-reaching powers if peace were under threat.

Milorad Dodik, who has long dominated the politics of the RS, derides Bosnia and talks of independence and integration with Serbia. Bosnian Croat leaders often call for their own "third entity". Bosniaks celebrate November 25th as "statehood day" because that is when modern Bosnia was founded in 1943. In schools all three ethnic groups learn different histories. Before the war 13% of marriages were mixed and in Sarajevo a third were. In 2019 the number of mixed marriages was only 3%. A survey in 2018 found that 49% of young Bosnians want to leave.

Gloom is so all-pervasive that it is common for parents to press their children to do so. Ivana Cook, from Tuzla, was born a few months before the end of the war. She says that of 25 students in her graduating class from school, 20 have gone. Ms Cook's mother says that she regrets not leaving herself after the war. Ms Cook did not want to emigrate, but she is lucky. She has a job and a flat which she shares with her boyfriend. Some 80% of Bosnians her age still live with their parents, and youth unemployment is high.

In the early post-war years Bosnians did not mix much, and it is still the case that many young people from mono-ethnic towns or villages, or the divided city of Mostar, have never met someone of a different ethnicity. But it is less so than before, and Bosnian politics is far more nuanced than is often believed. On November 15th a Serb was elected as mayor of overwhelmingly Bosniak central Sarajevo. The vast majority of young Bosnians are not hostile to one another. They play sports together, civil-society activists work on causes together and many criss-cross the inter-entity border daily for work, to shop ▶



Climate politics in Germany

Green on green

BERLIN

Some activists are running out of patience with Germany's Green party

OVER A YEAR ago protesters installed themselves in and around the 250-year-old oak and beech trees of the Dannenröder, a forest and water reserve in the southern German state of Hesse. From their lofty treehouses and make-shift huts, they vow to protect 27 hectares of "Danni" that face clearance for an extension to the A49 motorway. Police have begun to evict the protesters, sparking scuffles, arrests and a handful of injuries. But what looks like a familiar environmental protest resonates beyond the wildlands of Hesse, especially for Germany's Greens. Dannenröder tests the party's ability to balance its radical promise with its ambitions to govern.

Nationally the Greens, who sit in opposition, urge a moratorium on motorway-building. But in 11 of Germany's 16 states, including Hesse, they form part of ruling coalitions, which means grappling with the messy compromises of government. Tarek al-Wazir, Hesse's Green economy and transport minister, says he opposes the A49 but is obliged to implement it, as motorways are a federal responsibility. Bettina Hoffmann, a Green MP fighting to halt the A49, insists the state and national parties are united in leaning on the federal government to stop the project. But tensions are clear.

In recent years the Greens have been doing the splits: aiming to harness the energy of climate movements like Fridays for Future (FFF) while reaching beyond their base of well-heeled urbanites—including to the sort of voters who might use the A49. The success of the Greens' two leaders, Annalena Baerbock and Robert Habeck, who have cemented the party in second place in polls, seemed to have ended tensions

between the Greens' centrist *Realo* and radical *Fundi* wings. But a new generation of campaigners have grown frustrated with a party they see as insufficiently committed to meeting Germany's climate pledges. "I sometimes think the Greens don't know what we mean by 'climate emergency,'" says Luisa Neubauer, an FFF activist and party member.

The strains matter. In Baden-Württemberg, the only state where the Greens lead a ruling coalition, activists irritated by the party's cosiness with the car industry have formed a "Climate List" to contest state elections in March. Winfried Kretschmann, the state's Green premier, says the list threatens his re-election bid. Party insiders grumble that young activists do not understand the give-and-take of democracy. The ascendancy of climate politics has helped the Greens' rise. Now it complicates it.



Oh Danni boy

▶ or just to have fun somewhere else.

But that does necessarily mean that the first generation not to remember the war is going to change the country. Last week's local elections saw Drasko Stanivukovic, a 27-year-old, elected as mayor of Banja Luka, the capital of the RS. He says that its leadership is corrupt and needs to be replaced. He is against independence for RS, but otherwise he holds many of the same Serbian nationalist positions as Mr Dodik.

Hana Curak, aged 26, a sociologist from Sarajevo, says a lack of opportunities is the bane of her generation. You need connections with people in power to find a job, said 87% of young people polled in 2018.

Because a higher proportion of the educated and liberal young leave, Ms Curak says, more of those with less progressive and more nationalist values remain. She thinks that by legitimising a system in which ethnicity is paramount, Dayton has actually served to make many of her generation "even more conservative and nationalistic than their parents".

"What scares me", says Mr Cerimagic, is that "for years people have been saying it is up to the young people to save us from this misery, but then my impression is that they are not really different from the rest of us." For those dedicated to creating a better Bosnia, "it is going to be a long struggle." ■

Moldova's election

The Sandu surprise

A sacked reformer becomes president

WHEN THEIR 5,000 ballot papers ran out, the angry crowd in the scruffy London suburb of Beckton began chanting: "We want to vote!" There were similar scenes in Paris and Frankfurt. The numbers of diaspora Moldovans clamouring to cast their ballots were huge, and the country's electoral commission had failed to anticipate how many slips they would need. In the diaspora 93% plumped for Maia Sandu as president. On November 15th she defeated Igor Dodon, the Socialist incumbent, winning 58% of the overall vote.

Moldova is often characterised as a country split between those who want closer ties with the West and those who want them with Russia. But geopolitics is not what motivated most Moldovan voters when they unseated Mr Dodon, though he is reported to have visited Moscow more than 20 times in the past four years. For Ms Sandu, who was briefly prime minister last year, the single most important issue has long been corruption.

Prey to rapacious oligarchs and unscrupulous politicians, Moldova is the poorest country in Europe, with a GDP per head of just \$4,500. Thirty years ago it had 4.4m citizens. So many have left that fewer than 3m may have stayed behind. But, as the Beckton voters show, the leavers still care. If less money had been stolen at home, fewer of them would be toiling abroad.

Covid-19 has been a game-changer, says Vadim Pistrinciuc, a former deputy minister. Unemployment has soared, small and family businesses have been devastated and, unlike those elsewhere in Europe, have had little help from the government "because there is nothing to help them with. People have made the connection between our weak state and corruption."

Ms Sandu used to come across as rather chilly. In socially conservative Moldova her enemies have emphasised her childlessness and accused her of being a lesbian, which she denies. In the campaign she talked of her family and widened her appeal. Expectations will be high, but the president's powers are limited. She will seek a snap parliamentary election. The Socialist-led government is expected to cling on for the moment, though its legitimacy has clearly been dented by Mr Dodon's defeat. President Sandu will hope to capitalise on her current popularity and build the momentum her party needs to take full control of the government. ■

Charlemagne | The rainbow curtain

For gay people, Europe is still a divided continent



IRELAND AND Lithuania have much in common. Both are small, Catholic, Europhile, enjoy a tricky relationship with a larger neighbour and have cuisines heavy on potatoes. Both also left it late when it came to gay rights. Homosexual acts were decriminalised only in 1993 in both countries. But since then, things have diverged. In the space of a generation, Ireland went from considering homosexuality a crime to allowing gay marriage and electing a gay taoiseach with little fuss. Life for gay Lithuanians has been less happy. Laws banning gay “propaganda” are still on the books. Civil partnerships, let alone same-sex marriage, remain a pipe-dream. Merely living without fear would be an improvement: 84% of LGBT people in Lithuania are not comfortable revealing their identity.

Where an iron curtain once split Europe, a rainbow curtain now divides the continent. In western Europe, gay people enjoy a quality of life better than anywhere on the planet. They are free to marry and adopt children, and are protected from discrimination in all walks of life. Things in eastern Europe are not so good. In seven EU countries, including Poland, Hungary and Romania, less than half the population agree that gay people should have the same rights as straight ones. Civil partnerships are not offered in six EU countries, all in central and eastern Europe. Poland has introduced “LGBT-free zones”, a legally meaningless gimmick with the practical effect of declaring open season on gay people. Meanwhile, Hungary is working on a law that will ban gay couples from adopting. For gay people behind the Rainbow Curtain—which covers about a quarter of the EU’s population—life can be grim.

For a continent that prides itself on gay rights, the split between west and east is a scar. After all, gay rights hold outsized importance in European life. Denmark was the first country to allow civil partnerships, and the Netherlands was the first to introduce gay marriage, in 2001, the same year that it allowed same-sex couples to adopt. In Brussels, gay rights are an area of diversity EU officials are comfortable talking about. When race is brought up officials wince, reminded of the almost preposterous lack of non-white faces within EU institutions. There are, however, plenty of gay people in the corridors of power. The Eurovision Song Contest, one of the few transcontinental events, is a festival of camp. (Although not for everyone: the year that Conchita Wurst, an Austrian drag

act, won the event, Poland entered a decidedly heteronormative act featuring buxom women seductively churning butter.)

Improved rights for gay people were a quid pro quo for membership when the EU expanded eastward from 2004. Romania, for instance, was forced to ditch its law against homosexuality before it was allowed to enter in 2007. With the prospect of EU membership looming over the political class, complaints were confined to bishops in the Romanian Orthodox church. (Sample quote: “We want to enter Europe, not Sodom and Gomorrah.”) Once they were in the club, however, this leverage disappeared and backsliding began. When Law and Justice, the governing right-wing conservative party from Poland, first came to power in 2005, one of its immediate actions was to scrap the government department responsible for LGBT policies. Things were so bad that Robert Biedron, a Polish MEP and one of the country’s few prominent LGBT figures, says he started learning Swedish in case he had to flee. Just as governments in Poland and Hungary have trampled over judicial independence and free media, so too have they cracked down on gay rights. Gay people in general are another victim of the EU’s inability to ensure that countries maintain the standards that allowed them into the club in the first place.

Since family law is mainly up to member states, there is little the EU can do if a member state wants to stop a lesbian marrying or a gay couple adopting. Where Brussels can muscle in is when the right to free movement collides with bigoted domestic law. What happens if a gay couple and their child move to a country where such relationships are not recognised? The European Commission wants to smooth out these bumps, ensuring that the link between children and their gay parents is not severed if they move to a country where gay adoption is banned. While few are affected directly, such a move has potent symbolic power. Definitions of on-line hate speech will be widened to include homophobic abuse, too. Towns that introduced LGBT-free zones in Poland had EU funds cut. But the main thing the EU can offer is a pulpit, hammering those leaders who refuse to treat citizens equally.

Peek behind the curtain

Such banging of the drum for gay rights by Brussels does come with a risk. It is a fight both sides want to have. Normally, populists rely on caricatures when taking aim at Brussels. In this case there is less need. Populist politicians will claim that the EU is doing all it can to force countries to treat gay people better. EU officials will happily plead guilty. A common complaint is that eastern Europe is expected to go through decades of social change in the space of a few years. (Denmark legalised gay sex in 1933, but it took nearly eight decades before gay people could marry.) Change can happen quickly, though. Ireland enjoyed a social revolution in less than a generation, and Malta passed a slew of legislation that helped it become the most gay-friendly country in the EU in just a few years. There are few complaints about the pace of transformation in central and eastern Europe when it comes to living standards.

With the EU cowering beneath a second wave of covid-19 cases and in the middle of its biggest-ever recession, a fight over gay rights could easily fall down the pecking order. It should not. The EU has made much of promoting “European values”. Usually, these tend to mean a respect for the rule of law, which is hardly inherently European. When it comes to gay rights, however, Europe has genuinely been a pioneer. Until a gay person in Vilnius or Budapest has the same rights as one in Dublin or Madrid, European values are no such thing at all. ■



Constitutional reform

The executive unchained

The Tories have a radical plan to remake the state. Brexit is only the beginning

BRITONS HAVE been gripped in recent days by a drama superior to anything Netflix has to offer. Dominic Cummings, the all-powerful adviser who masterminded Brexit and had Boris Johnson in his thrall, has been ousted by a triumvirate made up of Allegra Stratton, the prime minister's press secretary, Munira Mirza, his policy chief (who used to be a revolutionary communist—but that's another story) and his girlfriend, Carrie Symonds. Those who disapproved of Mr Cummings not just for his appalling manners but also for his radicalism, of whom there are many both inside and outside the Conservative Party, are hoping that Mr Johnson will revert to being the pragmatic One Nation centrist he was as mayor of London.

That is certainly the impression that the prime minister gave this week when he launched a ten-point plan to turn Britain green. But Mr Cummings's great project will roll on without him.

The plan, which has the support of the Tory party and was outlined in the 2019 manifesto, is to weaken the judicial, politi-

cal and administrative limits that have been placed on the power of the executive. Brexit is only the beginning. By the time of the next election, ministers will have control over more policies, enjoy more discretion and face fewer restraints than they have for decades.

Meg Russell, director of the Constitution Unit at University College London, warns of "democratic backsliding". Charlie Falconer, the shadow attorney-general, sees Britain falling "under a majoritarian dictatorship". Some see parallels in America or even Hungary, yet this is a distinctly British story: a conservative counter-revolution against checks and balances to executive power built up over half a century.

→ Also in this section

52 Bagehot: A modern Machiavelli

Read more from this week's Britain section:
[Economist.com/Britain](https://www.economist.com/Britain)

In a televised lecture in 1976, Lord Hailsham, a former Lord Chancellor, called for the overthrow of Britain's ruling dictatorship. There was no junta of mustachioed generals and secret policemen; James Callaghan, the Labour prime minister, was a gentle fellow. Rather, Hailsham argued, Britain was an "elective dictatorship". Parliamentary sovereignty, the underpinning principle of Britain's uncodified constitution, granted the legislature the power to make and undo any law it wished, he explained. A government which commanded a majority in the House of Commons enjoyed a power absolute in theory and constrained in practice only by political realities and MPs' consciences. "Only a revolution, bloody or peacefully contrived, can put an end to the situation," he said.

Hailsham proposed a written constitution, inspired by those in Australia and Canada, which would curb the power of Parliament. He wanted a federal system of devolved parliaments for Britain's nations and regions, a bill of rights and an elected House of Lords. The new arrangement would be overseen by the courts. The queen would stay, of course.

Yet the regime he criticised was already being dismantled. From the 1960s, judges and legal academics responded to the ever-bossier post-war state by developing the doctrine of judicial review. In a series of cases, they marked out the scope for judges to overturn the decisions of ministers who had overstepped the powers Parliament

▶ gave them, failed to follow a fair process or behaved irrationally.

In 1973, Britain joined the European Economic Community. In the following decades, control of many areas of policy once dealt with in London went to Brussels. In exercising their remaining powers, ministers were constrained by European laws on state aid, procurement and the environment. Margaret Thatcher was enthusiastic, for the process limited the scope for them to mess with the economy. Brussels required the courts to strike down domestic laws and decisions that contradicted European law.

Tony Blair, who took office in 1997, thought Britain over-centralised and remote from citizens. The revolution he led looked a lot like the one Hailsham envisaged. He set up new devolved governments in London, Scotland, Wales and Northern Ireland. (An assembly later planned for north-east England was rejected in a referendum after a campaign on which Mr Cummings worked. Its slogan was “More doctors, not politicians”.) A Supreme Court was created, independent of the legislature. A Human Rights Act, with which laws and ministers’ decisions had to conform, was passed. There was more oversight and less secrecy. Thatcher had set up the National Audit Office to scrutinise government spending; Mr Blair’s Freedom of Information Act created new rights of access to official papers.

David Cameron, a small-state moderniser, abolished the prime minister’s power to trigger elections. He strengthened Whitehall’s hand, recognising the civil-service code, which asserts officials’ political impartiality, in law. He bolstered the regime of ministerial directions, under which senior civil servants can publicly caution ministers if they believe a project is undeliverable or wasteful.

Vernon Bogdanor, a constitutional historian, concluded in 2009 that Mr Blair’s reforms were a classically liberal project in limited government, “seeking to secure liberty by cutting power into pieces.” Before proposing a law, ministers had to check that it was compatible with European and human-rights legislation, as well as the devolution settlement. Ministers could expect their decisions to be scrutinised by judges, auditors and the public. The elective dictatorship had been toppled.

The Conservatives miss the *ancien régime*. They blame judicial review for gumming up decision-making, and human-rights law for hobbling immigration policy. The crude carve-up of policy areas between London, Edinburgh and Cardiff has, they think, left the British government too feeble to tackle crises like covid-19. Devolution was meant to save the Union but, they maintain, has only boosted separatists. On November 16th, in a moment of candour,

Mr Johnson expressed this view, telling a gathering of MPs he thought Scottish devolution a “disaster” and Mr Blair’s “biggest mistake”.

What Hailsham saw as a dictatorship, the Tories see as a bond between voters and the government. Institutions and watchdogs created during Mr Blair’s tenure masquerade as independent, argues an official, but instead form a parallel political class. According to this view, Blairism weakened rather than strengthened democracy: voters are disillusioned not because Westminster is too mighty but because those they chose to run the country are constrained by people who have not been elected.

The restoration

For many Tories the prorogation debacle of 2019 confirmed that things had gone badly wrong. It was the culmination of a battle around Brexit which, said the Conservative Party manifesto in the subsequent election, “opened up a destabilising and potentially extremely damaging rift between politicians and people”.

Mr Johnson had promised, “do or die”, to deliver Brexit on October 31st, but without a working majority, and unable to call an election, he was blocked by Parliament. He prorogued Parliament, but the Supreme Court, which heard interventions from the Scottish and Welsh governments, blocked his move. The judges described their decision as a defence of Parliament, in keeping with the courts’ role in settling constitutional questions for more than 400 years. Brexiteers saw it differently, and are determined to prevent the executive from losing control again.

In most countries, changing the constitution is hard. In Britain, it is easy. The new checks and balances were passed by Parliament, and what Parliament has created, it can take away. The reforms of the past 40 years will not be overthrown, but there will be a course-correction to assert the primacy of the politicians over judges and officials. Danny Kruger, a Tory MP, calls it “a restoration of politics to its proper place at

the apex of our common life.”

Brexit, which comes into full effect on January 1st, ends the supremacy of European law in Britain. As Mr Cummings’s campaign slogan of “take back control” promised, both the workload and the elbow-room of ministers will expand. They will take charge of the sanctions imposed on Russian kleptocrats, the allocation of airport landing-slots and the chemical composition of toilet unblocker. David Frost, Mr Johnson’s negotiator, sees Brexit as a zero-sum game in recovering lost sovereignty. Ending Europe’s control over state subsidies and emissions is “the point of the whole project.”

Parliament has passed a stack of laws to patch the hole left by Brussels in running Britain. But whereas in Brussels powers are distributed among the EU’s institutions, in Britain they are concentrated in ministers’ hands. MPs will have less freedom to block future trade deals than their counterparts in the European Parliament or America’s Congress; ministers will have wide powers to rewrite regulations on agriculture and medicines. A new environmental regulator has been set up, but campaigners think it weedier than the European Commission.

While ministers get mightier, the courts are being weakened. They will no longer be able to strike down decisions and acts incompatible with EU law. A review led by Edward Faulks, a critic of the prorogation ruling, will ask whether judicial review is being abused “to conduct politics by another means”. It will look at placing some of the prime minister’s prerogative powers, such as deploying troops or appointing ministers, beyond the reach of judges, and at “streamlining” the burden placed on government by disclosure rules.

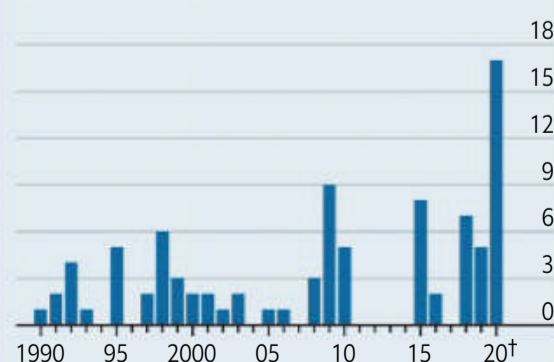
Robert Buckland, the Lord Chancellor, is considering changing the Supreme Court’s name to downgrade its status. A further review of how the courts apply the Human Rights Act will be launched this month. Mr Johnson wants to reclaim the power to trigger elections by repealing Mr Cameron’s Fixed-term Parliaments Act.

Critics argue that this will result in worse, not better, government. If disclosure is limited, the scope for bringing unlawful behaviour to light will be too. Judicial-review cases are usually about everyday matters in which officials have administered lousily, rather than grand constitutional questions. Judges enter political terrain rarely, reluctantly and only with good reason—which, many would argue, they had in the case of the prorogation of Parliament.

Devolution is being nudged back too. Mr Johnson wants to end the impression that he is a visitor in a foreign land when he tours the United Kingdom, and to show that being in the Union pays. Brussels used to send money to Scotland and Wales to pay ▶

Spend, spend, spend

Britain, number of ministerial directions*



*Orders for spending to go ahead following a formal warning from civil servants on grounds of regularity, propriety, value for money or feasibility †To July 23rd
Source: Institute for Government



► for film festivals, bridges and other goodies. In future London will distribute that bounty. The pandemic has also left city mayors feeling squeezed. Manchester's Andy Burnham, among others, complained about the imposition of lockdown in his city; Sadiq Khan, mayor of London, accused the government of a power grab after it threatened to take control of Transport for London, the Tube operator, during bail-out negotiations.

The Internal Market Bill, published on September 9th, is intended to create an all-UK market after Britain drops out of the EU's single market. It contains wide "ouster" clauses, limiting judges' scope to review how ministers use their powers and exempting them from their duty to act in accordance with the Human Rights Act. The government's legal advice justified the bill on the bald principle of parliamentary sovereignty: if lawmakers vote for it, it is constitutional.

"We are living through Hailsham's nightmare," says Peter Hennessy, a constitutional historian. The difference between the 1970s and today, he says, is the degree to which ministers restrain themselves to do only what they regard as right and proper: the so-called "good chaps" theory of government. "The problem with this government is its alarm bells don't ring," he says.

The executive lacks internal checks and balances. Mr Johnson's cabinet is stuffed with timid loyalists whose aides, since a restructuring by Mr Cummings, now answer to Downing Street. The government's top lawyers—Mr Buckland, Suella Braverman, the attorney-general, and Michael Ellis, the solicitor-general—nodded through the Internal Market Bill, which broke international law, although the head of the civil service's legal department and the advocate-general for Scotland quit over it. "If you operate a command model, you can go

a long way foolishly before anyone raises a flag," says Lord Hennessy.

Raising flags is one of the two jobs of Britain's permanent civil service. The civil service is not merely an instrument of ministerial will, bound to deliver the policies of the elected government: it is also a soft check on ministerial whim. Civil servants are obliged to provide politically impartial advice based on rigorous evidence. Job security, the logic runs, encourages honesty.

The tension between the civil service's two jobs is of long standing. Mr Cummings's complaint that mandarins smother innovation and defend the status quo was the premise of "Yes, Minister", a 1980s TV comedy. But the attacks on it now are unusually fierce. Under Mr Johnson, a string of top civil servants have been shoved out. Mark Sedwill, who quit as cabinet secretary in June, told MPs on November 17th that briefings to newspapers discouraged civil servants from giving "blunt and candid" advice.

The government wants to make the civil service more skilled and to raise the prestige of "operational" folk. But it also wants to make it more responsive to ministerial will. Mr Johnson has filled top jobs with political allies, including Dido Harding, the head of Britain's test-and-trace service, and Lord Frost. The number of ministerial directions has risen sharply this year (see chart on previous page), largely because of the need for speed during the pandemic. Theodore Agnew, the minister in charge of government reform, thinks ministers should be more willing to override cautious civil servants.

The main obstacle to the Internal Market Bill is now the House of Lords, which heavily amended the bill on November 9th. "It would be extraordinary if a measure of this kind, which whatever your view is a controversial measure, had not been ques-

tioned. They were carrying out their constitutional duty," says Lord Fowler, the Lords' speaker. Yet the upper house has little power: it can only delay bills, and by convention does not block the government's manifesto promises. Its credibility is undermined by a bizarre appointments system which combines tradition with patronage. Mr Johnson has shown disdain for it, filling it with pals and suggesting it move to York.

Moody blues

For 200 years, the Conservative Party has forestalled popular revolution by constitutional evolution. Ministers say that is what they are doing now, by channelling populist anger at over-mighty judges and foot-dragging mandarins. But there are worries about the direction of travel, not least from the government's own side.

An overweening executive does not sit comfortably with a taste for small government. Immigrants may appeal to judges to avoid deportation; so do Home Counties Tories keen to block developments. Business, too, dislikes government by ministerial whim, for investors prize the security that the rule of law offers. Those concerns have already made themselves felt. On October 16th, Moody's downgraded Britain's credit rating, blaming, in part, the country's weakened institutions and its approach to rules and norms.

Mr Cummings's goal was to deliver vast "moonshot" projects faster and cheaper. But government failures are often the consequence of hasty ministers listening to civil servants too little, not too much. "There's a real problem with ministers that overpromise and under-deliver. You need checks and balances upfront," says Gus O'Donnell, a former cabinet secretary.

There are diplomatic costs, too. The breach of international law embodied in the Internal Market Bill was condemned not just by the Labour Party and all living former prime ministers, but also by Joe Biden, whom Mr Johnson is now desperate to impress. It also poisoned trade talks in Brussels. And how, asked Sir John Major, a former prime minister, could Britain wag the finger at Russia and China again when they flouted international norms?

Mr Johnson fought the 2019 election on the basis that "getting Brexit done" would heal the country's divisions. Instead, it opens new questions about where power should lie and how it should be constrained. Sir Keir Starmer, the Labour leader and a former human-rights barrister, is a defender of the checks, balances and mores of Mr Blair's era. Mr Johnson represents a new strain of majoritarian democracy, for whom statecraft is a simple matter of serving voters what they ordered. The battle for Brexit is over. The fight for the constitution has just begun. ■

Bagehot | A modern Machiavelli

The ideal chief adviser for Boris Johnson would not much resemble the one who has just been fired



WHEN DOMINIC CUMMINGS, Boris Johnson's chief adviser until last week, leaves a room, he likes to make a childish gesture: he pulls a pin out of an imaginary grenade, and tosses it over his shoulder. The man who engineered Brexit and pushed Mr Johnson to hold the election that won him an 80-seat majority while dragging the government into fights with Parliament, the civil service and its own party, has left Downing Street, and the place looks as if an explosion has hit it. Projects are hanging in the air. Functionaries are running around like headless chickens. The only person who can mend all this is another chief adviser.

More than most leaders, Boris Johnson relies on the people around him, for his positive qualities (optimism and enthusiasm) are counterbalanced by negative ones (disorganisation and drift). He would have been a rotten Mayor of London but for the arrival of competent advisers, notably Simon Milton. He needs a similar *deus ex machina* to rescue his faltering premiership. Mr Cummings provided Mr Johnson with political genius and intellectual energy, but he lacked most of the qualities a chief adviser needs.

Downing Street could always add to its exorbitant consultants' bills and call in McKinsey to provide a few management bromides ("must be committed to transparency") to identify the right person to replace him. But a better way would be to read a few books. Start with Machiavelli's "The Prince"—the first book on politics to describe men as they are, warts and all, rather than as moralists would like them to be, and a wonderful source of eternal insights. Then imitate Machiavelli's method and "step inside the courts" of previous leaders by reading lots of history.

Chief advisers fulfil all sorts of vital functions in today's politics. They act as a counter-balance to the civil service and a filter for all those trying to bend a leader's ear. But they also perform an important psychological service: they give their master or mistress somebody to talk to. The best advisers are almost invisible: those who appear in the papers are not doing their job properly. James Baker, chief of staff to both Ronald Reagan and George H.W. Bush, said that the key word in the phrase "chief of staff" was "staff". There was no photograph in public circulation of Jonathan Powell, Tony Blair's chief of staff and the author of "The New Machiavelli: How to Wield Power in the Modern World", during his first year in

the job, so newspapers had to publish silhouettes of him.

But subordination to the boss doesn't mean becoming a patsy. Chief advisers need to be able to correct their master's weaknesses as well as magnify their strengths. Patrick Moynihan brought out the best in Richard Nixon by reminding him of Disraeli's advice that the best governments consist of "Tory men and Whig measures". Unfortunately there were plenty of other advisers around, such as John Ehrlichman and Bob Haldeman, who were happy to bring out the worst in the president. David Gergen rescued Bill Clinton's first administration from chaos by providing the young staffers who had run his presidential campaign with adult supervision. Mr Johnson needs both a Moynihan and a Gergen—someone who can provide both intellectual drive and adult discipline.

The modern Machiavelli has to be willing to prick ideological bubbles. There is nothing more dangerous for an organisation than self-congratulatory groupthink. Advisers need to be well versed in past mistakes so that they can probe their bosses' ideas and plans for weaknesses before rivals or reality expose those flaws. At the same time, whenever hubris turns to despair, as it so often does in politics, they need to be able to put the babble of daily headlines into perspective. Machiavelli's injunction that both princes and advisers should study history and "note the actions of great men" is even more germane today, when too many politicians study economics or, even worse, management science.

The ideal adviser needs to know when to pick fights and when to play nice. Machiavelli was right that change is dangerous because "he who innovates will have as his enemies all those who are well off under the existing order of things, and only lukewarm supporters in those who might be better off under the new". But too many Tories have come to believe that, because you can't make progress without making enemies, the mere existence of enemies is a sign that you're making progress. Demonising the establishment as a reactionary blob is less effective than co-opting its members by appealing to a mixture of their ambition and their better natures. Not all of the government's ideas for universities, the civil service and the BBC are daft, and a little digging reveals that many insiders agree with some of them.

Rubber levers

Finally, successful advisers also need to roam beyond Downing Street. One of the commonest complaints of prime ministers is that they grasp the levers of power only to discover that they are made of rubber: pull them and they bend rather than moving the machinery of government. This is not, as too many prime ministers conclude, because the levers are defective and the machinery needs to be re-engineered, but because in a pluralistic democracy power is widely distributed. Advisers need to help their bosses build coalitions across the political nation, supping not just with journalists, MPs and civil servants but also with city mayors, who rightly feel slighted by the London-focused political system.

Mr Johnson is currently engaged in a grand relaunch of his administration after a disaster-prone 11 months since the election. But none of his fine words about the green industrial revolution will mean a fig unless he can find a modern Machiavelli strong enough to drive policy forward and self-effacing enough to devote himself to the greater glorification of King Boris. The job description is a daunting one, but the successful candidate will have a chance to shape from the shadows the country in the wake of two of the biggest shocks, Brexit and covid-19, that it has received since the second world war. ■



Race and health

Far from equal

CHICAGO AND SÃO PAULO

Covid-19 has shone a light on profound racial disparities in health and the complexity of their causes

I STOPPED COUNTING how many people I knew from my community," says Marina Del Rios, a doctor in an emergency ward in Chicago, of the flood of desperately ill covid-19 patients. Infection rates among Latinos in Chicago are double those of the city's African-Americans and triple those of whites. Of the city's 15 worst-affected zip codes, 11 are predominantly Latino.

In the few countries that collect and publish such data, it is clear that covid-19 has hit ethnic minorities harder than whites. That is in part because the disease disproportionately affects those in jobs, such as security guards and supermarket staff, where ethnic minorities are over-represented. But it is also because of racial disparities in health. Doctors have long argued about the extent to which those disparities are the result of broader inequalities compared with other factors, such as racism or biology. Covid-19 has thrown those questions into stark relief.

Health outcomes differ for racial and ethnic groups. In Brazil people of colour can expect to live three years fewer than white people. In America, where the black-white health gap is at its narrowest ever, black men still live for four-and-a-half fewer years than their white counterparts. Covid-19 has magnified such differences.

It has hit ethnic minorities particularly hard. In Britain all non-white groups (except Chinese women) have been more likely to contract and to die from covid-19 than whites. Trends are similar in America. Disparities are worst among the working-age population. In America a 40-year-old Hispanic person is 12 times as likely to die as a 40-year-old white person, according to the Institute for Health Metrics and Evaluation at the University of Washington. Black Americans are nine times as likely to do so.

America and Britain are unusual in collecting and publishing detailed data about health and race or ethnicity. Some coun-

tries, such as France, outlaw it. Nonetheless a similar picture is emerging elsewhere. In São Paulo, Brazil's richest state, black people under the age of 20 are twice as likely to die from covid-19 than their white counterparts. Sweden tallied deaths early in its epidemic and found that those born abroad were several times more likely to die than those born in Sweden.

Professor Sir Michael Marmot, an epidemiologist, writes about how people's health is determined by social factors. The debate about covid-19 reminds him of 19th-century America, when northern doctors attributed higher rates of tuberculosis among black patients to poverty; southern doctors thought it was genes. "When social conditions improved, TB plummeted in both groups," he says, "and we learnt that it was overwhelmingly social."

How rich or well educated people are or what jobs they do is a strong predictor of health. It is the primary driver of racial health inequities. People who suffer more deprivation, which minorities often do, have poorer health and shorter lives. "There's long been an excessive focus in America on health care as the determinant of health," says Lisa Angeline Cooper, who researches racial health disparities at Johns Hopkins University.

West Garfield Park is one of the poorest, fastest-depopulating neighbourhoods of ▶

► Chicago. Many houses, shops and factories are boarded up or abandoned. Fear of gun violence keeps children indoors. Africa Food and Liquor and Quick Food Mart offer few fresh vegetables—mostly cabbage—but shelves stacked with sweets, fizzy drinks and booze. People assume most black deaths in Chicago are the result of gun violence, but the primary cause of early death in neighbourhoods like these is heart disease, says David Ansell, a doctor at Rush University Medical Centre. Across America black men under 50 are twice as likely as white men to die of heart disease.

In Brazil skin colour is a good proxy for social factors too, says Fatima Marinho, an epidemiologist in São Paulo. Sandra Maria da Silva Costa lives in a *favela* in Rio. She is 46 “but I look 56.” Even before catching covid-19 in April, she suffered from a litany of health problems, including in her lungs. Her lungs worsened in September when, after stealing some meat and milk, she spent a month in prison, where she received no health care. Both her parents died last year. They never spoke about racism or exclusion, says Ms da Silva Costa; they simply accepted that they would not get proper health care. “We’re black, poor and jobless,” she says. “We’re invisible.”

Wealth and education matter even in countries where people are treated more fairly. People who live in the areas of England and Wales that count among the most-deprived 10% are twice as likely to die of covid-19 as those in the least-deprived areas. All ethnic minorities except Indians and Chinese are more likely to live in such places than whites. Pakistanis are more than three times as likely as white Britons to do so and Bangladeshis twice as likely.

Two things help explain the disproportionate impact of covid-19 on ethnic minorities. First, and most important, they are more likely to be exposed to the virus. In many Western countries minorities are more likely to work in jobs that put them into regular and close contact with the public, increasing their risk of infection. They are also more likely to live in cities, in deprived areas and in crowded, multi-generational homes, all of which increase their exposure. Second, when they catch the virus they are more likely to die of it than white people. That is probably because pre-existing conditions, such as diabetes and heart disease, which increase the risk of dying of covid-19, are more common among ethnic minorities.

A virus that discriminates

Such factors go a long way to explaining the disproportionate impact of covid-19 on non-white people in Britain, according to the country’s Office for National Statistics. But not entirely. Bangladeshi men are three-and-a-half times more at risk of dying of covid-19 than white men of the same

age. After controlling for geography (this group is twice as likely to live in densely populated areas), this ratio fell to 2.3. After controlling for factors such as poverty and exposure at work, it fell to 1.9. But even after including self-reported health concerns and pre-existing conditions, their risk was still almost one-and-a-half times that of white men of the same age (see chart).

Even Sir Michael concedes that it is increasingly clear that socioeconomic conditions do not fully explain racial disparities in health. In a recent report he and colleagues found that in several countries in the Americas, such as Colombia and Brazil, the worse health of black people cannot fully be explained by conventional socioeconomic measures. The differences are greater for men than women in America. For black American women the life expectancy gap narrows significantly when controlling for education and income. “But for men a sizeable unexplained gap remains,” says Sir Michael. Some of that disparity can be explained by high homicide rates among black American men. They are also more likely to die of AIDS (though this affects relatively few men, it kills them when they are young and so has a significant impact on average life expectancy). But that does not fully explain the gap.

Puzzling patterns

Cancer is a good example of a disease the prevalence of which cannot be explained by socioeconomic factors alone. In Britain black people have much higher rates of stomach and prostate cancer than other groups. Asian women are more likely than any group to contract mouth cancer. South Asian women are the least likely to get cervical cancer. White Britons have the highest rates of cancer overall. Understanding why certain groups are more likely to get

different cancers hints at the complex interaction of social factors and biology that may be at work.

People’s risk of dying of particular diseases tends to reflect underlying conditions that make them more vulnerable, their access to a doctor or the treatment they will receive. Black women in America are no more likely than white women to get breast cancer but much more likely to die from it. Ethnic minorities made up 11% of covid-19 hospital admissions in Britain in May but 36% of those receiving intensive care. Hospitalised South Asians were the group least likely to survive, whereas there was no difference between black and white people, according to one study.

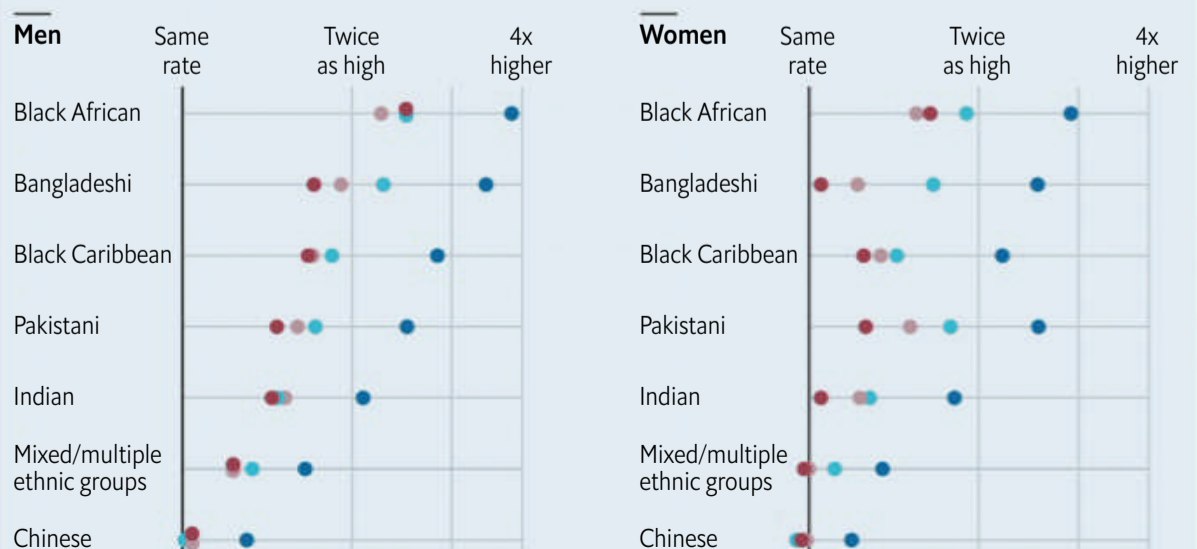
Disparities exist in other areas, too. Few things predict more accurately whether a woman will survive childbirth than the colour of her skin. In America black women are three times, and native Americans two-and-a-half times, as likely to die from pregnancy-related causes as white women. Even after controlling for education, differences persist. Covid-19 could compound this. In Britain’s first wave 55% of pregnant women hospitalised with the virus were from black and other ethnic-minority groups (they represent 14% of the population). In Brazil black pregnant women hospitalised with covid-19 have been around twice as likely to die as white ones.

What might explain such gaps? First, pre-existing conditions. In the rich world the leading cause of death related to childbirth is heart disease, responsible for over a third of deaths. Prevalence is higher among black women. Second, access. In America 89% of white women receive prenatal care in their first trimester, compared with 75% of black women. This means missed opportunities for early diagnosis of problems in pregnancy. Third, unequal treatment. In ►►

Counting the cost

England, death rate involving covid-19, by ethnic group and sex
Relative to the white population, March 2nd - July 28th 2020, log scale

● Adjusted for age... ● and geography... ● and socioeconomics... ● and health status



Source: Office for National Statistics



A dismal picture

- ▶ some Brazilian hospitals black and brown women are treated as though they are of lesser value, says Dr Marinho.

Many indigenous people in Brazil are reluctant to go to hospital at all. Previous interactions and “years of delays [in getting hospital appointments] generated a lack of trust, a lack of hope,” explains Elivar Karitiana, of the Karitiana tribe, who works for the indigenous health-care system in the Amazonian state of Rondônia. When his uncle, a healthy 56-year-old, became very ill with covid-19, he ended up in hospital in Porto Velho, the state capital and died. Villagers insisted “the doctors killed him” by putting in a breathing tube, says Mr Karitiana. He now worries about a second wave in the village. Since his uncle’s ordeal the tribe has become even more sceptical.

A problem everywhere

Even Britain, where health care is free, has disparities. Some groups make less use of programmes meant to catch health problems before they become more serious. Several studies have shown that women from ethnic minorities in Britain make less use of cervical screening than white women. They were more likely than white women to say (wrongly) that they were not at risk or to say they were scared of what might be found, or embarrassed or fearful of being seen by a male doctor.

Governments are belatedly working to ensure that efforts to stop covid-19 reach all people: putting testing centres in places particular groups will visit, for example, such as churches. At the start of the pandemic Latinos in Chicago, many undocumented migrants, made less use of testing centres than others because they were afraid of the authorities who ran them.

Awareness of cultural barriers will be crucial when rolling out covid-19 vaccines.

Culture Care, in California, matches black patients with black medics. An NBER study in 2018 found that black men seen by black doctors consented to more invasive preventive screening procedures (blood tests, for example, and injections), and more of them, than those seen by non-black ones.

But there is also evidence, mostly from America (which has good data), that people of colour simply receive worse medical care. When a black man enters a hospital with a heart attack he is about a third less likely than a white man entering a similar hospital with similar symptoms to receive a treatment called balloon angioplasty within 90 minutes (this timing is a key quality indicator). Studies show that black patients get less pain medication too (so much so that it is thought to have helped keep opioid addiction rates among black Americans well below those of whites).

Pain in black people is underestimated compared with pain in white people. An experiment by the University of Virginia found that around half of a sample of white medical students held some false beliefs about biological differences (that black people have thicker skin, for example). Such views were associated with underestimating and undertreating black pain.

New research looks at the health effects of chronic exposure to discrimination. The idea is that living in a racist society increases stress hormones for minorities and damages their health. Living in a racist environment can harm the health of all black people, even those who do not directly experience racism, says Delan Devakumar, at the Institute of Global Health at University College London. “This is akin to other environmental risk factors for health, such as high levels of air pollution,” he adds.

And yet all this does not fully explain the racial disparities seen with covid-19.

This is apparent from work done using the Biobank data set, an exceptionally detailed medical database of the lives and health of hundreds of thousands of British people. When using these data to account for socioeconomic status, lifestyle, vitamin D levels and pre-existing health disparities, they still do not explain all the differences.

Known unknowns

Some are now calling for a deeper look into the possible genetic contributions to covid-19-related health disparities. Naomi Allen, Biobank’s chief scientist, says population-level differences in the genetics of the immune response to SARS-COV-2 might increase the risk of hospitalisation and death. Asking questions about genetic factors, though, is tricky. Some fear they will distract from the big and important socioeconomic factors. Others think they are a red herring because the races that humans recognise are socially determined, rather than having real genetic underpinnings.

And yet it is true that different populations from different environments and places can have different variants of the same genes. In malaria-ridden parts of the world, natural selection has led to an increased prevalence of a gene that causes blood cells to form an odd sickle shape (which helps explain why over 90% of sufferers of sickle-cell disease in America are black). This protects against malaria.

Evolution has also tinkered with immunity. In some areas, presumably where ancestral levels of pathogens were higher, the immune system is more reactive. That is useful when fighting off illness, but having an overactive inflammatory system can also trigger chronic troubles such as diabetes and cardiovascular disease. These then put people at greater risk for other health conditions. There is evidence that those of African ancestry have a stronger inflammatory response than Europeans.

A set of genes inherited from Neanderthals influences which patients get severe covid-19. They are found throughout European populations at a low frequency. They are, though, particularly prevalent in South Asia. Bangladeshis carry the highest frequencies of these genes, a factor worth exploring when considering why Britons of Bangladeshi origin have had such high death rates of covid-19. These genes are absent in black people—who have a high infection risk, too. This demonstrates just how multifactorial disease can be.

According to research conducted by Raj Chetty, an economist, and others, the life-expectancy gap between rich and poor Americans has been rising even as the racial one has been declining. This suggests that in America race is becoming a poorer predictor of health outcomes than income or deprivation. The disparities change. But the world cannot stop counting. ■



Taiwan Inc in China

Scaling back

KUNSHAN

Cross-strait commercial ties helped build China's economy. They are beginning to fray

HUNDREDS OF JOBSEEKERS lined up outside a factory gate on a recent autumn morning. Uni-Royal, a Taiwanese maker of electronic components for such brands as Samsung and Toshiba, was looking for extra help at its plant in Kunshan, an hour's drive west of Shanghai. New factory hands could earn 4,000 yuan (\$610) a month, double the local minimum wage. Kunshan is dotted with hundreds of Taiwanese manufacturers like Uni-Royal. More than 100,000 Taiwanese call Kunshan home.

"Little Taipei", as Kunshan is known, illustrates a broader phenomenon. Exact estimates vary, but as many as 1.2m Taiwanese, or 5% of Taiwan's population, are reckoned to live in China—many of them business folk. Taiwan Inc has not let fraught political relations with China, which views the island as part of its territory, get in the way of business. Taiwanese companies have invested \$190bn in Chinese operations over the past three decades. Foxconn, a giant Taiwanese contract manufacturer of electronics for Apple and

other gadget-makers, employs 1m workers in China, more than any other private enterprise in the country.

As the West grows increasingly suspicious of communist China's rise—a trend that America's next president, Joe Biden, may slow but not reverse—Beijing seems keener than ever to bolster cross-strait commercial bonds. It sees Taiwanese firms as a source of investment and critical technologies such as computer chips, the export of which to China Washington has tried to curtail. At the same time, corporate

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Taiwan is cooling on its giant neighbour. Geopolitics is not the only reason.

When China opened up to foreign investment in the 1980s, entrepreneurs from Taiwan were the first foreigners to open their wallets. Enticed by cheap labour and land across the strait, they quickly set up shop in the coastal provinces closest to Taiwan. To this day Jiangsu (which includes Kunshan), Zhejiang, Fujian and Guangdong attract most Taiwanese money (see map on next page). A common language and shared culture helped reduce transaction costs. Foxconn built its first Chinese factory in Shenzhen in 1988. By 2008 around a sixth of China's stock of inward investment came from Taiwan, making it the biggest foreign investor in China.

Today three of China's 12 most popular consumer-goods brands by revenue are Taiwanese. Chinese gobble up Master Kong instant noodles, Want Want rice crackers and Uni-President juices. Apple's three biggest China-based suppliers—Foxconn, Pegatron and Wistron—are all Taiwanese.

Now China is going out of its way to recruit more businesses from Taiwan. Between 2018 and 2019 the government unveiled no fewer than 25 policies aimed at luring them. Measures include tax credits and, more striking, a special right to bid on lucrative government contracts, from railway construction to "Made in China 2025", an innovation scheme centred on advanced manufacturing. In May the Chinese ►►

► authorities released an official directive, signed by five ministries, permitting Taiwanese-owned firms in China to “receive the same treatment as mainland enterprises”. It applies even to sensitive areas like 5G mobile networks, artificial intelligence and the hyperconnected “Internet of Things”. No other foreign firms enjoy similar treatment.

These efforts by Beijing have so far had limited success. Annual investment flows from Taiwan have fallen by more than half since 2015 (see chart). This growing reticence on the part of corporate Taiwan can be explained by three considerations. The first is geopolitical.

China’s goal of discouraging formal independence by strengthening business ties is increasingly transparent to many Taiwanese. Beijing’s special treatment of Taiwanese firms, which are designated as domestic ones in its drive for “indigenous innovation”, only stokes more suspicions. It may have helped Taiwan’s independence-leaning president win re-election in January. Chinese firms, which have been able to invest in Taiwan since 2009, are coming under fire from the island’s regulators, which suspect them of being a fifth column for the Chinese Communist Party. Last month Taobao Taiwan, the local version of Alibaba’s Chinese e-commerce platform, said that it would cease operations.

Trading partners

Geopolitical tussles beyond the Taiwan strait also play a role. Tariffs imposed by America on a long list of Chinese exports have prompted many Taiwanese producers to shift operations out of China. A recent survey by the National Federation of Industries, a trade body in Taiwan, found that four in ten Taiwanese bosses with factories in China said they already have or will “transfer capacity” elsewhere, mainly to South-East Asia. Taiwan’s Giant, the world’s biggest producer of bicycles, has identified Hungary as an alternative production base.

Making life even more difficult for some Taiwanese firms is America’s blacklisting of certain Chinese tech titans. Huawei, a Chinese telecoms champion that is a particular target of American ire, last year accounted for 15% of the revenues of Taiwan Semiconductor Manufacturing Company (TSMC), a huge chipmaker. This month TSMC confirmed it has set aside \$3.5bn for a new plant in Arizona.

A second challenge for Taiwanese firms concerns competition. Zhang Yingde, a Taiwanese small-business owner in Shanghai, talks of a “red supply chain” which, Beijing’s directives notwithstanding, continues to favour Chinese bidders. Mr Zhang says he can only hope to get in on the action as a subcontractor. Jerry Huang, the head of Ningbo’s Taiwan Business Association, which represents some 300 Taiwanese manufacturers in the eastern Chinese city, says that none has won a big government contract to date.

Mr Huang does not blame discrimination against Taiwanese firms. He points instead to the capabilities of homegrown Chinese rivals, which are becoming more competitive and innovative. This month Wistron, a Taiwanese assembler for Apple, agreed to sell its factory in Kunshan to Luxshare, a low-cost Chinese competitor. The fact that Wistron was prepared to cede operations to a Chinese rival suggests that technical know-how in electronics assembly is no longer a barrier to entry that Taiwanese outfits feel compelled to guard.

Now that their dominance in manufacturing is fading, Taiwanese firms which want to succeed in China may need to ride on “Taiwan’s soft power”, says Keng Shu of Zhejiang University. This will be easier in services, he reckons, given Taiwan’s global reputation for warm customer service. But unlike manufacturing, where Taiwan enjoyed a first-mover advantage, China’s services industry has no shortage of established players, foreign and domestic.

The third reason for Taiwan Inc’s diminished zeal for China has to do with genera-

tional change. Uni-Royal in Kunshan is a case in point. Taiwanese expatriates who dominate its management are nearing retirement. Young Taiwanese are reluctant to take on the often thankless task of running Chinese factories. A common refrain heard from Taiwanese owners across China is that the impending “leadership vacuum” has made them cautious about big outlays.

To attract stripling Taiwanese entrepreneurs, China’s central government has in the past year opened dozens of “cross-strait entrepreneurship incubators” in big cities. These offer perks like free office space, introductions to potential Chinese clients, posh flats at discount rents and a chance to apply for up to 500,000 yuan in seed capital from the government. Weak pitches such as insufficiently differentiated mobile apps need not apply, says Zhu Yan, who operates an incubator in Jiaying, in Zhejiang province. Still, the bar is lower than Chinese venture-capital firms typically set.

Mr Zhu’s incubator has lured ten Taiwanese startups. But schemes like it will not be enough to allay Taiwanese bosses’ concerns about pricier labour and stiffer competition—let alone about the new great-power rivalry. More likely than not, the golden era of Taiwanese business in China is over. ■

German business

Pride and prejudice

BERLIN

Many guest workers become guest entrepreneurs

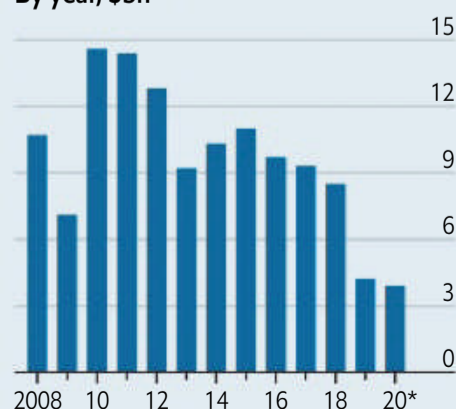
TO THE CONSTERNATION of Ugur Sahin and Özlem Türeci, much of the couple’s coverage in the German press focused on their Turkish roots. “Our world can be saved. From Mainz. By children of migrants,” was a headline in *Bild*, Germany’s best-selling tabloid. Their story certainly defies the cliché of owners of doner-kebab stands and fruit-and-vegetable shops—even if Mr Sahin and Ms Türeci, chief executive and chief medical officer, respectively, of BioNTech, would have preferred to read about the details of their firm’s discovery, in partnership with Pfizer, an American drugmaker, of a highly effective vaccine against covid-19.

“There are other BioNTechs,” says Rosemarie Kay of the IfM, a think-tank in Bonn. Migrants are much likelier than the average German to start a business (see chart on next page). According to a recent survey by KfW, a state-owned development bank, one in four of the 605,000 founders of firms last year had foreign origins. They are not limited to groceries and gastronomy. Spot-►

Straitened

Taiwan, investment in mainland China

By year, \$bn



Source: Mainland Affairs Council

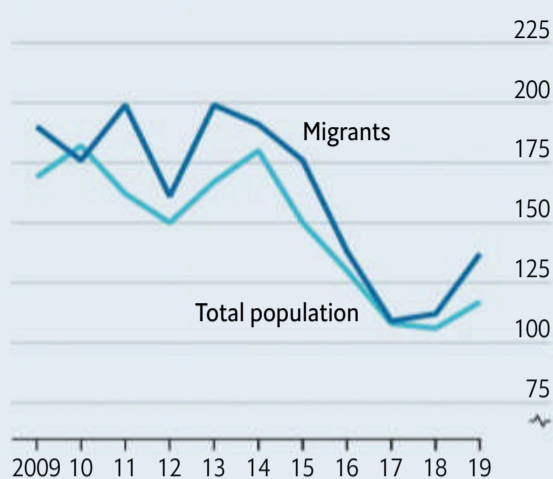
By province, \$m, Jan-Aug 2020



*Jan-Aug

Gastgründer

Germany, startups per 10,000 working-age people



Source: KfW Research

► ted, established by Nik Myftari, a refugee from Kosovo, is a dating website. Novum, created in 1988 by Nader Etmennan, who fled Iran, has become one of Germany's biggest chains of hotels.

Immigrants to Germany (like Mr Sahin) or those with at least one parent who was born abroad (like Ms Türeci) number 19.6m, representing 24% of the population. A study from the Bertelsmann Foundation, another think-tank, found that members of this group own 773,000 businesses. Of these, 469,000 are sole traders. The rest are employers, mostly in construction, retail and services. Their numbers are growing. By comparison, the number of other Germans who own businesses declined by 275,000 in the period, to 3.2m.

"Germans are averse to self-employment," says Armando Garcia-Schmidt of the Bertelsmann Foundation. Many graduates prefer a safe civil-service career to the vicissitudes of starting a business. The booming labour market of the past decade helped skilled and unskilled youngsters land a decent job without trying.

Options for migrants tend to be more limited. Some come from countries with strong entrepreneurial traditions and tend to pick successful entrepreneurs as role models. Various studies show that explicit or implicit discrimination makes the labour market, even in good times, much tougher for migrants. And many have qualifications from their country of origin that are not recognised in Germany, so creating a business is their only chance to earn more than the wage from a menial job.

Mr Garcia-Schmidt expects the labour market to become more difficult for everyone once the pandemic has abated and Germany's generous furlough schemes expire. Covid-19 has made 2020 a terrible year for founders of all stripes. As the country emerges from the coronavirus recession, more native Germans may opt for self-employment as an alternative to joblessness. They can learn a thing or two from their migrant neighbours. ■

Walmart**Beastly earnings**

NEW YORK

The pandemic is producing clear winners and losers among America's retailers

HOW HAVE America's retailers coped with covid-19? "We're still learning," declared John Furner, who runs Walmart's vast American operations, on November 17th, as the supermarket giant reported third-quarter results. He is being too modest. Walmart, as well as a handful of other big firms such as Target, its smaller rival, and Home Depot, a DIY Goliath benefiting from housebound home-improvers staring at dingy walls and outdated kitchens, are thriving.

Paul Lejuez of Citigroup, a bank, described the three months to October as "another stellar quarter" for Walmart. Total global revenues increased by 5.2%, year on year, to \$135bn. If anything, international sales, which grew by just 1.3%, dragged down strong performance in America, which accounts for the bulk of revenues; Walmart has said it will sell most of its flagging Japanese supermarkets. By contrast, domestic comparable-store sales, a standard industry metric, rose by 6.4%. Home Depot's quarterly revenues shot up by 23% compared with a year ago, to \$33.5bn, keeping up the previous quarter's pace. Target's operating profit nearly doubled to \$1.9bn.

Shining retail stars mask darkness elsewhere in the industry. American shoppers rebounded faster than elsewhere in the rich world (see chart). But retail sales grew by just 0.3% last month, compared with the one before, the slowest in half a year. They softened in most of the 13 categories tracked. As investors swooned over Walmart and Home Depot, Kohl's, a middling retail chain, reported falling revenues. "The distinction between the haves and the

have-nots has gotten even sharper," says Simeon Gutman of Morgan Stanley, an investment bank.

Mr Gutman points to the successful firms' superior management of diverse, global supply chains. This allows shoppers to satisfy most of their retail needs in one store—particularly important in a pandemic, when people are keen to limit their outings. Walmart's customers make fewer trips to the store but spend more whenever they do, he notes.

The star retailers' biggest edge, though, comes from e-commerce. Walmart in particular upped its e-game just in time to benefit from a pandemic surge in online shopping. A survey of American shoppers by McKinsey, a consultancy, found that kerbside pick-up has nearly doubled from pre-covid levels, and in-store "click and collect" sales have shot up by nearly 50% from last year. Walmart's digital sales leapt by nearly 80% in the latest quarter, year on year, to \$10bn. That is still less than 8% of revenues—but more than in the whole of 2016, according to Morgan Stanley. The fast-approaching holiday shopping season is likely to bring even more online sales than usual, says Mr Gutman.

By doubling down on digital, Walmart is taking on Amazon's e-emporium. The tech giant is not taking this lying down. On November 17th it launched its long-awaited digital pharmacy. This threatens not just chemists such as Walgreens and cvs but also Walmart, which sells prescription drugs in over 4,000 of its big-box stores. When it comes to e-commerce, Mr Furner's humility is fully justified. ■

Bytes of Bentonville

Retail sales, % change on a year earlier



Sources: National statistics; Bloomberg; Morgan Stanley

Walmart, revenues, \$bn



*Jan & Feb combined due to lunar new year holiday †Feb-Oct

Initial pandemic offerings (1)

Public holidays

SAN FRANCISCO

Airbnb's stockmarket debut will be a hit. Never mind its murky prospects

TALK ABOUT terrible timing. When the pandemic hit in March, Brian Chesky had just put the finishing touches on the paperwork for Airbnb's much-awaited public listing. Instead of travelling to New York to ring the opening bell at the Nasdaq stock exchange, he found himself spending days (and nights) on Zoom in his home office in San Francisco, fighting to keep his online holiday-rental marketplace alive. "It was like you are going 100 miles an hour and suddenly have to hit the brakes," Airbnb's boss recalls.

This time around Mr Chesky might be luckier. On November 16th Airbnb unveiled its prospectus, putting it on track for an initial public offering (IPO) next month, just as the first doses of the covid-19 vaccine may become available. The IPO could value Airbnb at more than \$30bn. The firm's longer-term prospects are harder to divine.

The vaccine is not the only thing that makes this an opportune time for Airbnb to go public. The window for tech IPOs has not been open this wide since the dotcom bubble 20 years ago. More than 50 tech startups have floated this year, raising a total of \$26bn, according to Dealogic, a data provider. Many of Airbnb's employees want to cash in on the shares they have been awarded before their right to do so expires. And the firm needs money, on top of the \$2bn it raised earlier this year to tide it over—hence its decision to scrap earlier plans to list shares directly without drumming up fresh capital.

Mr Chesky has a good recovery story to tell, too. In the painful second quarter the number of nights booked on Airbnb fell to 28m, from 84m a year before. Gross bookings collapsed by two-thirds, to \$3.2bn. In the next three months, though, the numbers rebounded, to 62m and \$8bn, mainly thanks to what Mr Chesky calls "travel redistribution". Guests eschewed virus-hit foreign cities, formerly Airbnb's stronghold, for domestic and rural destinations. Stays less than 500 miles (800km) from home rose by more than 50% this summer.

Mr Chesky has also made Airbnb leaner. Before the pandemic the firm had sunk money into new businesses, including flights and a television studio, to pad revenues ahead of the listing. Since then his motto has been "back to the roots". He has fired around 1,800 employees, a quarter of the workforce, shut down most of the new activities and radically cut online advertis-



Mr Chesky can relax. But for how long?

ing (more than 90% of guests now book directly on Airbnb's site). As a result, though the firm lost \$916m in the first six months of the year, it turned a net profit of \$219m in the third quarter.

Can Airbnb keep this up? Even before the pandemic growth had begun to slow. Once things are back to normal, room for further expansion may be limited, at least in the company's core market. Bernstein, a research firm, expects annual growth in private rentals to slow to 7-8%, from around 20% in the past few years. And Airbnb's operating margins lag behind those of its closest rivals, Booking.com and Expedia (which operates VRBO, a site that lists mostly holiday homes).

Airbnb's future also depends on its ability to police its service and meet a growing list of legal requirements across many jurisdictions where it operates. As with other big online firms, renters have found ways to abuse the platform, for instance by using rental properties for parties; in July police in New Jersey broke up a rowdy event with 700 people. As for regulations, the firm says in its prospectus that by October 2019, 70% of its top 200 cities by revenue had imposed restrictions, such as limits on how many days a year residential properties can be rented out.

Mr Chesky's biggest task, however, will be to work out what Airbnb, now entering its teens, should be when it grows up. He has said he would like to see it evolve like Apple or Disney—firms that have adapted over time and outlived their founders. The pandemic has been a setback for its new lines of business. "Either we keep doing new things as the world changes," he says, "or we stop doing new things—and we won't exist in the future." Even if, occasionally, doing new things means sticking to the old ones. ■

Initial pandemic offerings (2)

Mouth-watering

DoorDash is a dish served piping hot. Will it cool?

THE NEW "TikTok Treats" menu on Postmates in Los Angeles wins no plaudits for gastronomy. It appeals to carb-loving teens: cloud bread and pancake cereal. But the tie-up with the popular short-video app is another sign that food-delivery firms are coming of age. Among teens and millennials, ordering food online is as ingrained a habit as booking an Airbnb, bingeing on Netflix or hailing an Uber.

Just how hooked consumers are thanks to the pandemic is clear from financial documents filed on November 13th by DoorDash, America's biggest food-delivery company, ahead of its listing on the New York Stock Exchange next month. From January to September it booked orders worth \$16bn, up by 198% year on year, earning revenues of \$1.9bn. It ferries grub from 390,000 American restaurants.

The majority of America's 700,000 or so eateries now distribute via a delivery app, notes Lauren Silberman of Credit Suisse, a bank. The pandemic turbocharged a pre-existing trend for convenience food, as more women work and everybody is short of time. In doing so, it has also rehabilitated one of Silicon Valley's most derided business models.

Restaurants entered the digital realm two decades ago when Takeaway.com in Europe and Grubhub in America put menus online. Restaurants delivered the food themselves and the middlemen were reliably profitable. By contrast, the new "third-party logistics" firms like DoorDash and Uber Eats (whose ride-hailing parent has also bought Postmates) have to divvy up the bills, which average around \$30, three ways. Once drivers and restaurants take their cut not much is left.

Until recently none of these newfangled firms made money, even in emerging markets where labour costs are far lower. Lack of obvious economies of scale or barriers to entry meant several rivals were fighting over market share by offering diners generous discounts—and bleeding red ink in the process. They also faced the prospect of a sharp rise in labour costs. Last year California passed a law that required DoorDash, Uber and other "gig-economy" companies to treat app-based workers as full employees.

On November 3rd Californians voted in favour of a ballot initiative which in effect overturns the law—and may discourage other state legislatures from passing simi- ▶

lar ones. The law's defeat on the tails of the pandemic bonanza has once again whetted investors' appetite for food delivery. DoorDash is hoping for a valuation of \$25bn, up from \$16bn in its most recent private-market funding round in June. The offering is already oversubscribed. It is hard to argue with growth rates of 100-200% a year, notes Mark Shmulik of Bernstein, a research firm. DoorDash bulls point to Meituan-Dianping, the biggest such app in China, which turned profitable last year and is now worth a cool \$230bn.

The American firm's numbers con-

tained plenty to chew on. DoorDash is generating cash and is profitable on an adjusted basis. Its in-app ads business offers juicy margins. The company sees itself as the digital hub for the convenience economy, connecting merchants, customers and riders; the word "platform" cropped up 646 times in the filing. It has started delivering groceries and convenience-store items. Its logistics arm sells last-mile delivery to other companies, notably Walmart. Looking ahead, high unemployment amid a continuing pandemic downturn should mean lots of cheap labour.

Other facts are harder to swallow—not least that it has taken covid-19 to make food delivery profitable, and then only marginally so. DoorDash warns that growth will slow as the virus ebbs. The share prices of many listed digital firms that benefited from lockdowns and self-isolating consumers, from Amazon to Zoom, dipped on the news of an effective vaccine. And despite their critics' defeat in California, gig firms will continue to face accusations of thriving on the back of exploited workers. In this respect, DoorDash has already joined the club of listed tech platforms. ■

Bartleby How to play the board game

A useful guide by a cultural veteran

REACH A CERTAIN prominence in public life and you may be invited to become a non-executive director. The most lucrative option is to join the board of a large company. But for social prestige, there is nothing quite like joining the board of a cultural organisation. In Britain, these boards are dominated by "the great and the good"—aristocrats and wealthy businesspeople.

Sir John Tusa, a former BBC executive, has written a guide based on his extensive experience among Britain's literati and glitterati. "On Board: The Insider's Guide to Surviving Life in the Boardroom" is a useful primer for any board member. The job, Sir John argues, is not all about free tickets and lavish dinners. "There is no difference between governance on a corporate board and an arts board," he says. "Sitting on a board, let alone chairing one, is one of the most demanding, complex and taxing activities in the world of public life."

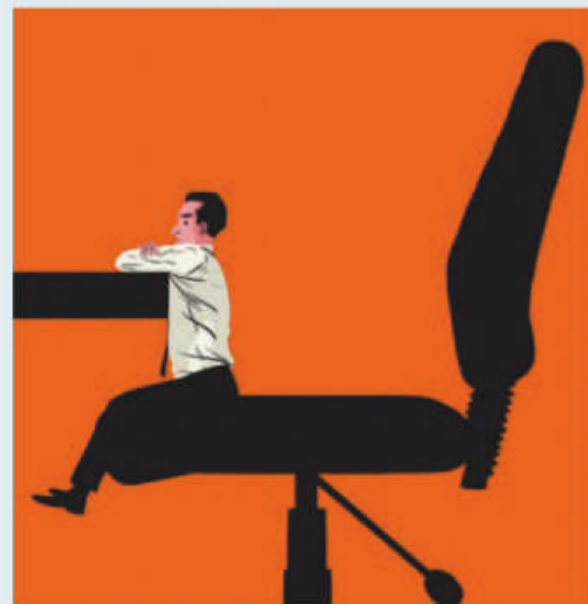
The book also gives an inside glimpse of the political battles that were fought over the future of venerable institutions such as the British Museum, English National Opera and the National Portrait Gallery. Cultural boards face a constant tension between the need to get funding from the government and the artistic ambitions of their executives, a dilemma made even thornier by the need to repair crumbling or outdated buildings.

Such was the traditional nature of these institutions in the years when Sir John operated that the book is sometimes redolent of the interwar era. He was invited to join the board of the British Museum over lunch at the Garrick, a gentleman's club founded in 1831. He then discovered that board meetings were held on Saturday mornings because a former Archbishop of Canterbury,

when a trustee, had requested the time slot as it allowed him time to write his Sunday sermon in the afternoon.

Perhaps this old-fashioned atmosphere (which has now been changed by bringing in a wider range of trustees) led to some of the difficulties that Sir John describes. Too many appointments were rushed, he says, forgetting the first rule: "If you can't see the right candidate in front of you, don't appoint." One frequent problem he faced was tension between the chairman and chief executive, so he suggested that one-to-one discussions between the two should be part of the appointment process to ensure compatibility. When in their posts, the duo should aim to talk every day.

Even then, the chairman (or woman) must retain a certain air of detachment. The boss's approach, says the author, can be summed up by the quote: "We are totally on the same side until the day that I have to sack him." Bad chairmen tend to impose their views, fail to respond to ideas and refuse to alter their approach. Often they place their favourites on the board, creating factions and causing destruction.



Sir John's advice to chief executives is to tell the board what they are doing, when, how and why—all in order to persuade board members that the boss deserves support. But CEOs should not deluge trustees or directors with paperwork: "If information is power, it must be remembered that too much information is a smokescreen."

As for board members, Sir John says they should ask questions of the executive, and be careful about accepting the answers too easily. They should also remember that there is no such thing as a stupid question. And it is not their job to develop strategy: "The executive proposes, but the board disposes," he says.

Trustees should be chosen with a view that one of them is capable of chairing the board in due course. Furthermore, trustees should know why they have been invited to join the board and how they might best contribute to the organisation's success.

All Sir John's suggestions seem sensible and most would apply to public companies as well as to arts institutions. The role of non-executive directors has never been well defined. Tiny Rowland, a swashbuckling tycoon, dismissed them as "Christmas tree decorations"—just for show, in other words. Think of the great names that studded the board of Theranos, a blood-test startup, and how they failed to stop its collapse.

Most non-executives do their best but are caught between two stools. They do not know enough to challenge the executives properly. But if they push their questions too far, they will not be reappointed. Above all, trustees and non-executive directors cannot do their job unless the management wants their input. Wise bosses should know their limitations and rely on boards for advice.



Schumpeter | Wring out those Bells

Can one of the architects of AT&T's woes turn it round?



JOHAN STANKEY is an American chief executive from central casting. The 58-year-old has a square jaw, a lanky frame and, as one friend put it, “the world’s deepest voice”. During his 35 years as a telecoms executive, he has been a voracious dealmaker. He helped set Southwestern Bell Corp, one of the Baby Bells spawned by the break-up in 1984 of American Telephone & Telegraph (AT&T), on an M&A blitzkrieg that eventually consumed the original Ma Bell herself. He then helped orchestrate its \$176bn push into entertainment, buying DirecTV, America’s largest cable provider, in 2015, and Time Warner, a media colossus, three years later. In July he took over as AT&T’s boss. A self-confessed “Bell-head”, he doesn’t flinch when confronting media moguls. Yet before one constituency he practically cowers: widows, orphans and other investors that depend on AT&T as the world’s second-biggest dividend-payer after Microsoft.

That is a problem not because AT&T cannot afford this year’s anticipated \$15bn payout. Despite the travails of covid-19, it easily can. The rub is that it has become a treadmill. This year is the 36th since AT&T was broken up in which it has increased the dividend. Such a legacy may not be strange for a stolid telecoms firm. But with a flighty media business on the side, it is a foolish promise. Moreover, AT&T’s acquisition spree has saddled it with almost \$150bn of net debt, even as its two core businesses, mobile telecoms and entertainment, are in the throes of upheaval that requires immense financial flexibility. Instead of revitalising each of them, AT&T has so far done what many “dividend aristocrats” do—try to sell the family silver to make ends meet.

Yet there are indications that Mr Stankey may be prepared to challenge the old ways of thinking. He ought to—even for the sake of those widows and orphans.

He started the job with the odds stacked against him. Not only has the covid-19 pandemic clobbered WarnerMedia, the renamed Time Warner, by disrupting film releases, accelerating the decline of cable TV and reducing advertising spending. He also had to overcome doubts about his leadership abilities first aired last year by Elliott Management, an activist hedge fund, when it took a stake in AT&T. When his former boss, Randall Stephenson, announced his retirement in the midst of the pandemic, it was hard to imagine

that an outsider could run a company with a market value of \$200bn and a phone book’s worth of problems by Zoom. So Mr Stankey won the contest, despite his role as Mr Stephenson’s lieutenant during years of value destruction. Since then, he has soothed some nerves, taking further acquisitions off the table, promising to repair the balance-sheet and lengthening debt maturities. Yet the share price languishes, as investors wonder if he can sustain the dividend while competing against two fierce rivals, T-Mobile in telecoms and Disney in entertainment.

One big test of his mettle will be an auction next month of wireless spectrum. Mobile, after all, is AT&T’s mainstay, generating as much core earnings, or EBITDA, in a week in the third quarter as WarnerMedia did in a month. Yet T-Mobile, once a distant third in wireless subscriptions, is now running neck-and-neck with AT&T and has its sights on Verizon, the leader. After its merger with Sprint, T-Mobile has also surged ahead of both rivals in the coverage and speed of its fifth-generation (5G) network, adding to its appeal. In order to catch up, AT&T and Verizon will take part in an auction of mid-band 5G spectrum starting on December 8th. Verizon’s balance-sheet is robust enough to bid what some expect to be at least \$15bn. AT&T may feel more constrained. Yet those who keep a careful eye on its credit rating think it should splurge, both on spectrum and the fibre networks it lays across America. Davis Herbert of CreditSights, a research firm, calls them the “core tenets” of its business. (How quickly it can sell long-in-the-tooth assets like DirecTV to ease the financial strain is another matter.)

On November 18th Mr Stankey may have shown promising signs of audacity, though, when WarnerMedia announced an unexpected move in support of HBO Max, AT&T’s streaming platform that competes with Disney+, not to mention Netflix. It said it would release “Wonder Woman 1984”, a potential Christmas blockbuster, simultaneously on HBO Max and in American cinemas on December 25th (it will hit cinemas in other countries earlier). That will break a long tradition of releasing films in theatres first to recoup production costs at the box-office, and to support the cinema business. It shows the company may be prepared to cannibalise revenues in one part of the firm—Warner Bros, the film studio—for the greater goal of driving subscribers to its streaming service, which is potentially a bigger long-term source of value. If going all-in on streaming attracts hordes of subscribers, it could reward Mr Stankey’s dogged faith in the marriage of phone and film.

From Wonder Woman to Superman

It is time for more of such hard choices. Yet the risk is that Mr Stankey feels he has time on his side. He now appears to enjoy Elliott’s support (reports that the asset manager had sold its equity stake do not mean it has thrown in the towel; it may still have a large derivatives position). The rating agencies are patient. Neil Begley of Moody’s says that because of coronavirus and other reasons, it has put big investment-grade firms like AT&T on a “longer leash”. Many remain convinced the dividend is a sacred cow.

That breeds complacency, however. The payout saps AT&T’s financial flexibility just when it needs all the leeway it can find. It encourages defensiveness, when T-Mobile and Disney are, as Roger Entner, a telecoms analyst, puts it, “surrounding it like wolves”. Come what may, one day it will have to cut the dividend—preferably to be complemented with more flexible share buy-backs. If Mr Stankey does that to make the company more nimble, he might emerge a corporate superhero. If it is forced upon him by weak earnings, it will be kryptonite that could cost him his job. ■



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Sovereign debt

Roll up, roll up and write down

HONG KONG

How can governments recover faster from insolvency?

“THE PROCEDURES for resolving an international debt crisis”, wrote Alexis Rieffel, a former American Treasury official, in 1985, “resemble a three-ring circus”. In the first ring, the bankrupt country negotiates with the IMF, which must decide how much the country can repay and what belt-tightening it must endure. In the second ring, the country asks for leniency from other governments to whom it owes money. And in the third, it seeks a “comparable” deal from private lenders.

The circus sometimes, however, struggles to hold it all together. After Argentina defaulted in May, for example, the IMF failed to play its customary role in the first ring. It could not provide new supervision and finance, because the country was still reeling from the failure of its previous IMF bail-out. The second ring has also suffered from some absent performers. In the past decade China has become a far bigger lender to poor countries than other governments combined (see chart 1). But it is not a member of the Paris Club, which has tended to oversee debt renegotiations between

countries and their official creditors. As for the third ring, when the Latin American debt crisis struck in the early 1980s, it took commercial lenders (and their governments) almost seven years to find a lasting solution. The juggling went on and on.

Many fear another series of defaults is looming. Government revenues and export

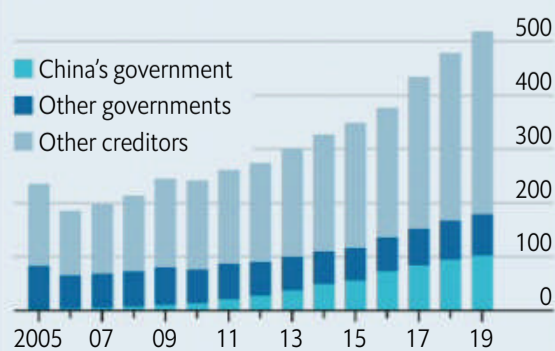
receipts have plunged in many poor countries (though efforts by America's Federal Reserve to calm financial panic have lowered their cost of borrowing). On November 13th Zambia became the sixth country this year to default on its bonds. Eight spend over 30% of their fiscal revenues on interest payments, reckons Fitch, a rating agency, more than in the early 2000s when Bono and other debt-relief campaigners were at their clamorous best. Fitch gives 38 sovereigns a rating of B+ or worse, where B denotes a “material” risk of default (see chart 2 on next page). According to its projections, governments with a junk rating—BB+ or worse—may soon outnumber those classed as investment-grade.

Will the circus handle any new crisis better than it did in the 1980s? In some ways its task is even harder now. Poor countries owe a wider variety of liabilities to a broader range of creditors. For many emerging economies, bonds have eclipsed bank loans. And loans themselves are far from uniform. Some are secured against state assets, such as a stake in a public enterprise, or oil revenues; the creditor might prefer to seize the collateral rather than write off the debt. Others are syndicated, or parcelled out among many banks, which means that no single creditor can forgive the loan at its own discretion.

This gnarly mix of instruments is matched by an equally tangled bunch of creditors: public, private and everything in between. In April, for example, the G20 ▶▶

Where it's due

DSSI-eligible* countries, external-debt stock of public and publicly guaranteed borrowers†
\$bn, by creditor



Source: World Bank

*Debt Service Suspension Initiative
†Including use of IMF credit

▶ group of big economies called on member governments to provide a repayment holiday on loans to the world's poorest countries. China was unhappy that private creditors did not share in the effort. Others complained that China Development Bank, which is owned and directed by the state but not synonymous with China's government, did not take part.

There has, however, also been progress. On November 21st-22nd, G20 leaders will sign off on a "common framework" for renegotiating debts with the world's poorest countries. The framework, in effect, extends the principles of the Paris Club to those G20 members who are not already in it, widening the second ring of the circus. It applies only to countries with unsustainable debts, and any borrower that receives relief from the G20 must seek a similar deal from other creditors. Because all lenders must do their bit, little hangs on whether they are classified as official or private. That is perhaps why the framework has met little opposition from China.

There has been progress in contracts as well as clubs. After Argentina defaulted in 2001, it offered to exchange its unpayable bonds for new securities with easier terms. Some bondholders rejected the deal, seeking full payment in New York's courts instead. That made life harder for both Argentina and its other creditors. Since 2003, most bonds issued under New York law have contained "collective-action clauses", which compel all bondholders to go along with any deal accepted by the majority. Such clauses helped Ecuador resolve its default this year with "hardly any real grumbling", notes Clay Lowery of the Institute of International Finance, a bankers' association. They also helped Argentina reach a deal with its main bondholders in August (albeit with "a fair amount of grumbling").

A review of the "architecture" for resolving sovereign debt, published by the IMF in September, pondered other contractual innovations that might ease future restructurings. Lenders might insist on wider use of "negative-pledge clauses" that prevent a

borrower pawning vital assets as collateral to other creditors. Syndicated loans might add "yank the bank" provisions that allow a lender to be kicked out of the syndicate if it blocks a deal. The fund is also paying renewed attention to "contingent" debt instruments that are more sensitive to the ups and downs that befall poor countries. Barbados, for example, has issued bonds that repay less in the event of an earthquake or tropical cyclone.

One idea, proposed by Ben Heller and Pijus Virketis of HBK Capital Management, an investment fund, is "bendy bonds". In most cases, these would behave like ordinary bonds. But in a crisis the issuer could extend the maturity and defer interest for a couple of years in return for paying additional interest at the end of the bond's life. The issuer could benefit from the kind of payment holiday envisaged in the G20's April initiative without any help from the great powers. As the long history of debt restructurings attests, "fixed" income liabilities are often anything but. Solemn commitments to pay in full and on time cannot always be kept. Lenders and borrowers alike might therefore welcome instruments that specify up front when and how fixed income will become more flexible. ■

RCEP

Big deal

The winners from Asia's new trade pact

IT TOOK EIGHT years of gruelling negotiations to agree on the Regional Comprehensive Economic Partnership (RCEP), which was signed by 15 countries in Asia and the Pacific on November 15th. The world's newest and biggest regional trade deal is not the deepest. It eliminates fewer tariffs than normal, and some only after two decades. Its coverage of services is patchy, as is that of agricultural goods. India is not a member. Still, when leaders met virtually to sign on the dotted line, they hailed the pact as a triumph.

RCEP began as a tidying-up exercise, joining together in one overarching compact the various trade agreements in place between the Association of South-East Asian Nations (ASEAN) and Australia, China, Japan, New Zealand and South Korea. That limits how much trade will be newly affected. Of the \$2.3trn in goods flowing between signatories in 2019, 83% passed between those that already had a trade deal.

Some trade will be newly affected, though. China had no existing deal with Japan, for instance; nor did South Korea. So

RCEP's economic impact will be more than a rounding error. Peter Petri of the Peterson Institute for International Economics, a think-tank in Washington, and Michael Plummer of Johns Hopkins University estimate that Japan and South Korea will gain the most. By 2030 their real incomes are expected to be 1% higher than they would have otherwise been.

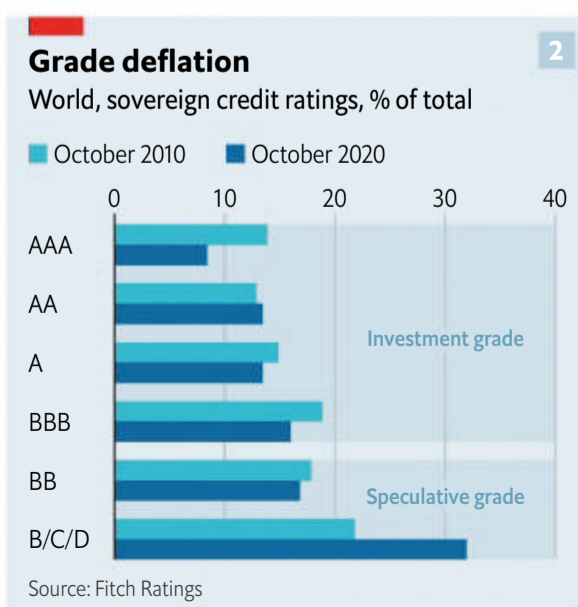
Perhaps the biggest benefits will come from RCEP's rules of origin, which set out how much regional content a product must have for it to enjoy lower tariffs. ASEAN has trade deals in place with China, South Korea and Japan, but a coffee cup exported by a member may face three different sets of rules depending on the destination. RCEP helps by offering companies one set of rules (and paperwork). Rules on content are relatively liberal: many products will need just 40% of their value to be added within the region in order to take advantage of lower tariffs.

The fastest way to annoy Asian diplomats would be to claim that the pact is "China-led"—in fact, ASEAN started the talks. Still, the deal serves China's interests. It had once warily watched its neighbours sign up to the Trans-Pacific Partnership, which reined in state-owned firms and included rules on labour and environmental standards. Now RCEP could strengthen China-centric supply chains—with none of those constraints.

Members may hope that RCEP ensures the resilience of supply chains by supporting new, competitive production bases that can withstand the sudden imposition of trade restrictions. The region's vulnerability to such actions became clear this year, when many in the G20 group of countries applied restrictions during the pandemic. These tended to hurt ASEAN members most often, according to analysis by Global Trade Alert, a monitoring group.

Curmudgeons complain that RCEP will promote regional trade and supply chains at the expense of those that involve non-members, however. Stronger rules covering competition, state-owned firms or product standards might have allayed those fears. But it seems that agreeing on those was too difficult, partly because RCEP's members are at vastly different levels of economic development.

For any of these predictions to come true, signatories must first ratify the agreement. Deborah Elms of the Asian Trade Centre, an advisory firm, reckons that could happen by January 2022. Some hope India will join after that, but the chances seem slim. (It withdrew from negotiations because of worries its industry would be swamped by imports from China.) Others hope RCEP will revive American interest in the region. Domestic politics will make bold trade initiatives hard for a Biden administration. But it will be watching. ■





Tax evasion

Court controversy

BONN

A tax-fraud scandal draws in Hamburg's financial and political elite

AT THE VERY last minute, the lawyers of Christian S tried to stop his trial, arguing that the 77-year-old former bigwig with M.M. Warburg, one of Germany's oldest private banks, was too frail to attend court in a pandemic. But on the evening of November 16th Germany's constitutional court ruled that the trial could go ahead the next day. With judges, lawyers and the accused wearing contraptions that looked like oversized diving masks, each shielded by a perspex partition, a prosecutor read out the charge sheet. It took so long that the judge ordered a break halfway through.

Mr S, who cannot be fully named due to reporting restrictions in Germany, is one of four Warburg bankers accused of grave tax evasion through so-called "cum-ex" transactions in 13 cases between 2006 and 2013 that cost the German taxman more than €325m (\$386m). (The other three will be tried separately.) Cum-ex trades are share transactions done at high speed on or just before the day dividend payments are recorded. Before payment, shares come with (cum) dividends, which are reflected in their prices; after, they come without (ex). A flurry of deals may allow two or more investors to reclaim tax on a given dividend, even though it has been paid just once.

The defendant said very little. He was a confidant of Christian Olearius, the patrician co-owner of the Hamburg-based bank who was head of its supervisory board until he resigned last year, because of his alleged involvement. (Mr Olearius denies any

wrongdoing.) Last month the effects of the scandal rippled out to the political sphere, seeming to draw in Olaf Scholz, Germany's finance minister and a former mayor of Hamburg. The city's parliament launched an investigation into why Hamburg under Mr Scholz let €47m of tax payments owed by the bank lapse under a statute of limitations. As mayor in 2016, Mr Scholz twice met Mr Olearius, a donor to, and fund-raiser for, the city's cultural venues; he says such meetings with bankers and businessmen were customary, and that he cannot remember what was discussed. Warburg says the investigation is purely political, as Mr Scholz is the Social Democratic Party's candidate for the chancellorship.

This is the second cum-ex trial. In March the same court found two former British bankers guilty of tax evasion. They received a suspended sentence as they had co-operated with prosecutors. Warburg came up frequently during the trial because of its role in the trades made by the British duo. It was ordered to pay around €176m as part of the March ruling. It says it has not breached any laws and is appealing.

The lawyers for Mr S maintained a similar line. The trial, which is due to conclude in January, seems likely to be more confrontational than the first—and perhaps more embarrassing for Germany's political and financial classes. Many expect Mr Olearius to be indicted soon.

Whatever happens, Warburg's standing may have already suffered. "It might have gambled away the trust of clients," says Christopher Kopper of Bielefeld University. Its future depends on how much it will have to pay out when all the fines are totted up—and whether customers abandon the grand old bank. ■

Retail banks

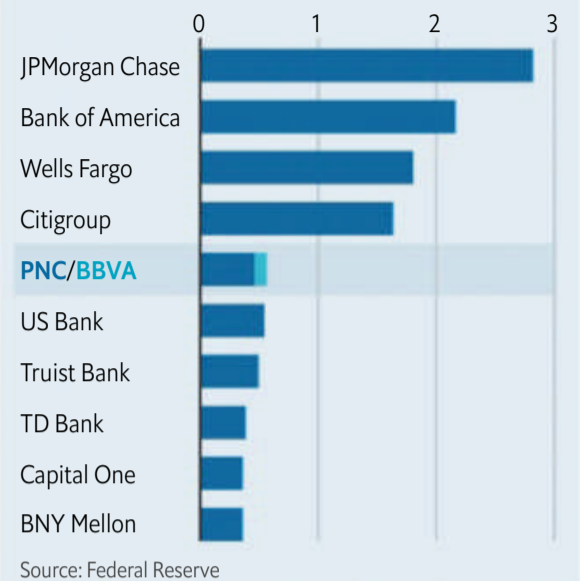
Bye bye America

The sale of BBVA's American unit to PNC may set off a wave of mergers

IN MAY PNC, America's seventh-largest retail bank by assets, sold a stake in BlackRock, an asset manager, for \$17bn. Bill Demchak, PNC's boss, said at the time that worries about the economy had prompted it to divest, in order to "bullet-proof" its balance-sheet. On November 16th he broke cover. PNC said it would buy the American arm of BBVA, Spain's second-largest bank, for \$11.6bn. The deal could set off a scramble for scale on both sides of the Atlantic. Indeed, BBVA in turn said on the same day that it was in merger talks with Sabadell, another Spanish lender.

Nearer the big league

United States, largest commercial banks
At June 30th 2020, by assets, \$trn



Scale has become increasingly important for retail banking in America. It is dominated by four giants—JPMorgan Chase, Bank of America, Wells Fargo and Citigroup—that have amassed branches while lavishing spending on marketing and technology. The investment in digital banking has paid off during the pandemic, as flashy apps have attracted a growing share of deposits. At the same time, the Federal Reserve's low interest rates are squeezing lending margins. That hurts regional banks most: they rely more on interest income from loans than their Wall Street rivals, which also earn fees on trading and investment-banking activities.

PNC's acquisition of BBVA USA Bancshares is the largest banking deal in America since BB&T bought SunTrust for \$28bn last year. It will create the country's fifth-largest retail bank (see chart). The combined entity will be a coast-to-coast franchise operating in 29 of the country's 30 largest markets: half of BBVA's branches are in Texas, and the rest span southern states, where PNC's presence is limited. Still, PNC may seek to expand further. It has excess capital to deploy, in part because regulators have capped dividends and banned share buybacks. And America's field of mid-size banks remains crowded. At least 30 lenders have assets of around \$50bn-250bn.

The price tag on BBVA's American franchise amounts to about 30 times its projected earnings in 2021, according to analysts at UBS, a bank. That is a lot for a unit that has long underperformed, posting returns on equity of around 6-7% (BBVA's Mexican arm, which is comparable in terms of risk-weighted assets, routinely produces returns of 20% or more). But PNC has demonstrated a knack for turning round ailing ventures, notably the American arm of RBC, a Canadian bank, which it snapped up in 2012. Investors seem confident PNC can repeat the trick: the bank's ►►

Buttonwood Sand in the gears

The lesson from the most recent quant quake

WHAT IS IT like to lose to a machine? In 1997 the world's best chess player, Garry Kasparov, was beaten by Deep Blue, a \$10m super-computer made by IBM. Twenty years later he wrote "Deep Thinking", a book about the experience. What comes across vividly is how exhausting each game was. Chess players, even great ones like Mr Kasparov, get tired and frustrated. Doubts begin to creep in. By contrast, Deep Blue just needed the occasional reboot.

Now turn the tables. What is it like to win against the machines? By New Year's Eve the least smart buy-and-hold investor in an index fund might be able to boast of such a victory. For 2020 has been rotten for "quant" funds, which use powerful computers to sift market data for patterns that might predict future prices. "Long-short" momentum—buying recent winners and selling recent losers—had been one of quant's better strategies this year. Yet on November 9th, when news broke of an effective vaccine for covid-19, it had its worst ever day.

Quants rely on history. If something happens that is without precedent, such as a vaccine in a pandemic, they have a problem. No doubt a few quant hedge funds are nursing heavy losses. And perhaps a few discretionary funds have made a killing. The terrain on which human traders can beat the machines is much diminished. But November 9th shows it is still possible. Chalk it up as a small victory for the species.

It is no small irony that momentum trading takes advantage of human weaknesses. One of these is "conservatism bias". Investors tend to stick to prior views too rigidly and change them only slowly in response to new information. They may give undue emphasis to the price paid for a stock as a marker of its

true value and, as a consequence, sell winning stocks too soon and hang on to dud stocks for too long. There is also a contrasting tendency to extrapolate past success. So as well as under-reacting to news, people also over-react to it. Momentum trading seeks to exploit this.

A lot of long-short strategies, including momentum, rank stocks by a particular attribute and then buy the top decile (or quintile) of the group and sell the bottom one. This requires machines. Sorting through thousands of securities quickly is beyond the meagre talents of a living, breathing portfolio manager. It requires algorithms that first establish and then fine-tune the optimal period over which to do the sorting. And it needs speedy and seamless access to automatic trading platforms and market data. You would not want to do all this by hand and brain.

In chess, the brute force of computing power eventually wins out. In investing, the strength of synthetic traders is in dealing with reams of information that is machine-readable, such as tick-by-tick stock prices. The most powerful machines



can make sense even of unstructured ("big") data. But an event like the discovery of a vaccine can flummox even the smartest of them. Humans retain an edge. They are able to winnow down endless possibilities using mental shortcuts. They can imagine scenarios that the past has not thrown up—scenarios such as "a vaccine may become available soon, given the amount of money and effort being thrown at it"; and "news of such a vaccine might spark a sell-off in 'stay-at-home' shares and a rally in 'get-out-of-the-house' shares".

But why were the moves in prices so dramatic? A good rule of thumb, says one quant guru, is that the faster you trade, the less capacity there is for your strategy. A speedy trading strategy, such as momentum, relies on liquid markets to keep turnover costs in check. The strategy can become crowded. And when the quants suffer losses, they may be forced by risk-management rules to close their positions. As everyone rushes to get out at the same time, it makes for extreme price movements. This is in part why sophisticated quant funds are constantly evolving. They look for unique datasets on which to train their machines. Or they try to come up with new ways to parse weaker signals that others cannot detect in the market noise.

The quants have had a rough time, but they are hardly in retreat. Their domain will only expand. The margin of advantage for discretionary trading—for human ingenuity, in other words—will shrink. It is worth remembering that the first time Mr Kasparov played against Deep Blue, in 1996, he won. Now, as he has pointed out, you can download free chess engines that are far more powerful. We should savour victories over the machines while we can.

► share price rose by 3% on the day the deal was announced.

BBVA's investors were even more enthusiastic. Its share price jumped by 20% on the day. Britta Schmidt of Autonomous, a research firm, estimates the net value gained at about €8bn (\$9.5bn), or 40% of the bank's market capitalisation. The sale will shore up its core-capital ratio by nearly three percentage points, to 14.5%, well above the level demanded by regulators.

A chunk of the bounty may go towards acquisitions closer to home, fuelling a long-awaited wave of consolidation in Eu-

rope's overbanked markets. BBVA's American exit makes its portfolio disproportionately exposed to emerging markets, giving it a reason to invest at home. It may also help that, since July, the European Central Bank has encouraged banks to recognise an accounting gain, known as negative goodwill, which they generate when they buy a rival at a lower price than the book value of its assets. Such "badwill", in turn, can be used to offset restructuring charges. Investors seem to believe that BBVA's talks with Sabadell will succeed: Sabadell's share price jumped by 16% on the PNC news, and

a further 9% after PNC and BBVA said that due diligence had begun.

Transatlantic divestitures, meanwhile, will probably continue. European banks operating in America should either go big or give up, says Adrian Cighi of Credit Suisse, a bank. Analysts expect HSBC, Europe's largest bank by assets, to signal a partial exit when it releases its results in February. Santander and BNP Paribas, the other European banks with a big American presence, say they do not want to sell. The PNC deal, however, may make shareholders think focus is not such a bad idea. ■

China's bond market

No guarantees

HONG KONG

Investors are jolted by the default of a highly rated state-owned firm

CHINA'S CREDIT-RATING agencies do not disguise their love for the state. Yongcheng Coal and Electricity's state pedigree was at the top of a list of merits in a recent credit appraisal by CCXI, one such agency, which expressed its confidence in the group on October 10th with a top-notch AAA rating on a 1bn-yuan (\$152m) bond.

Yongcheng's default a month later on a different 1bn-yuan bond has sent a shockwave through China's \$14trn bond market. The company paid overdue interest three days later, but not before investors dumped state-backed debt with links to Henan province, the region in central China where it is based. The jarring news that a state group with a recent AAA-rating had defaulted halted at least 20bn-yuan-worth of planned debt issuance over the following week, as yields on state debt surged.

The concern was so great that a large state-owned company in neighbouring Shanxi province was forced to issue a rare statement to investors on November 14th pledging that the companies it controls would not default. "The particular thing about this case was that it was completely unexpected," said Charles Chang of S&P, another rating agency.

Investor panic has focused on Yongcheng, but there are signs of wider tumult. Huachen Automotive, a carmaker owned by a provincial northern government, said on November 16th that it had sought restructuring after defaulting on a bond in October. Tsinghua Unigroup, a technology firm controlled by Tsinghua University, failed to repay a 1.3bn-yuan bond on the same day. The companies had enjoyed AAA and AA ratings, respectively.

That state firms can default is no surprise. Yongcheng is one of ten to have done so this year. Regulators have realised they can no longer afford to bail out inefficient, loss-making companies. A small but steady stream of weak state firms have been allowed to default since 2015, part of a government plan to impose discipline on the market. Defaults also make it possible to price in risk better, something foreign investors have struggled to do. As defaults have risen over the past three years, foreign investors have ploughed record sums into China's bond market.

But Yongcheng's default has alarmed investors because it throws out the old rule-book that helped determine which groups would receive state support and

which would be allowed to go bust. Parent companies have been the strongest guiding light to date. Yongcheng's parent, for example, is one of Henan's largest state-owned groups and is wholly owned by the province's asset administrator, making Yongcheng state royalty in the region. Huachen Automotive is owned by a similar entity. Such proximity to powerful asset administrators used to give investors confidence that the state would swoop to the rescue at the first sign of distress. Not any more.

Scale also used to be important. Large state groups have been valuable to cities and provinces because they give secure employment to tens of thousands of people. Huachen Automotive alone has more than 40,000 employees. Restructuring them would threaten jobs and social stability, but these are risks the government appears increasingly willing to take. "Parent company, size—these are the reasons people argue you should buy," says Edmund Goh of Aberdeen Standard Investments, an asset manager. "This is starting to change, and people are going to be reading more of the details."

Investors and rating agencies will have to study state firms' fundamentals, instead of relying on perceived government backing. S&P expects more defaults among large state groups that were once considered untouchable. Zhu Ning, a professor at the Shanghai Advanced Institute of Finance, said that regulators may even launch "a crackdown on the rating agencies for better-informed ratings". The shift will prove awkward for local agencies, such as CCXI, which are under pressure from state groups to hand out as many sparkling AAA ratings as possible. ■

The velocity of money

Changing down

WASHINGTON, DC

Why money is changing hands much less frequently

INFORMING A CUSTOMER "I'm sorry, I can't give you your money" is the stuff of bankers' nightmares. But in June the Federal Reserve had to tell commercial banks just that: it was running out of spare change. As parts of the economy shut down, the flow of coins from wallets to deposits gummed up, leading retailers and banks to demand more. The Fed was forced to ration the supplies of pennies, nickels, dimes and quarters based on banks' previous orders.

The speed with which money, both physical and digital, moves is an important indicator of economic activity. Money's

Free fall

United States, velocity of money*



*Nominal GDP divided by the stock of money with zero maturity (M2M). M2M includes notes and coins in circulation, some travellers' cheques, demand and savings deposits, and money-market funds

Source: Federal Reserve Bank of St Louis

"velocity" is calculated by dividing a country's quarterly GDP by its money stock that quarter. The Fed tracks velocity for several definitions of money. The measure that is most popular with economists is "money of zero maturity" (M2M), which includes assets redeemable on demand at face value—such as bank deposits and money-market funds. The bigger GDP is relative to the money supply, the higher the velocity.

Velocity has plummeted this year (see chart). In the second quarter, the velocity of M2M dipped below one for the first time on record, meaning that the average dollar was exchanged less than once between April and June. The decline stemmed from both economic shutdowns and heightened uncertainty early on in the pandemic, as well as a money supply dramatically increased by stimulus efforts.

Recessions tend to dampen the velocity of money by increasing its attractiveness as a store of value relative to alternatives. Uncertainty pushes up demand for money, explains David Andolfatto of the St Louis Fed. In a weakening economy, consumers prefer to save rather than shop; investors cling to the safe assets that make up M2M.

Both the Depression and the Great Recession began with sharp declines in velocity. Where it recovered its pre-Depression levels by the mid-1930s, though, velocity continued to fall after the 2007-09 crisis. Some economists attribute that to the Dodd-Frank act, which took effect in 2010 and put regulatory pressure on shadow-banking activities, increasing demand to hold money in the formal banking system.

As covid-19 spread earlier in the year, anxiety about the economy sent velocity tumbling further. In April personal savings shot up to a record 33.6% of disposable income, not only because of worries about the future but also because shutdowns limited the ability to spend. October's rate of 14.3% was still higher than in all pre-pandemic months since 1975.

Meanwhile, stimulus measures have pushed up the money supply, in order to prevent the economy, and inflation, falling ▶▶

off a cliff. Households were sent cheques for \$1,200, unemployment benefits were made more generous and the Fed bought government debt with new money. The stock of MZM shot up by more than 20% between March and June.

The glut of dollars could create a new set of difficulties once the pandemic ends. Households, flush with cash, could go on a spending spree. As consumer demand recovers, more money will start to change hands and inflation will start to rise.

Though shoring up prices is partly why the Fed is buying assets in the first place, some economists worry that the situation could quickly spiral out of its control, if households all try to spend their money at once. Michael Bordo of Rutgers University predicts “a greater risk of inflation getting out of control than the Fed is willing even to contemplate”. If the velocity of money rebounds post-pandemic, placing a speed limit on it may prove to be as troublesome as jump-starting it. ■

So far, most lawsuits have centred on fiduciary duty to disclose climate risk. Shareholders have sued the Commonwealth Bank of Australia for failing to disclose them, including risks related to possible investment in a coal mine (the lawsuit was dropped when the bank published an annual report acknowledging the risk). In America ExxonMobil, an oil major, has been beset by class-action and shareholder lawsuits alleging that the company has misled investors on climate risks. So far, none has been successful.

In some more recent cases, the focus has shifted from disclosure to demanding strategies to reduce risk. Mr McVeigh’s case alleged that Rest was failing to address the risks posed by climate change. Ms O’Donnell’s case is being watched for a different kind of outcome. If she wins, the Australian government, which has done much to support the coal industry and little to limit national emissions, may have to issue a public statement about the financial risks posed by climate change. A backlash against dirty bonds is already hurting some of Australia’s regional governments. Last year Sweden’s central bank said that it would not invest in the assets of dirty issuers, and promptly sold bonds issued by Queensland and Western Australia.

Occasionally shareholder litigation can lower emissions directly. In 2018 ClientEarth bought €30-worth (\$36) of shares in Enea, a Polish power company, and later sued over the firm’s plan to build Ostroleka C, dubbed “the last coal unit ever to be built in Poland”. The NGO argued that the decarbonisation of the energy sector would make Ostroleka C an unprofitable stranded asset, creating an “indefensible” financial risk. The Polish courts ruled in ClientEarth’s favour last year, and the project has been abandoned—a powerful precedent. ■

Shareholder litigation

Setting precedents

Investors seeking action on climate change turn to the courts

KAATHLEEN O’DONNELL is a 23-year-old Australian law student whose holdings of her government’s bonds mature in 2050, by which date carbon emissions may well have pushed global warming past the 1.5°C goal enshrined in the UN Paris agreement. In July Ms O’Donnell filed a court case against the Australian government for failing to disclose climate-change risks to investors. In 2018 Mark McVeigh, another young Australian, sued his pension fund, the Retail Employees Superannuation Trust (Rest), for allegedly failing to adequately manage the risks that climate change poses to its investments.

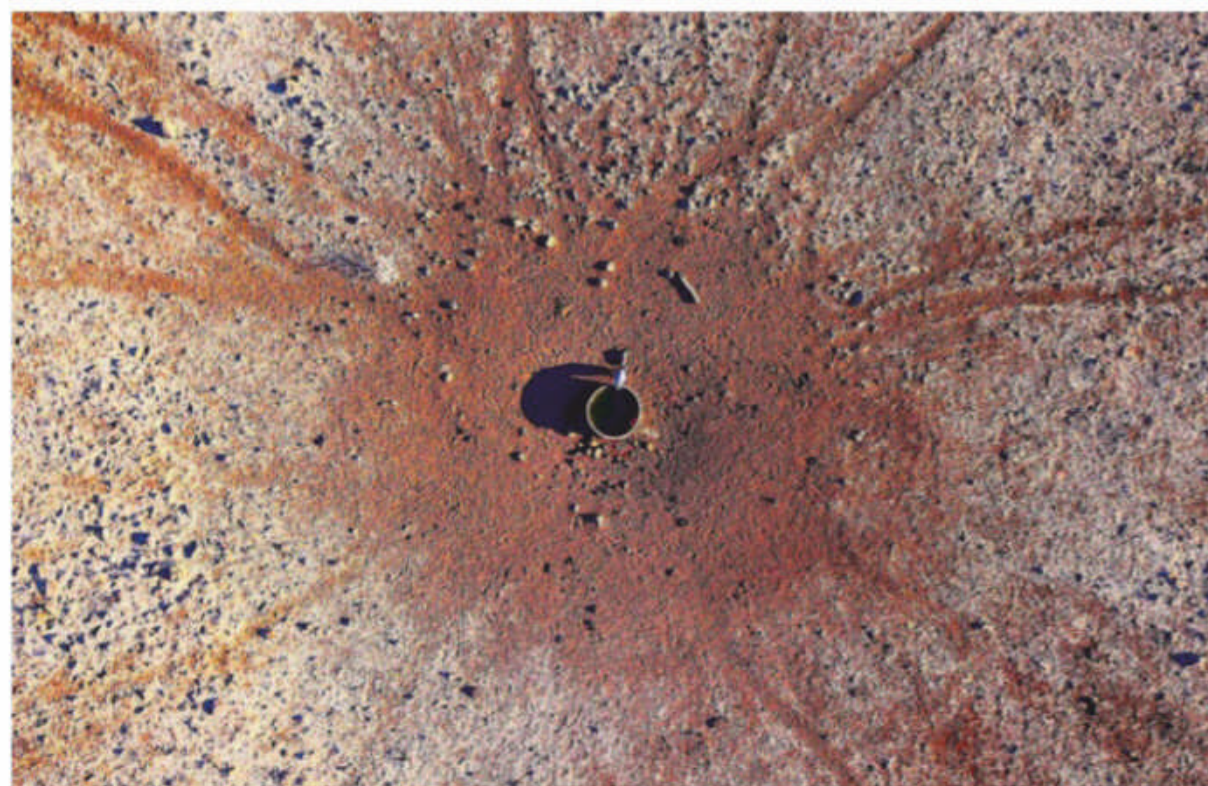
The fact that Mr McVeigh and Ms O’Donnell are both Australian may reflect their government’s laggardly approach to climate change. But their court cases are also part of a growing willingness among green investors to see legal action as an alternative to divestment. “Unless the corporate sector switches quickly to meet investor expectations, I think we are inevitably going to see increasing shareholder litigation,” says Peter Barnett, a lawyer with ClientEarth, an NGO.

The approach can yield results. On November 2nd, with Mr McVeigh’s case due back in court that day, Rest, which manages assets worth A\$57bn (\$42bn), agreed to settle, stating that “climate change is a material, direct and current financial risk” to the pension fund and committing itself to identifying and managing the risks. It now aims to shrink its carbon footprint to net zero by 2050. (Ms O’Donnell’s case is still being heard.)

In some ways, litigation is the logical next step as investors become more engaged. The number of shareholder resolutions seeking to shift companies’ policies on climate change is rising, including through initiatives like Climate Action

100+, a group of 518 investors with more than \$47trn in assets. ShareAction, a charity, counts 11 shareholder resolutions citing climate change filed in Europe in 2020, up from five in 2015.

If resolutions fail, shareholders can divest, or they can choose to sue. In 2018 a group of 95 asset managers overseeing \$11.5trn called on rich-world utilities to draw up decarbonisation plans that are consistent with the Paris goals and eliminate coal power by 2030. “If necessary, we will deploy all the tools available to us as shareholders to require laggards to do so,” they wrote in the *Financial Times*. To Mr Barnett, that implies a willingness to litigate. AP7, a Swedish pension fund, lists initiating “legal processes” against companies as one of its tools to promote sustainable asset management.



Drought down under

Free exchange | Tragic rerun

Joe Biden's economic record will be shaped by the Federal Reserve



BARACK OBAMA'S economic record is overshadowed by a torturously slow recovery from the global financial crisis. A premature turn to deficit reduction left America's recovery in the hands of a Federal Reserve that was doctrinally unprepared to engineer a rapid rebound in employment. Mr Obama's vice-president, and now the president-elect, Joe Biden, no doubt took the lessons of that experience to heart. Ahead of America's presidential election on November 3rd, he seemed poised to meet the pandemic-induced downturn with fiscal force. If the Democratic Party does not win a Senate majority, however, an all-too-familiar mess might ensue. With generous fiscal support seemingly off the cards, the central bank may again prove ill-equipped to rise to the challenge of providing needed stimulus. And Mr Biden may struggle to place his stamp on the Fed's board of governors. The drama surrounding the nomination of Judy Shelton, a Republican pick with outlandish economic views, which on November 17th stumbled after it appeared she had insufficient support in the Senate, could become the first of many.

Central banks once required little in the way of fiscal assistance. But they have struggled to cope since a drop in short-term interest rates towards zero sapped their preferred policy tool of its potency. None has dared to cut rates deep into negative territory, fearing the potential risks to banking systems. Massive asset-purchase programmes have provided a modest fillip to demand, and central bankers in Asia and Europe continue to experiment with new tools, by expanding their purchases beyond government bonds and setting caps on long-term interest rates, for instance. Nonetheless, diminished monetary ammunition has led economists to advocate that fiscal policy play a much larger role in stabilising the economy.

The Fed has tried to adjust to this new world. In the wake of the financial crisis it promised to keep interest rates "at exceptionally low levels...for an extended period". But that failed to spark a rapid recovery. Perhaps the public doubted that the Fed would actually keep rates low, and tolerate the resulting faster price growth, when the time came. The Fed's promise may well have been undermined by its framework, which stipulated an inflation target of 2%. The need for a new approach—one that would explicitly enable the Fed

to accept higher inflation, and so keep interest rates low for longer—led Jerome Powell, its chairman, to launch a strategy review in 2019. In August this year he unveiled a revised framework, one of "average-inflation targeting". Its premise is simple. If the Fed wants to hit its 2% target on average, then periods of below-target inflation, which are expected to be numerous in coming years, must be offset by corresponding periods of above-target inflation. The Fed was giving itself permission not to slam the economic brakes (by raising interest rates) should inflation threaten to rise above 2%.

A promise not to brake, though, cannot get a stalled car moving. The Fed did not pair its new strategy with other demand-boosting measures. It bought roughly \$3trn in assets between February and June, as covid-19 sent the economy into a tailspin, but has since kept its balance-sheet roughly flat. The Fed's new doveishness looks to be opportunistic rather than active: it will accept higher inflation should someone else kick the economy in that direction, but is reluctant to try new monetary measures to deliver a kick of its own. That might explain why market expectations of inflation in ten years' time remain well below pre-pandemic levels and have changed little since the summer.

It seems that, like Mr Biden, Mr Powell placed his hopes in fiscal stimulus. The chairman has repeatedly urged Congress to provide more support to America's pandemic-stricken economy. Now, though, Democrats must win two difficult run-off races in January to keep the Senate out of the hands of Republicans, who are unlikely to facilitate Mr Biden's policies. (A Republican Senate would continue to be led by Mitch McConnell, who said in 2010 that limiting Mr Obama to one presidential term was his party's priority.) Mr Biden's grand economic plans thus look doomed, shifting chief responsibility for America's economic fortunes back to the central bank. Passive doveishness alone may not suffice.

Joe knows

The Fed will do its best to respond. It may soon approve more monetary stimulus in response to a new covid-induced economic chill; in a speech on November 16th Richard Clarida, the Fed's vice-chairman, hinted that an expanded asset-purchase programme could be in the offing. But the opportunity to pair new measures with an attention-grabbing policy overhaul has passed. A revision to its strategy just months after the last one would undermine the central bank's credibility.

A change in its leadership could give the Fed an opportunity to adjust its message and tactics. But Mr Biden will not find it easy to remould the central bank. Mr Powell's term as chairman does not expire until 2022. His decent record means that Mr Biden is unlikely to depart from the custom of renewing a sitting chairman's term (it is one that President Donald Trump departed from when he did not reappoint Janet Yellen, Mr Powell's predecessor). Nor is it clear that a Republican Senate would approve Mr Biden's nominees, which could soon become a problem if Lael Brainard, a doveish Fed governor who is considered to be one of the front-runners to be Mr Biden's treasury secretary, vacates her seat. In 2011 the Republicans blocked Mr Obama's choice of Peter Diamond, a Nobel-prizewinning economist, and politicians' interest in monetary policy has only increased since. As *The Economist* went to press, Mr McConnell continued to hunt for votes among a quarantine-depleted Republican caucus to approve Ms Shelton's nomination. Mr Biden may find that economic ideas have changed since he last walked the corridors of power. Politics has not. ■



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Aerial combat

Virtual mavericks

Fighter aircraft will soon get AI pilots. But they will be wingmen, not squadron leaders

CLASSIC DOGFIGHTS, in which two pilots match wits and machines to shoot down their opponent with well-aimed gunfire, are a thing of the past. Guided missiles have seen to that, and the last recorded instance of such duelling was 32 years ago, near the end of the Iran-Iraq war, when an Iranian F-4 Phantom took out an Iraqi Su-22 with its 20mm cannon.

But memory lingers, and dogfighting, even of the simulated sort in which the laws of physics are substituted by equations running inside a computer, is reckoned a good test of the aptitude of a pilot in training. And that is also true when the pilot in question is, itself, a computer program. So, when America's Defence Advanced Research Projects Agency (DARPA), an adventurous arm of the Pentagon, considered the future of air-to-air combat and the role of artificial intelligence (AI) within that future, it began with basics that Manfred von Richthofen himself might have approved of.

In August eight teams, representing firms ranging from large defence contrac-

tors to tiny startups, gathered virtually under the auspices of the Johns Hopkins Applied Physics Laboratory (APL) in Laurel, Maryland, for the three-day final of DARPA's AlphaDogfight trials. Each had developed algorithms to control a virtual F-16 in simulated dogfights. First, these were to be pitted against each other. Then the winner took on a human being.

Dropping the pilot?

"When I got started", says Colonel Dan Javorsek, who leads DARPA's work in this area, "there was quite a bit of scepticism of whether the AI algorithms would be up to the task." In fact, they were. The winner, created by Heron Systems, a small firm in

the confusingly named town of California, Maryland, first swept aside its seven digital rivals and then scored a thumping victory against the human, a pilot from America's air force, in five games out of five.

Though dogfighting practice, like parade-ground drill and military bands, is a leftover from an earlier form of warfare that still serves a residual purpose, the next phase of DARPA's ACE (air combat evolution) project belongs firmly in the future, for it will require the piloting programs to control two planes simultaneously. Also, these virtual aircraft will be armed with short-range missiles rather than guns. That increases the risk of accidental fratricide, for a missile dispatched towards the wrong target will pursue it relentlessly. Tests after that will get more realistic still, with longer-range missiles, the use of chaff and flares, and a requirement to deal with corrupt data and time lags of a sort typical of real radar information.

The point of all this, putative Top Guns should be reassured, is not so much to dispense with pilots as to help them by "a redistribution of cognitive workload within the cockpit", as Colonel Javorsek puts it. In theory, taking the pilot out of the plane lets it manoeuvre without regard for the impact of high g-forces on squishy humans. An uncrewed plane is also easier to treat as cannon-fodder. Still, most designs for new fighter jets have not done away with cockpits. For example, both of the rival European programmes—the British-led Tem- ▶

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▶ pest and the Franco-German-Spanish Future Combat Air System (FCAS)—are currently “optionally manned”. There are several reasons for this, explains Nick Colosimo, a lead engineer at BAE Systems, Tempest’s chief contractor.

One is that eliminating the pilot does not provide much of a saving. The cockpit plus the assorted systems needed to keep a human being alive and happy at high altitude—cabin pressure, for example—contribute only 1-2% of a plane’s weight. A second is that even AI systems of great virtuosity have shortcomings. They tend not to be able to convey how they came to a decision, which makes it harder to understand why they made a mistake. They are also narrowly trained for specific applications and thus fail badly when outside the limits of that training or in response to “spoofing” by adversaries.

An example of this inflexibility is that, at one point in the AlphaDogfight trials, the organisers threw in a cruise missile to see what would happen. Cruise missiles follow preordained flight paths, so behave more simply than piloted jets. The AI pilots struggled with this because, paradoxically, they had beaten the missile in an earlier round and were now trained for more demanding threats. “A human pilot would have had no problem,” observes Chris DeMay, who runs the APL’s part of ACE. “AI is only as smart as the training you give it.”

This matters not only in the context of immediate military success. Many people worry about handing too much autonomy to weapons of war—particularly when civilian casualties are possible. International humanitarian law requires that any civilian harm caused by an attack be no more than proportionate to the military advantage hoped for. An AI, which would be hard to imbue with relevant strategic and political knowledge, might not be able to judge for itself whether an attack was permitted.

Of course, a human being could pilot an uncrewed plane remotely, says Mr Colosimo. But he doubts that communications links will ever be sufficiently dependable, given the “contested and congested electromagnetic environment”. In some cases, losing communications is no big deal; a plane can fly home. In others, it is an unacceptable risk. For instance, FCAS aircraft intended for France’s air force will carry that country’s air-to-surface nuclear missiles.

The priority for now, therefore, is what armed forces call “manned-unmanned teaming”. In this, a pilot hands off some tasks to a computer while managing others. Today’s pilots no longer need to point their radars in the right direction manually, for instance. But they are still forced to accelerate or turn to alter the chances of the success of a shot, says Colonel Javorsek. Those, he says, “are tasks that are very well suited to hand over”.

One example of such a handover comes from Lockheed Martin, an American aerospace giant. It is developing a missile-avoidance system that can tell which aircraft in a formation of several planes is the target of a particular missile attack, and what evasive actions are needed. This is something that currently requires the interpretation by a human being of several different displays of data.

Another example is ground-collision avoidance. In 2018 a team led by the American air force, and including Lockheed Martin, won the Collier Trophy, an award for the greatest achievement in aeronautics in America, for its Automatic Ground Collision Avoidance System, which takes control of a plane if it is about to plough into the terrain. Such accidents, which can happen if a pilot experiencing severe g-forces passes out, account for three-quarters of the deaths of F-16 pilots. So far, the system has saved the lives of ten such pilots.

A dog in the fight?

Eventually, DARPA plans to pit teams of two planes against each other, each team being controlled jointly by a human and an AI. Many air forces hope that, one day, a single human pilot might even orchestrate, though not micromanage, a whole fleet of accompanying unmanned planes.

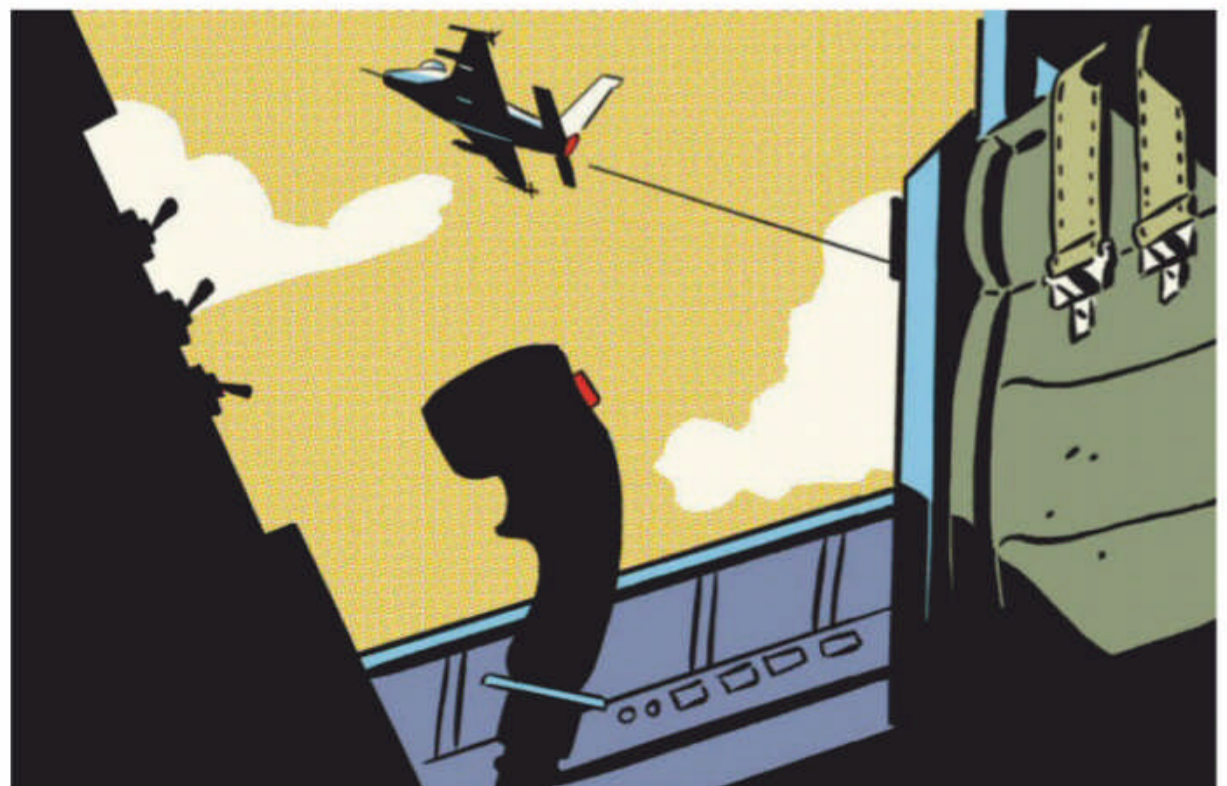
For this to work, the interaction between human and machine will need to be seamless. Here, as Suzy Broadbent, a human-factors psychologist at BAE, observes, the video-game and digital-health industries both have contributions to make. Under her direction, Tempest’s engineers are working on “adaptive autonomy”, in which sensors measure a pilot’s sweat, heart-rate, brain activity and eye movement in order to judge whether he or she is getting overwhelmed and needs help. This approach has been tested in light aircraft, and further

tests will be conducted next year in Typhoons, fighter jets made by a European consortium that includes BAE.

Ms Broadbent’s team is also experimenting with novel ways to deliver information to a pilot, from a Twitter-like feed to an anthropomorphic avatar. “People think the avatar option might be a bit ridiculous,” says Ms Broadbent, who raises the spectre of Clippy, a famously irritating talking paper clip that harangued users of Microsoft Office in the 1990s and 2000s. “Actually, think about the information we get from each other’s faces. Could a calming voice or smiling face help?”

Getting humans to trust machines is not a formality. Mr Colosimo points to the example of an automated weather-information service introduced on aircraft 25 years ago. “There was some resistance from the test pilots in terms of whether they could actually trust that information, as opposed to radioing through to air traffic control and speaking to a human.” Surrendering greater control requires breaking down such psychological barriers.

One of the aims of AlphaDogfight, says Mr DeMay, was to do just that by bringing pilots together with AI researchers, and letting them interact. Unsurprisingly, more grizzled stick-jockeys tend to be set in their ways. “The older pilots who grew up controlling the radar angle...see this sort of technology as a threat,” says Colonel Javorsek. “The younger generation, the digital natives that are coming up through the pipeline...trust these autonomous systems.” That is good news for DARPA; perhaps less so for Colonel Javorsek. “These things that I’m doing can be rather hazardous to one’s personal career”, the 43-year-old officer observes, “given that the people who make decisions on what happens to me are not the 25-year-old ones. They tend to be the 50-year-old ones.” ■





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Space exploration

Mandate of heaven

BEIJING

China plans to bring back the first Moon rocks for 40 years

IN JANUARY 2019, when a Chinese spacecraft called *Chang'e 4* visited the Moon, the mission broke new ground, figuratively speaking, by landing on the far side of that orb, which is perpetually invisible from Earth and thus also out of direct radio contact. This meant communications had to be relayed by a satellite which had been cunningly located for the purpose at a place where the interaction of the gravitational fields of Earth and Moon meant it could orbit a point in empty space.

China's next lunar mission, by contrast, will break ground literally. *Chang'e 5*, scheduled for launch around November 24th, is intended to drill two metres down into the Moon's surface, retrieve about 2kg of rock, and then return this to Earth. If successful, it will be the first lunar sample-return mission since 1976, when a Soviet probe called *Luna 24* sent back a mere 170g of the stuff. And it will be another step forward in China's space programme.

The *Chang'e* missions, named after a Chinese Moon goddess, have had their ups and downs. *Chang'e 5* was originally scheduled for blast off in 2017, but the failure in July of that year of an otherwise-unrelated project that was, like *Chang'e 5*, using a Long March 5 as its launch vehicle, caused a delay. (*Chang'e 4* used a different sort of launcher, a Long March 3B.) The "go" does, however, now seem to have been given. State media reported on November 17th that the rocket with *Chang'e 5* on board has been moved to its launch pad at Wenchang

space centre, on Hainan island.

Assuming the launch goes to plan, success will then depend on a complex ballet involving the craft's four components. These are a service module, a return-to-Earth module, a lunar lander and an ascender—a configuration originally used by America's Apollo project. Once the mission is in lunar orbit, the lander and the ascender will separate from the orbiting mother ship of service and return modules as a single unit and go down to the surface. The landing site is in the northern part of a vast expanse of basalt called Oceanus Procellarum, a previously unvisited area. Researchers hope rocks collected here will confirm that volcanic activity on the Moon continued until far more recently than the 3.5bn years ago that is the estimate derived from studies of currently available samples.

Once the new material has been gathered, which will take several days, the ascender will lift off, dock with the mother ship and transfer its haul to the return module. The service module will then carry the return module back to Earth, releasing it just before arrival to make a landing at a recovery site in Inner Mongolia, also used for China's crewed missions, in December.

Digging into the lunar surface may, however, pose problems. *InSight*, an American rover now on the surface of Mars, has struggled to operate a drill nicknamed "the mole" that is designed to reach three metres below ground level. According to NASA, America's space agency, this is because the mole has encountered clumpier regolith than its designers were expecting, causing it to bounce rather than burrow.

If *Chang'e 5* does manage to overcome such hazards and return samples to Earth, China has said little so far about which foreign countries, if any, will be granted access to them. But America is likely to be last in the queue. For the past couple of decades American governments of all stripes have

been reluctant to co-operate with China in space-related matters, largely because of fears about giving away secrets useful for designing ballistic missiles. In space, as in so much else, the two powers are not-so-friendly rivals. China's stated goal is to establish a crewed base near the Moon's south pole, where water is available in the form of ice perpetually shielded from sunlight by crater walls. America has similar plans. Watch, as it were, this space. ■

Covid-19 vaccines

And then there were two

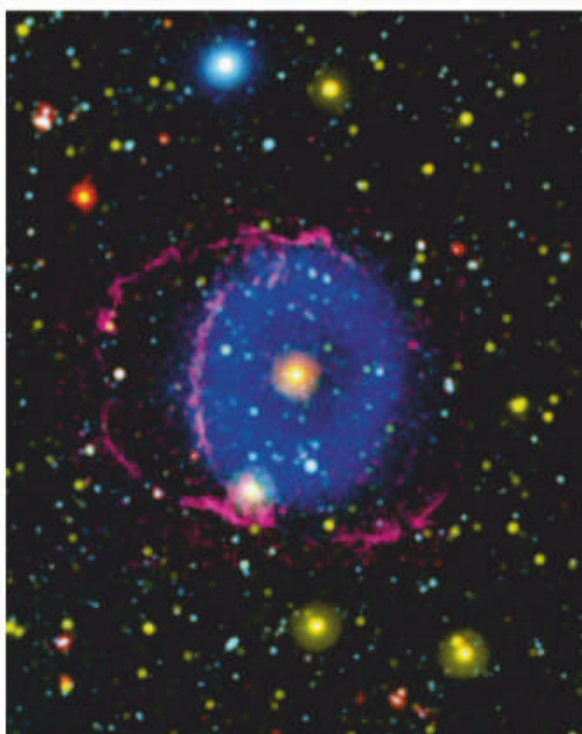
Another new vaccine arrives, and a new class of drugs is born

WAITING FOR a breakthrough in the fight against covid-19 has been a bit like waiting for a bus to arrive. After almost a year of watch-checking and neck-craning, two come along at once. First, on November 9th, Pfizer, an American pharma giant and BioNTech, a German minnow, announced that they had jointly developed an effective vaccine for the illness. They were followed, on November 16th, by Moderna, an American biotech firm.

Moderna says its offering is 94.5% effective. Pfizer says the efficacy of its is 95%. Moderna's figure is an estimate based on a peek at data being gathered in a continuing trial involving 30,000 volunteers. Pfizer's comes from the final analysis of a trial involving 43,000 people, in which 170 cases of covid-19 were seen. Of these, 162 were in the placebo arm (ie, those involved had received dummy injections).

The news bodes well for a third candidate, from AstraZeneca and Oxford University. This pair have, rather notably, not released any interim data from their trials so far. They have also been vaguer about when their vaccine might be available, saying only, "the end of the year". But it is thought their trials are only weeks away from having a full set of data. Mene Pangalos, AstraZeneca's head of R&D, told the Greenwich Economic Forum, a conference held last week, that the firm might apply for full approval—rather than the emergency authorisation sought by the other two projects—in America, and perhaps in Britain and other parts of Europe as well.

More good news was to be found among the details of how, and for whom, these vaccines work. All the severe cases of covid were seen in unvaccinated volunteers. It is also now clear that the vaccines worked in participants of a range of ages, including those over 65, and from a variety of ethnic backgrounds. This means both vaccines ►►



When stars collide

This picture shows the 5,000-year-old aftermath of a merger between two stars—though the light that created it took a further 6,000 years to reach Earth's neighbourhood. It was published in this week's *Nature* by Keri Hoadley of the California Institute of Technology and her colleagues. It is a composite of three images taken at different frequencies, two by the *Galaxy Evolution Explorer*, a space telescope which operated from 2003 to 2012, and one from the ground. The blue area represents gas ejected during the merger. The faint red rings are the visible traces of shock waves from the resulting explosion. Such collisions are reasonably common in binary star systems. But this image is reckoned one of the clearest so far of the consequences.

▶ will save lives in groups of people who have been hit disproportionately hard by covid-19. Data published this week in the *Lancet* suggest that the elderly respond well to the AstraZeneca vaccine, too. Continuing reviews of the safety of these vaccines suggest they are well tolerated, although a minority do get a day of flu-like symptoms, such as fatigue, muscle and joint pain.

The first two vaccines both look like worthy weapons in the fight against covid-19. There is, though, one thing about the Moderna vaccine that sets it apart. It can be kept in a regular fridge at between 2°C and 8°C for 30 days. The Pfizer vaccine, by contrast, needs to be kept ultracold, at -70°C or below, most of the time. That will make the Moderna vaccine far easier and cheaper to distribute (although the cost of the Moderna vaccine itself is higher). If the AstraZeneca vaccine proves successful, it, too, is thought likely to need only a standard refrigerator to preserve it. And because this vaccine is also a fraction of the price of the others, it might still end up being the most popular choice.

All three vaccines use the same strategy: to introduce into the human body RNA (a molecule similar to DNA) that carries the recipe for “spike”, a protein abundant on the outsides of particles of SARS-COV-2, the virus that causes covid-19. The body then uses this recipe to manufacture spike, and the immune system, recognising the protein as alien, mounts a response to it. Thus stimulated, the immune system can react rapidly if it subsequently encounters the spike proteins of actual viruses.

The vaccines from Pfizer and Moderna introduce the RNA directly, as molecules known as messenger RNA (mRNA) held inside small, fatty particles called liposomes. AstraZeneca’s offering instead incorporates the RNA into the genetic material of a harmless cold virus. The mRNA approach is regarded as particularly interesting, because this is the first successful example of what researchers hope will be a new class of drugs that work by feeding cells instructions to make therapeutic proteins *in situ*.

Message received

Learning how to introduce mRNA into the body without it either being destroyed or stimulating an unhelpful immune response has been challenging. These two new vaccines are the first evidence of the technology’s potential. Moderna is pursuing mRNA as the basis for other vaccines, against such pathogens as cytomegalovirus, influenza, paediatric-respiratory-syncytial virus and Zika. BioNTech, meanwhile, is exploring the use of mRNA to

Correction. In last week’s Briefing (“Covid-19 vaccines”, November 14th), we said in the table called “A full field” that the candidate from Novavax is an “inactivated” vaccine. It is actually a “protein-subunit” vaccine. Sorry.

stimulate the immune system to fight cancer. Its pipeline includes treatments for malignant melanoma and for prostate, head-and-neck and breast cancers.

As for covid-19, the success of these rapidly created mRNA vaccines bodes well for dealing with any future mutations of SARS-COV-2. As the pandemic continues to spread, and such mutations accrue, it is possible that the excellent responses these vaccines now provoke could wane. That,

though, should not be a problem. Just as natural selection can tinker with the virus’s genetic code, so too can scientists tinker with the code in the vaccines. And, once they have proved themselves, those vaccines could be adjusted every year, as happens already with influenza vaccines. The tools the world needs to emerge from the covid-19 pandemic are starting to arrive. That they are all arriving at the same time is an unlooked-for blessing. ■

Evolution

Cutting out the middle man

Sieve-toothed seals may be whales in the making



LAKE BAIKAL, near Russia’s border with Mongolia, is, by volume, the biggest body of fresh water on Earth. At 1.6km, it is also the deepest. Several unusual animals call it home, including the world’s only species of freshwater seal.

Baikal’s seals are abundant. There are about 100,000 of them. But the lake is nutrient-poor, so how they do so well has been a mystery. A study just published in the *Proceedings of the National Academy of Sciences*, by Watanabe Yuuki of the National Institute of Polar Research, in Tokyo, suggests the answer is by filtering tiny organisms from the water.

Most seals eat fish. And Baikal seals do, indeed, have needle-pointed canines of the sort expected of piscivores. But in 1982 researchers noted that they sport a second sort of specialised tooth behind those canines. These have frilled cusps which resemble combs. At the time, nobody knew what to make of them. But Dr Watanabe speculated that they might be an adaptation for feeding on other strange creatures dwelling in the lake.

Seals arrived in Baikal 2m years ago, from the Arctic Ocean. So too did some much smaller marine creatures, known

as amphipods. These have diversified into more than 340 indigenous species. One of them, *Macrohectopus branickii*, spends its days hiding in the depths of the lake and then forages in the shallows at night in great numbers.

Marine mammals the size of seals would normally see amphipods as too small to hunt. But Dr Watanabe wondered if the Baikal seals’ comblike teeth might have evolved to enable them to rake these tiny crustaceans from the water in sufficient quantities to make them useful prey—much as some whales collect krill using comblike structures called baleen plates. He and his colleagues therefore attached waterproof video cameras and accelerometers to a few seals, to monitor what they were getting up to. This equipment remained attached to the animals for between two and four days, before coming loose and floating to the lake’s surface, whence the researchers were able to recover it.

Footage from the cameras and data from the accelerometers showed that the seals were indeed pursuing the dense amphipod aggregations that form at night. They would dive in with their mouths open and collect prey before making another pass. Dr Watanabe estimates that each seal captures an average of 57 amphipods per dive—and thus thousands of them a day. The needlelike canines are not redundant, for the seals do hunt fish as well. But they also compete with those fish for the amphipods, thus partially bypassing a link in the food chain and perhaps thereby maintaining themselves in larger numbers than would otherwise be possible.

Whether, were some of these filter-feeding seals to make it back to the ocean, they would follow the baleen-whale path and evolve into giants, is an interesting speculation. But even confined to their lake, Baikal seals provide an intriguing example of parallel evolution.



Beethoven at 250

Ninth lives

Like the pandemic-hit celebrations of his jubilee, Beethoven's career was a struggle against adversity

IN DECEMBER 1808 Ludwig van Beethoven amazed Vienna with a four-hour, self-promoted concert. It included premieres of his Fifth and Sixth symphonies, and of his Fourth Piano Concerto. Shortly afterwards the gruff maestro seemed to have crowned his long search for a stable income with an annuity worth 4,000 florins from Archduke Rudolph of Austria and two other aristocrats. He contemplated marriage and set to work on his next concerto.

Then Napoleon Bonaparte's forces attacked and occupied the city for the second time in four years. Beethoven, who lived in the line of fire, covered in his brother's basement as he tried to protect his already damaged hearing from the din. Worse, his patrons failed to pay up. Distraught and anxious, he wrote of the "destructive, disorderly life" around him, "nothing but drums, cannons and human misery".

Beethoven was born 250 years ago (his exact birthday is uncertain). Almost from the time he left his native Bonn for Vienna in 1792, setbacks disrupted the keyboard virtuoso's promising career. Hearing loss

struck in 1798, not a quiet slide into silence but an incessant "squealing, buzzing and humming" in the ears. In 1802 he considered suicide, writing that "it was only my art that held me back".

Yet that art quickly mastered the formal beauty and decorum of Haydn and Mozart before moving into an entirely new realm of innovation and unshackled self-expression. Completed in 1804, his Third Symphony, the "Eroica", broadcast this leap to a thunderstruck public, alarming some listeners ("strident and bizarre"), transfixing others ("true genius"). By 1810 the Fifth Symphony was being hailed as a landmark in world culture—a gospel of Romantic feeling that "opens up to us the kingdom of

the gigantic and the immeasurable".

Knock him down, and Beethoven would bounce back with another stupendous coup. By 1824 the critic Adolph Marx could write that the composer's style bore witness to "the struggle of a strong being against an almost overwhelming fate". It is fitting, then, that the global celebrations of his jubilee have been marked by dismay, resilience and resurrection.

The festivities began before the pandemic struck. Based in Bonn, the BTHVN250 programme scheduled hundreds of events in Germany. Vienna, where Beethoven lived without much affection for 35 years—"From the emperor to the bootblack, all the Viennese are worthless"—forgave the slights to offer exhibitions and concerts galore. In Brazil Marin Alsop, an American conductor, launched her "Global Ode to Joy" project, planned performances of the heaven-storming Ninth Symphony on six continents. Opera houses prepared to raise the curtain on "Fidelio", Beethoven's only opera and an ever-green hymn to freedom. "Oh what bliss, to breathe freely in the open air," sing a chorus of prisoners, in a scene to melt the iciest heart. Then they return to their cells.

This spring, the whole world followed them. Lockdowns forced the anniversary ringmasters to tear up their plans. "Beethoven had to reinvent himself again and again," notes Malte Boecker, director of BTHVN250. His acolytes followed suit. Events were postponed; performances ►►

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► moved online. Yet “audience numbers grew and grew. It became like a snowball,” says Mr Boecker. The “Beethoven Pastoral Project”, inspired by his bucolic Sixth Symphony, became a virtual network of artists, already reaching a global audience of 30m.

The composer would have winced in recognition. The chronic insecurity faced by musicians today is “very close to the situation in Beethoven’s time”, Mr Boecker notes. War with France raged with little respite from 1792 to 1815; inflation shrank earnings; publishers, promoters and patrons went bust. Laura Tunbridge, professor of music at Oxford and author of a new biography, “Beethoven: A Life in Nine Pieces”, underlines her subject’s role as “one of the early freelancers”, a hard-nosed jobbing professional.

Lurching between court and market, prosperity and penury, he worked on the cusp between the old musical regime of noble and royal patronage, and the new order of commercial publishing and concert promotion. Between 1809 and 1812 he earned 6,000 florins a year, six times an average civil-service salary. But he ran through it fast and complained that “I have not a farthing left.” His grandest pieces, such as the Ninth Symphony and “Missa Solemnis”, are timeless monuments to genius. They were also properties that Beethoven pitched aggressively (and often simultaneously) to rival publishers. Those two went to Schott and Sons of Mainz for 1,600 florins.

The one and only

He let the snobby Viennese presume the “van” in his Flemish surname denoted noble descent. (It didn’t.) But he despised most aristocrats and, embracing his celebrity status, was not shy about telling them. “Of princes there have been and will be thousands,” he wrote to Prince Lichnowsky, one of his patrons, after a quarrel. “Of Beethovens there is only one.” When he and Goethe encountered Austrian royalty at a Bohemian spa, Goethe doffed his hat and bowed; Beethoven strode on, telling the superstar author, “You did those yonder too much honour.” Like many other children of the Enlightenment, he was filled with hope, then rage, by Napoleon’s ascent from the chaos of post-revolutionary France. Famously and furiously, he scratched out the dedication of the “Eroica” to Napoleon when the Corsican declared himself emperor.

Like America’s Founding Fathers, Beethoven was a republican idealist, not a modern democrat. He once said that he “never believed” in the dictum “*Vox populi, vox Dei*” (“The people’s voice is the voice of God”). To the ears of posterity, though, Beethoven’s music means heroic liberation and human solidarity. The ominous blows that launch the Fifth Symphony became

the Morse-code “V” for victory during the second world war. Leonard Bernstein conducted the Ninth in Berlin as the Wall came down in 1989.

Now, with massed choirs banned on health grounds, such barnstorming showpieces remain unstageable in Europe. In place of the towering icon, an intimate, informal Beethoven has flourished during his plague-hit jubilee year. Ms Tunbridge notes the vogue for small-scale arrangements of his music. Igor Levit, a pianist, has gathered a worldwide audience for concerts streamed from his flat in Berlin.

On December 17th—the date of Beethoven’s baptism in 1770—Daniel Barenboim

is due to conduct the West-Eastern Divan Orchestra in Bonn; BTHVN250 hopes that this flagship concert can go ahead, now as a prelude to delayed commemorations rather than a climax. Suntory Hall in Tokyo still promises several performances of the “Daiku” (Number Nine), which German POWs introduced to Japan in 1918. But as an anniversary anthem in these queasy, isolated times, Mr Boecker recommends not the ecstatic joy of the Ninth but the humbler “Heiliger Dankgesang”—the heartfelt “song of thanksgiving” from a late string quartet, composed during convalescence. Fate has amplified Beethoven’s voice not as a struggler, but as a healer. ■

Anthropomorphic fiction

Four legs good

Perestroika in Paris. By Jane Smiley. Knopf; 288 pages; \$26.95

THIS ECCENTRIC NOVEL could not be more different from Jane Smiley’s best known book and her most recent ones. “A Thousand Acres” (1991), which won a Pulitzer, was an audacious retelling of “King Lear” featuring an Iowan farmer and his three daughters. “Some Luck” (2014), “Early Warning” (2015) and “Golden Age” (2015), known collectively as the “Last Hundred Years” trilogy, tracked the fortunes of another Iowan farming family across several generations. In “Perestroika in Paris” Ms Smiley swaps the Midwest for France and, for the most part, people for animals.

This Perestroika is not a Soviet policy but a racehorse—Paras for short. After finishing first at Auteuil racecourse, the “curious filly” trots out of her open stall and gambols off into the City of Light.



Don’t frighten the horses

She encounters Frida, a streetwise German short-haired pointer, lonely since the death of the busker who owned her. They bond with a polyglot raven called Raoul, who takes them under his wing and off to the green expanse of the Champ de Mars where they pool resources and live in peace.

Gradually, humans intrude. Pierre is head gardener of their urban idyll, Anaïs a baker who keeps Paras in oats. Étienne, an eight-year-old orphan, gives the animals refuge at his great-grandmother’s house as snow falls and Christmas approaches. But when Étienne’s aged relative dies and Paras is reunited with her groom and trainer, the future looks uncertain for the ragtag group of friends.

Ms Smiley has employed anthropomorphism before. “Moo” (1995) lampooned academia; “Horse Heaven” (2000) sent up horse-racing. But “Perestroika in Paris” is no satire, nor a foray into surrealism or magical realism. Rather it is an immersive fable. Through the unlikely alliance and beguiling adventures of her runaway horse, stray dog and know-it-all raven (plus two rats and a pair of mallards) Ms Smiley explores themes of diversity, loyalty, fellowship and freedom. Along the way her animals wryly comment on the oddities of human behaviour: “Quite often they flock together in large, bright rooms,” Raoul explains, “and then they plume themselves and establish rankings.”

Deeper undercurrents of menace or moments of panic would have given the yarn more edge. But in general Ms Smiley avoids excessive whimsy and sentimentality to deliver a comforting read at the end of a difficult year—a winter’s tale full of wit, warmth and charm.

Derring-do

Clouds of glory

The Moth and the Mountain. By Ed Caesar. *Avid Reader Press*; 288 pages; \$28. Viking; £18.99

IN MAY 1933 Maurice Wilson, a first-world-war veteran, took off from Stag Lane aerodrome in north London. He had resolved to fly his Gipsy Moth, a single-engine biplane, 6,000 miles to Mount Everest, crash-land on its lower slopes and ascend the then-unconquered mountain—alone. He had only 19 hours of flight-training under his belt, and “had hardly climbed anything more challenging than a flight of stairs”.

Ed Caesar tells this irresistibly quixotic tale in “The Moth and the Mountain”—a rollicking biography of an eccentric adventurer, and a sensitive study of the pressures that drove him. War was the defining fact of Wilson’s life. As Wade Davis argued in “Into the Silence”, his account of the early Everest expeditions, for the men involved the perils of high-altitude climbing paled beside the carnage of the Western Front. They were a generation inoculated by trauma. On average, a second lieutenant (Wilson’s rank) survived for about six weeks; his battalion lost over 400 men in a single night. At 20 he won the Military Cross for bravery, but was shot in 1918 and repatriated.

In the “topsy turvy” world of peace he was shell-shocked and rootless. He “lost the thread of his own story”, writes Mr Caesar. Everest promised to give Wilson’s life a new plot. He was enthralled by previous British attempts on the mountain, the best known of which, in 1924, led to the death of George Mallory, the era’s finest alpinist, high on its slopes. Those early climbers

saw in the “third pole” of Everest a kind of vindication for the empire; to Wilson it suggested a more personal deliverance.

Unlike the airy and ill-prepared Wilson, Mr Caesar, a journalist at the *New Yorker*, grounds his story in patient archival sleuthing. Marrying extracts from Wilson’s letters and diaries with lively prose, he winningly conveys the glamour and contradictions of this outlandish figure, bringing cinematic vividness to his escapades. The maximum range of Wilson’s aeroplane was 750 miles, so he was forced to hopscotch between scrubby imperial outposts as Whitehall pen-pushers—fearing the “loud-mouthed aviator” would cause a diplomatic incident—tried to stop him. But his cunning and ironclad jauntiness delivered him to the foot of the mountain, and his inevitable fate.

Despite these enticing details, Wilson’s motivations remain obscure. As Mr Caesar admits, the “slippery rock face” of his life shrugs off the most agile biographer. Apart from a few telling cracks of introspection and self-doubt, his writings are a smooth wall of what-ho bravado. Evidently he was damaged by his military service, but the deeper principles which guided him are a blur. Mr Caesar tentatively points to the influence of esoteric religious beliefs that flourished in the turbulence of the post-war era. An unusual relationship with a married woman, Enid Evans, was clearly important, too. He even touches on the somewhat shaky rumours that Wilson was a secret transvestite.

Yet these speculations bring readers no closer to the man himself. “You imagine”, “you can almost see”: Mr Caesar increasingly resorts to these hopeful conjectures. “Sometimes, Wilson seems distant and ancient,” he writes towards the end. “At others, he is so close that you can hear him.” Hypothermic and huddling in a tent blasted by icy winds, Wilson signed off his final letter with a characteristic “Cheerio”. ■

Globalisation

Ports in a storm

Unlocking the World. By John Darwin. *Allen Lane*; 496 pages; £25

IN LIVERPOOL, A French observer marvelled in 1907, “one feels one is in contact with America, Australia, west Africa, the Far East, at the same time as with Germany and France. There one is at the commercial centre of the world.”

This remark neatly captures the subject of John Darwin’s new book. He tracks a century of what he calls “steam globalisation”, when steamships and railways drove a dramatic acceleration in the exchange of goods, people, ideas and money across the world. Faster and cheaper transport seemed to shrink the globe; the volume of world trade and foreign investment soared. Mr Darwin shows how major port cities were both products of these transformations and agents of change. In the great opening up of the world that is his subject, the port cities were the hinges.

The current era of globalisation, the author notes, is not unique but the latest in a series that have built on each other in a cumulative, though not neatly linear, fashion. In the mercantile system that sprang up in the wake of the voyages of Ibn Battuta, Christopher Columbus and Vasco da Gama, Asia was the world’s workshop and Europe relatively peripheral.

Then coal, readily available in Europe, fuelled what historians have called the “Great Divergence” of the 18th century, whereby Europe (and later North America) came to dominate. By describing the evolution and sometimes decline of a number of major port cities, most compellingly London, Bombay, Singapore and New York, Mr Darwin shows how this process worked.

Singapore, for instance, grew exponentially, and played a central role in the industrialisation of tin and rubber production in its maritime hinterland of Malaysia. New Orleans rose in importance with the Mississippi riverboat steamer, only to decline as railway connections to Baltimore and New York changed the dynamics of American trade once more. Trieste enjoyed a brief heyday as the Austro-Hungarian Empire’s main seaport, before collapsing abruptly into romantic obscurity after 1918.

Mr Darwin takes globalisation to mean primarily “economic connectedness between different parts of the world”. That is a reasonable but limited definition, missing the ascent in the 19th century of ideologies such as nationalism and socialism that purported to explain social relations ►►



Flights of fancy

▶ around the world. Rising sciences such as geology and palaeontology had a similarly broad scope. “Unlocking” the world, meanwhile, is a vivid metaphor, but it implies a smooth, even inevitable process. In reality the world’s doors were not just unlocked, but often kicked down. Mr Darwin knows this, and stresses the influence of geopolitics and imperialism, not just free trade as an abstract concept. But he might have depicted the bootprints more graphically.

Still, his book is an enjoyable synthesis of a large body of scholarship. He closes by remarking that today’s globalisation is not simply a bigger, faster version of what happened in the steam age. As in the early-modern period, Asia is once again the workshop of the world. He wonders if there is another parallel, however. In 1914 the European-dominated global economic system seemed irresistible. Then war intervened. Will a systemic crisis break the current cycle of globalisation, too? ■

Evil incarnate

Sexy beast

The Antichrist. By Philip Almond.
Cambridge University Press; 354 pages;
\$39.99 and £29.99

IT IS A fair bet that most readers of *The Economist* will not have thought of the Antichrist for a while. That does not mean, however, that this figure has gone away. Ever since early Christian thinkers decided that the evil in the world needed a focus, a project and a name, in order to be decisively defeated at the Second Coming, this shape-shifting form has hovered around.

He was Rosemary’s baby in the film of that name, engendered on Rosemary by Satan and with “his father’s eyes”. He was Damien in the “Omen” movies, born of a female jackal and eventually American ambassador to the Court of St James’s. In the “Left Behind” books he is Nicolae Carpathia, secretary-general of the UN-turned commander of the One World Unity Army. Depending on your politics, the ultimate foe of QAnon may be the Antichrist, or Xi Jinping may be, or the *New York Times*; for institutions are fingered as the Antichrist as often as men are. And since its appearance signifies the end-times, when apocalyptic events will be unloosed upon the world and Christ will return to sort it all out, it is all too plausibly the Antichrist’s moment now, with wildfires, plague and climate change all converging. It might be good to know, one way or the other.

But as Philip Almond explains in this

entertaining romp through the subject, that is just the problem. It is very difficult to spot him, or it. Christians who felt duty-bound to keep permanent watch—and they included Isaac Newton and the young John Henry Newman, as well as John Knox and other usual suspects—squabbled among themselves over whether the Antichrist was an individual, in which case Nero, Simon Magus and Napoleon were popular, or a crowd, in which case the Turks were long-time favourites, or simply the evil that battles good in the breast of every human being. The book of Revelation, which does not mention the Antichrist by name, provided a whole menagerie of aliases and clues, from the Whore of Babylon to the seventh head of the dragon rising from the sea. The number of the Beast, 666, could be precisely found in the names of Popes Innocent IV and Benedict XI—and in the timing of Queen Victoria’s accession.

Amid all this, Martin Luther’s clear-eyed certainty that the papacy was the Antichrist comes as a gale of fresh air. It was a surprisingly old claim, first made in 1190 by Joachim of Fiore, and taken up with increasing enthusiasm as the Catholic church embroiled itself in simony, sexual deviance and the sale of indulgences. The theory behind it was that the Antichrist was not a tyrant skulking outside Christendom, picking believers off, but a malign influence working within it, even right at the heart and at the top. This was not a problem for some future apocalyptic time (though that time was exhaustively worried over, to the very week and day), but an abomination that was here, and pressing.

The essence of this lurking Antichrist was deception, especially of the faithful. This explains why medieval paintings often show the Son of Perdition as a benevolent prince, crowned and robed, or even as a double for Jesus, bearded, thoughtful and working miracles. Evil was ever-beguiling, and drew plenty of willing followers. The

alternative—to make the Antichrist utterly monstrous and vile, as on this book’s cover, where William Blake makes a horned cadaver of him—puts the enemy in plain sight, and lets Christians off too easily from vetting their own behaviour.

The search for the Antichrist leads Mr Almond down many obscure paths, peopled by cobwebbed theologians such as Irenaeus and Hippolytus, and deep into the weirdest thickets of medieval fantasy-weaving. He has fun—“Sexy Beast” is his heading on a section about the Antichrist visions, peculiarly like ink blots, of Hildegard of Bingen—but does not forget that a modern reader also needs to know why the Antichrist was important. The problem he, or it, was invented to solve was that Christ had promised to return to the world and establish his kingdom, but had not done so yet. Christians needed to believe that a great showdown between good and evil was, however, coming. Satan himself had already been sent to hell, but his thoroughly demonised spawn was working in the world. The faithful had to be kept alert to the dark deviousness around them.

Does the idea have any relevance now, when the word seems merely quaint to anyone outside the tradition of prophetic Christianity? Mr Almond likes to think it does. If the great eschatological conflict and the triumph of good are dispensed with, history and human existence may seem to have no purpose. “Cosmic nihilism” is all that is left. By contrast, the story of the Antichrist encourages men and women to give their own lives meaning, at least: to be aware of the evil in themselves and to cultivate the good.

To this reviewer, the whole strange story cuts the other way. The usefulness of the Antichrist today is surely as a swift and comprehensive way to displace evil onto others—when in reality, in the words of the 17th-century radical Ranter, Joseph Salmon, “this great whore is in thee.” ■



The enemy within

Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units	
	% change on year ago latest	quarter*	2020†	% change on year ago latest	2020†	%		% of GDP, 2020†	% of GDP, 2020†	10-yr gov't bonds latest,%	change on year ago, bp	per \$ Nov 18th on year ago	% change		
United States	-2.9	Q3	33.1	-3.8	1.2	Oct	1.2	6.9	Oct	-2.3	-14.9	0.9	-93.0	-	
China	4.9	Q3	11.2	1.8	0.5	Oct	2.9	4.2	Q3§	1.7	-5.6	3.2	14.0	6.54	7.2
Japan	-5.8	Q3	21.4	-6.4	0.1	Sep	0.2	3.0	Sep	2.6	-11.3	nil	-8.0	104	4.7
Britain	-9.6	Q3	78.0	-10.6	0.7	Oct	0.6	4.8	Aug††	-1.5	-18.9	0.4	-33.0	0.75	2.7
Canada	-13.0	Q2	-38.7	-5.8	0.7	Oct	0.7	8.9	Oct	-2.1	-13.0	0.7	-78.0	1.31	0.8
Euro area	-4.4	Q3	60.5	-8.3	-0.3	Oct	0.3	8.3	Sep	2.2	-9.0	-0.6	-22.0	0.84	7.1
Austria	-14.3	Q2	-38.2	-6.4	1.3	Oct	1.1	5.5	Sep	1.0	-7.4	-0.4	-30.0	0.84	7.1
Belgium	-5.1	Q3	50.2	-7.9	0.7	Oct	0.4	5.2	Sep	-1.1	-9.7	-0.3	-33.0	0.84	7.1
France	-4.3	Q3	95.4	-9.5	nil	Oct	0.5	7.9	Sep	-1.9	-10.7	-0.3	-29.0	0.84	7.1
Germany	-4.2	Q3	37.2	-5.8	-0.2	Oct	0.5	4.5	Sep	5.5	-7.2	-0.6	-22.0	0.84	7.1
Greece	-15.3	Q2	-45.4	-9.0	-1.8	Oct	-1.4	16.8	Aug	-2.9	-7.9	0.8	-72.0	0.84	7.1
Italy	-4.7	Q3	81.8	-9.1	-0.3	Oct	-0.2	9.6	Sep	2.6	-11.0	0.6	-69.0	0.84	7.1
Netherlands	-2.5	Q3	34.5	-6.0	1.2	Oct	1.1	3.8	Mar	7.0	-6.0	-0.5	-34.0	0.84	7.1
Spain	-8.7	Q3	85.5	-12.7	-0.8	Oct	-0.3	16.5	Sep	0.5	-12.3	0.1	-36.0	0.84	7.1
Czech Republic	-10.8	Q2	27.2	-7.0	2.9	Oct	3.2	2.8	Sep†	-0.5	-7.7	1.2	-32.0	22.2	4.0
Denmark	-7.6	Q2	21.1	-4.0	0.4	Oct	0.4	4.8	Sep	10.0	-6.3	-0.4	-14.0	6.27	7.5
Norway	-0.2	Q3	19.7	-3.5	1.7	Oct	1.4	5.3	Aug††	1.8	-0.9	0.8	-66.0	9.00	1.2
Poland	-8.0	Q2	34.5	-4.0	3.1	Oct	3.4	6.1	Sep§	2.8	-11.3	1.2	-92.0	3.76	2.9
Russia	-3.6	Q3	na	-4.4	4.0	Oct	3.3	6.3	Sep§	1.7	-4.3	6.1	-50.0	75.9	-16.0
Sweden	-4.1	Q3	18.3	-3.8	0.3	Oct	0.4	8.3	Sep§	4.5	-4.1	nil	2.0	8.58	12.1
Switzerland	-8.3	Q2	-26.1	-4.1	-0.6	Oct	-0.9	3.3	Oct	9.0	-4.6	-0.5	nil	0.91	8.8
Turkey	-9.9	Q2	na	-3.9	11.9	Oct	12.0	13.2	Aug§	-4.5	-5.1	11.9	-18.0	7.69	-25.5
Australia	-6.3	Q2	-25.2	-4.4	0.7	Q3	0.7	7.0	Oct	1.1	-7.6	0.9	-28.0	1.37	7.3
Hong Kong	-3.5	Q3	11.8	-5.5	-2.3	Sep	0.4	6.4	Oct††	5.4	-5.9	0.7	-98.0	7.75	1.0
India	-23.9	Q2	-69.4	-9.8	7.6	Oct	6.5	7.0	Oct	0.7	-7.8	5.9	-60.0	74.2	-3.2
Indonesia	-3.5	Q3	na	-2.2	1.4	Oct	1.9	7.1	Q3§	-1.8	-7.1	6.2	-87.0	14,070	0.1
Malaysia	-2.7	Q3	na	-8.0	-1.4	Sep	-1.1	4.6	Sep§	2.1	-8.1	2.7	-78.0	4.09	1.7
Pakistan	0.5	2020**	na	-2.8	8.9	Oct	9.8	5.8	2018	-0.4	-8.0	9.8	-148	160	-2.7
Philippines	-11.5	Q3	36.0	-6.1	2.5	Oct	2.4	10.0	Q3§	0.9	-7.8	3.0	-169	48.2	5.0
Singapore	-7.0	Q3	35.4	-6.0	nil	Sep	-0.4	3.6	Q3	18.0	-13.9	0.9	-83.0	1.34	1.5
South Korea	-1.3	Q3	7.9	-1.2	0.1	Oct	0.5	3.7	Oct§	3.8	-5.7	1.6	-18.0	1,104	5.5
Taiwan	3.3	Q3	18.9	-0.2	-0.2	Oct	-0.3	3.8	Sep	12.3	-1.5	0.3	-42.0	28.5	7.0
Thailand	-6.4	Q3	28.8	-5.9	-0.5	Oct	-0.8	1.9	Aug§	3.1	-6.4	1.2	-40.0	30.3	-0.2
Argentina	-19.1	Q2	-50.7	-11.3	37.2	Oct†	42.0	13.1	Q2§	2.4	-9.2	na	-464	80.2	-25.6
Brazil	-11.4	Q2	-33.5	-5.2	3.9	Oct	3.1	14.4	Aug§††	-0.4	-15.9	2.0	-266	5.29	-20.8
Chile	-9.1	Q3	22.6	-5.9	2.9	Oct	2.9	12.3	Sep§††	0.2	-8.9	2.6	-74.0	757	2.3
Colombia	-9.5	Q3	39.6	-7.3	1.7	Oct	2.6	15.8	Sep§	-4.6	-8.8	5.0	-112	3,649	-5.2
Mexico	-8.6	Q3	57.4	-9.1	4.1	Oct	3.4	3.3	Mar	1.8	-5.3	5.8	-115	20.2	-4.6
Peru	-30.2	Q2	-72.1	-13.0	1.7	Oct	1.8	15.7	Oct§	-1.1	-9.2	4.1	-19.0	3.58	-5.9
Egypt	-1.7	Q2	na	3.6	4.6	Oct	4.7	7.3	Q3§	-3.4	-9.4	na	nil	15.6	3.3
Israel	-1.9	Q3	37.9	-5.2	-0.8	Oct	-0.6	4.7	Sep	3.6	-10.9	0.8	-9.0	3.35	3.3
Saudi Arabia	0.3	2019	na	-5.2	5.8	Oct	3.4	9.0	Q2	-3.9	-10.9	na	nil	3.75	nil
South Africa	-17.1	Q2	-51.0	-7.7	2.9	Sep	3.5	30.8	Q3§	-2.1	-16.0	8.8	41.0	15.4	-4.2

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:	
		Nov 18th	Dec 31st 2019
United States S&P 500	3,567.8	-0.1	10.4
United States NAScomp	11,801.6	0.1	31.5
China Shanghai Comp	3,347.3	0.2	9.7
China Shenzhen Comp	2,261.6	-0.1	31.3
Japan Nikkei 225	25,728.1	1.5	8.8
Japan Topix	1,720.7	-0.5	nil
Britain FTSE 100	6,385.2	nil	-15.3
Canada S&P TSX	16,889.8	0.7	-1.0
Euro area EURO STOXX 50	3,482.2	0.4	-7.0
France CAC 40	5,511.5	1.2	-7.8
Germany DAX*	13,201.9	-0.1	-0.4
Italy FTSE/MIB	21,622.7	3.0	-8.0
Netherlands AEX	600.9	0.3	-0.6
Spain IBEX 35	7,981.5	2.4	-16.4
Poland WIG	52,232.2	1.9	-9.7
Russia RTS, \$ terms	1,276.8	3.5	-17.6
Switzerland SMI	10,563.9	0.3	-0.5
Turkey BIST	1,294.7	1.2	13.2
Australia All Ord.	6,726.5	1.1	-1.1
Hong Kong Hang Seng	26,544.3	1.2	-5.8
India BSE	44,180.1	1.3	7.1
Indonesia IDX	5,557.5	0.9	-11.8
Malaysia KLSE	1,604.8	2.2	1.0

	index	% change on:	
	Nov 18th	one week	Dec 31st 2019
Pakistan KSE	40,514.7	-1.7	-0.5
Singapore STI	2,788.6	2.8	-13.5
South Korea KOSPI	2,545.6	2.4	15.8
Taiwan TWI	13,773.3	3.9	14.8
Thailand SET	1,364.6	1.4	-13.6
Argentina MERV	51,295.5	-0.3	23.1
Brazil BVSP	106,119.1	1.3	-8.2
Mexico IPC	42,252.6	3.4	-3.0
Egypt EGX 30	10,989.7	-0.1	-21.3
Israel TA-125	1,486.1	1.4	-8.1
Saudi Arabia Tadawul	8,621.2	2.0	2.8
South Africa JSE AS	57,323.7	-0.5	0.4
World, dev'd MSCI	2,543.4	0.6	7.8
Emerging markets MSCI	1,207.5	2.4	8.3

US corporate bonds, spread over Treasuries

	Basis points	
	latest	Dec 31st 2019
Investment grade	153	141
High-yield	495	449

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

Commodities

The Economist commodity-price index

2015=100	Nov 10th		Nov 17th*		% change on	
	Nov 10th	Nov 17th*	month	year		
Dollar Index						
All Items	132.3	135.1	4.6	22.9		
Food	109.8	111.6	4.9	14.4		
Industrials						
All	153.2	157.0	4.4	29.3		
Non-food agriculturals	108.8	111.4	4.9	13.2		
Metals	166.4	170.5	4.3	33.0		
Sterling Index						
All items	152.4	155.5	2.2	19.9		
Euro Index						
All items	124.1	126.2	4.2	14.7		
Gold						
\$ per oz	1,884.6	1,887.3	-1.1	28.1		
Brent						
\$ per barrel	43.7	43.8	1.4	-29.8		

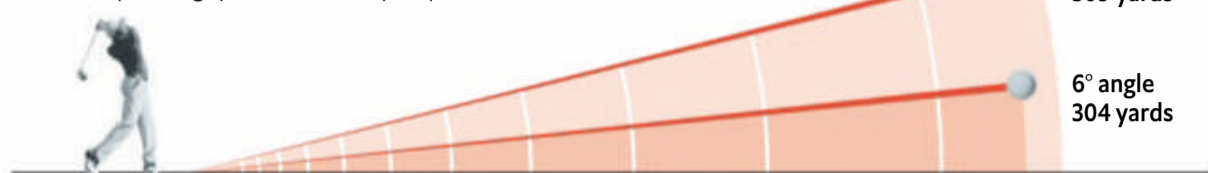
Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit [Economist.com/indicators](https://www.economist.com/indicators)

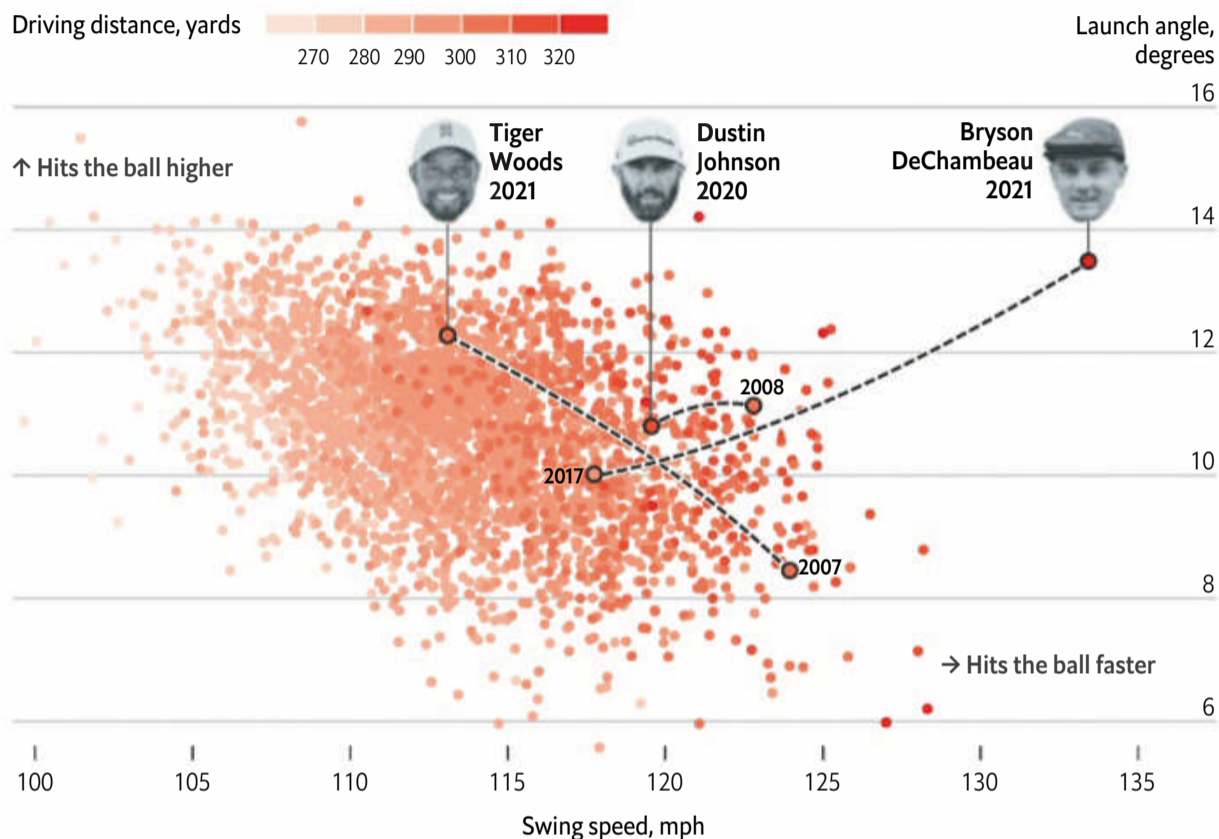
→ Golfers are driving farther by swinging faster. But only Bryson DeChambeau combines hard hitting with a lofty trajectory

Predicted effect of launch angle on driving distance

With 135mph swing speed and 2,200 rpm spin rate

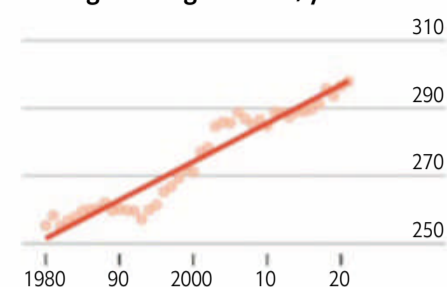


PGA Tour golfers, 2007-21 seasons*, average swing speed v launch angle of ball

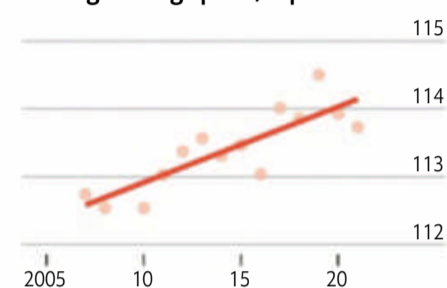


Sources: PGA Tour; ShotLink; USGA; R&A; Distance Insights Project *Since 2014, seasons have begun in Sept/Oct of previous year

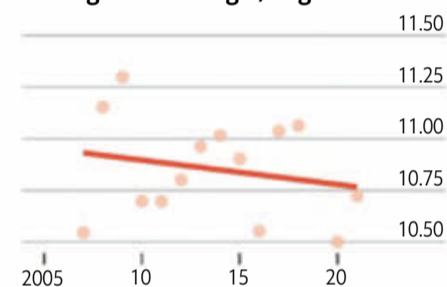
Average driving distance, yards



Average swing speed, mph



Average launch angle, degrees



Consultants of swing

How top golfers have optimised their games to break distance records

GOLF HAS a length problem. The farther players drive the ball, the longer holes need to be, so that skills like iron play and putting remain important. But the longer courses are, the more they cost to maintain and the worse their environmental impact. They also become more daunting for recreational golfers, who keep them in business.

In 2004 golf's regulators introduced limits on the size of clubs, hoping to slow the trend of ever-longer drives. Nonetheless, the pin-flation has continued apace. On November 15th a famous record tumbled: someone completed the Masters Tournament in fewer than 270 strokes, the mark Tiger Woods set when he won his first major title in 1997. The new low of 268 belongs to Dustin Johnson, a burly driver who has averaged more than 300 yards (274 metres) a pop throughout his career. He achieved the feat even though the Augusta National course is 8% longer than in 1997.

How have golfers continued to blast the ball farther than ever? The PGA Tour, the top men's circuit, publishes ball-tracking statistics based on the flight of most drives in tournaments since 2007. These suggest that, although better equipment may have helped, players' recent gains stem largely from their technique—and even bigger improvements now appear inevitable.

The data come from ShotLink, a system that tracks how fast a golfer swings ("club-head speed"), his ball's trajectory ("launch angle") and its rotation speed ("spin rate"). After taking each player's average value for these metrics in each year, we built a statistical model using them to predict driving distances. Together, the three factors explained 70% of the differences between players' distances, and almost all of the increase in length over time.

The model's lessons are intuitive. To thump the ball as far as possible, maximise clubhead speed and launch angle while minimising spin (which causes the ball to soar higher, rather than racing forward). However, most players face a trade-off between these goals, explains Paul Wood of Ping, a club manufacturer. Harder impacts usually mean flatter trajectories. Although the average male player swings faster and produces less spin than in 2007, launch an-

gles have declined since then.

One golfer, however, has escaped this constraint. Bryson DeChambeau, a physics graduate with oddly designed clubs and a voracious appetite for data, is nicknamed the "Mad Scientist". While the PGA Tour was suspended because of covid-19, he added 18kg (40lbs) of bulk. This has allowed him to swing faster than anyone else. But he has also managed to smash the ball with a high launch angle, rather than a low one—an unprecedented combination that might owe something to his unusually stiff wrists and robotic technique. Using both his brains and his brawn, Mr DeChambeau is now hitting 15 yards farther than his closest competitors do. He won his first major title at the us Open in September.

Mark Broadie, a professor at Columbia University and golf statistician, reckons that other professionals will try to beef up. But golf history is littered with players who lost their edge after tinkering with their swings. And time may yet show that the risks of Mr DeChambeau's bombs-away approach offset some of the rewards. He strayed into the rough often at the Masters.

Nonetheless, the Mad Scientist's breakthrough is bad news for course designers. They will probably have to keep fiddling with their fairways for years to come. ■



Words against noise

Rabbi Lord Sacks, chief rabbi, broadcaster and moral philosopher, died on November 7th, aged 72

EVERY MORNING he could, Jonathan Sacks pulled on his track-suit and went out jogging. He was not called the “rapid rabbi” for nothing. Jogging, as his desk-sign reminded him, led to positive thinking. And, thanks to his noise-cancelling earphones, it brought him peace. He heard nothing as he ran but Schubert, Beethoven, or whoever it might be. Those same earphones—one of the best purchases he had ever made—also enabled him when he meditated to hear the music of creation, the quiet voice of wisdom within it, and his response, from his spontaneous waking “Modeh Ani”, “I give thanks”, onwards.

Otherwise, the noise was hard to lose. Every year the voices became more strident and extreme. Consumerism cried “I want! I want!” Individualism cried “Me! Me! My choices, my feelings!” until even the iPhone and iPad he used all the time vexed him with their “I, I, I”. Society had become a cacophony of competing claims. The world gave every sign of falling apart. Even religion, his business, could be a megaphone of hate. He never felt that more strongly than when he stood in January 2002 at Ground Zero in Manhattan, with the ground still smoking round him.

His answer, as the leader of the Orthodox Jews of Britain and also as a moral philosopher, was to raise his own voice. Over his term of office, from 1991 to 2013, he became famous both outside Judaism and outside Britain for his speeches, his lectures (including stints at New York University and Yeshiva University), his three dozen books and his three-minute sermons on BBC Radio 4’s early-morning “Thought for the Day”. A rabbi was, after all, a teacher. He was a clear, kind one, still with a touch of East End about him—his father had sold *shmatters*, clothes, in Petticoat Lane, and when he was made a peer in 2009 he took the title “Baron Aldgate”. But he was also firm, even stern. He wanted to leave his mostly secular listeners in no doubt that things were good or evil, true or false, absolutely, and that moral relativism was the scourge of the age.

Judaism, as he pointed out, often provided antidotes to the chaos. The Torah, God’s will revealed in words, was an algorithm that gave discipline to life. Keeping Shabbat was an ideal way to achieve work-life balance. The festivals and High Holy Days reminded Jews of their shared traditions and history: the “we”, not the “I”. Above all, out of the suffering endured by Jews for centuries, Judaism had distilled hope. Every crisis gave birth to opportunity. The world could be changed not by force, but by ideas.

Unhappily, though, much of the raucousness that dogged him came from Jews themselves. Though non-Jews saw him as the spokesman for all the Jews of Britain, officially he was the leader of only an Orthodox minority, the United Hebrew Congregations of the Commonwealth. A much larger number, Reform and Liberal and ultra-Orthodox, or Haredi, were outside his purview, but still looked to him. Pleasing everyone was impossible. His intellectual instincts, honed at Church of England schools and Cambridge rather than religious *shuls*, were on the liberal side, and in that spirit he made services more lively and revised the daily prayer book, translating the Hebrew from scratch. But in practice it was the Haredi he found himself placating most: avoiding gay groups, doing little to advance the role of women, and—his most regrettable mistake—refusing to attend the funeral of a much-loved Reform rabbi, Hugo Gryn, and calling him a destroyer of the faith. “A great chief rabbi—to the Gentiles,” a fair number said, noting his easier mixing with prime ministers and royals. The Haredi, not won over, called him “*Boychik*”, wet behind the ears.

Perhaps he was. He never set out to be a rabbi; the impulse had grown very slowly, from that first sense of the mystery of God, when he was two or three, in the sadness of the music at his grandfather’s tiny synagogue in Finchley. He did not even feel especially Jewish until, at Cambridge, the Six-Day War of 1967 suddenly fuelled a lifelong attachment to Israel. He spent the next summer criss-crossing America on a Greyhound bus to look for rabbis, and Menachem Mendel Schneerson in Brooklyn, then the Lubavitcher *rebbe*, was the first to suggest he might be one himself and train others. Still he wavered, wondering about accountancy. In the end, in the mid-1970s, it was a voice in his head that made him say—as Abraham, ordered to sacrifice his son Isaac, had said three times to God—“Hineni”, “Here I am.”

The task of uniting his co-religionists paled, of course, beside the collapse of society, but this too he had to address. Every man and woman had a duty to care for others, and thus to recreate the bonds that held society together. “I” had to give way to “we”. Out of great crises—climate change, coronavirus—that chance might come. Ideally religion could drive this change, with the world’s faiths uniting, as they had done, imams and gurus, priests and rabbis, at Ground Zero that day. But his argument in “The Dignity of Difference” that all the major religions were equally valid ways to truth had caused even more trouble with the Haredi. Instead, in his last book, he called for a shared morality: agreed norms of behaviour, mutual trust, altruism, and a sense of “all-of-us-together”. The liberty craved by “me” could be sustained only by “us”.

It was a very long shot, but he was not a pessimist. Part of his job was to cheer people up, and he liked to wear a yellow tie, like sunshine, for his public lectures. If he felt depressed, music soon lifted him out of it. So, too, did his studies. If he was stranded on a desert island, he told a BBC interviewer, he hoped it could be with all 20 volumes of the Talmud and plenty of pencils, in order to write commentaries in the margins. Meanwhile, thinking and writing in his garden study in Golders Green, with or without his invaluable earphones, he could escape the shouting world a little.

On a visit he made once to Auschwitz, as he wept and asked, like so many others, where God had been in the Holocaust, he seemed to hear an answer: “I was in the words.” The words were “You shall not murder.” If human beings refused to listen to God, even He was helpless. But if much of the noise that humans made could be cancelled out, they might more often hear what He was saying. ■

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