The Economist

Is China exporting inflation?

Peru in peril

The toxic side of America's soft power

Assessing the new Alzheimer's drug

JUNE 12TH–18TH 2021

Bunged up

How the green boom could get stuck

LOUIS VUITTON

High Jewelry

2012

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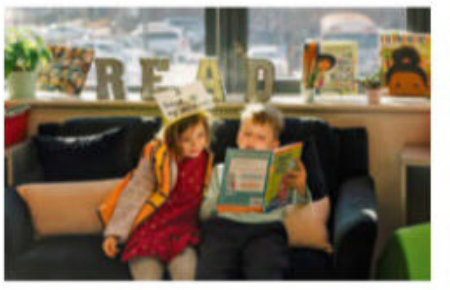

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The Economist

Volume 439 Number 9249

Published since September 1843
to take part in *"a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."*

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Amsterdam, Beijing, Berlin, Brussels, Chicago, Dakar, Dallas, Dubai, Johannesburg, Madrid, Mexico City, Moscow, Mumbai, New Delhi, New York, Paris, San Francisco, São Paulo, Seoul, Shanghai, Singapore, Tokyo, Washington DC

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The leaders of the **G7 countries** headed to the Cornish resort of Carbis Bay for a summit, their first in two years and the first for Joe Biden as America's president. Ahead of the summit G7 finance ministers met in London, where they proposed the biggest shake-up of **corporate tax** since the 1920s, backing a minimum global rate of at least 15% and a clampdown on companies that park profits in tax havens. But the proposals will need the support of other countries and will be a hard sell in China and India, among other places.

Democrats had to rethink their plan to pass comprehensive legislation on **electoral reform**, known as the For the People Act, when Joe Manchin, a Democratic senator from West Virginia, said he would not support it because it lacked Republican support. Mr Manchin also definitively ruled out backing any attempt to weaken the filibuster, another headache for the Democrats in a Senate that is split 50-50.

America's border agency intercepted 180,034 illegal **migrants** in May, a new 21-year high. The number of unaccompanied children at the border is falling, as is the number of migrants from Central America. In her first trip abroad as vice-president, Kamala Harris went to Guatemala and warned potential migrants not to enter the United States, as they would be turned back.

Pedro Castillo, a left-wing former schoolteacher, narrowly won **Peru's** presidential run-off. With just 50.2%, a lead of 70,000 out of 17.5m votes cast, he has a weak mandate and will preside over a bitterly divided country. His conservative opponent, Keiko Fujimori, claimed there had been fraud, although there is little evidence of this.

In **Nicaragua** Daniel Ortega, the strongman president who hopes to win a fifth term in elections in November, appeared to be further muzzling the opposition, when four prominent opposition politicians were detained in the space of a few days.

There were mixed results for Morena, the party of President Andrés Manuel López Obrador, in mid-term elections in **Mexico**. It and its allies lost their two-thirds majority in the national legislature's lower house, but it remains the most popular party and has expanded its national footprint.

A court in Moscow ruled that two organisations connected to Alexei Navalny, a jailed opposition leader in **Russia**, were "extremist", and thus should be shut down and their members barred from standing in elections. The move, which follows a change in the law that came into effect just five days earlier, is clearly aimed at preventing supporters of Mr Navalny from running in parliamentary elections expected in September. The hearing was held behind closed doors.

The **European Commission** launched legal proceedings against **Germany's** Constitutional Court to assert the primacy of European Union law. The case relates to the German court's ruling last year that the European Central Bank's bond-buying programme contravenes the German constitution. That ruling contradicted a decision by the European Court of Justice, the EU's highest court, which found that the programme complies with EU law.

Jihadists killed more than 138 people in an attack on a village in **Burkina Faso**, the deadliest incident since the start of an insurgency in 2015.

Assimi Goita, an army officer in **Mali** who has led two coups in less than a year, was sworn in as the president of a transitional government. His power-grab has prompted the African Union to suspend Mali. France has halted joint military operations against jihadists in protest.

Israel's outgoing government approved a march by Israeli nationalists through Jerusalem's Old City. Hamas, the militant Palestinian group that runs Gaza, warned that the march, due to take place on June 15th, could trigger a new round of violence.

Iran held a presidential debate in which Mohsen Mehralizadeh, a former provincial governor, pointed out the obvious: the regime has rigged the ballot in order to ensure that Ebrahim Raisi, the head of Iran's judiciary and a staunch hardliner, wins the election on June 18th.

A few, small scattered protests took place in **Hong Kong** to mark the anniversary on June 4th of the bloody suppression of the pro-democracy movement in Tiananmen Square in 1989. The city's government banned the usual commemorative gathering in a park which in previous years had attracted thousands of people. It cited reasons related to the pandemic.

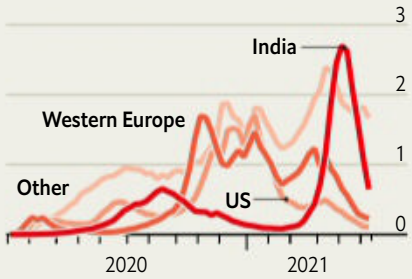
Mongolia's presidential election was won by Ukhnaa Khurelsukh, who resigned as prime minister in January amid street protests about the country's health service. Mr Khurelsukh is from the ruling Mongolian People's Party; he won 68% of the vote, the most for any presidential candidate since the start of democratic elections in 1990.

A new species of **dinosaur**, excavated in 2007 in Australia, has been identified by palaeontologists as among the largest ever. *Australotitan cooperensis*, a plant-eating beast, would have been 6.5 metres tall and 30 metres long.

Coronavirus briefs

To 6am GMT Jun 10th 2021

Weekly confirmed cases by area, m



Vaccination doses

	Total '000	% of over-11s with 1st dose	2nd
UAE	13,347	94	59
Malta	558	84	59
Israel	10,602	82	77
Bhutan	483	78	0
Mongolia	3,481	78	66
Canada	26,856	72	10
Bahrain	1,850	70	58
Britain	68,801	70	48
Chile	19,645	69	52
Uruguay	3,092	69	37

Sources: Johns Hopkins University CSSE; Our World in Data; United Nations

The numbers of new **cases and deaths** are steadily falling, according to the World Health Organisation, with "marked declines" in Europe and South-East Asia. But infections in Africa are rising.

Unicef stepped up its campaign ahead of the G7 meeting to persuade rich countries to **donate more vaccines** to poor ones. Joe Biden was ready to donate 500m doses of the Pfizer jab.

Japan sent 1.2m doses of the AstraZeneca vaccine to **Taiwan** to help fill a shortage. Chinese officials were quick to condemn the move for what they see as turning vaccine assistance into "a tool of political self-interest". Taiwan accuses China of obstructing its attempts to buy the Pfizer jab.

In **England** 80% of adults were estimated to have antibodies against covid-19, either through vaccination or having had the disease.

→ *For our latest coverage of the virus please visit economist.com/coronavirus or download the Economist app.*

The approval granted by America's Food and Drug Administration to a new drug to combat **Alzheimer's disease** was hailed as a breakthrough, even though the FDA conceded that the drug, aducanumab (to be marketed as Aduhelm), is not proven to work. It has shown success in reducing the build-up in the brain of a protein known as beta-amyloid, one of the possible causes of Alzheimer's. Biogen must now conduct a large-scale clinical trial to determine whether it does also slow memory loss and cognitive decline.

A consortium of private-equity funds, which includes **Blackstone**, reached an agreement to take a majority stake in **Medline**, a privately held supplier of medical equipment. At $34bn the deal is one of the biggest ever buy-outs involving private equity.

The American Senate passed a mammoth bill that aims to counter **China's rising expertise in technology**. The legislation would, among other things, fund research in artificial intelligence and quantum computing and support the American chip industry. The House of Representatives will soon debate its version of the bill. Separately, Joe Biden ordered a security review of all apps based in countries such as China.

Mr Biden earlier signed an order banning Americans from investing in 59 **Chinese companies** that do business in defence and surveillance. Many are connected to Huawei or Aviation Industry Corporation of China, a state-owned aerospace company. Legal experts say Mr Biden's order is broader in terms than a similar one signed by Donald Trump, and that it may be harder to challenge in court.

China's **producer-price index**, which measures the cost of goods leaving factories, surged by 9% in May, year on year. That was the fastest pace since September 2008, caused by rising prices for oil, iron ore and non-ferrous metals. Higher costs for producers could be passed on to consumers in China, and elsewhere, pumping up inflationary pressures.

How (not) to win friends

Britain's Competition and Markets Authority said it was investigating British Airways and Ryanair to see if the **airlines** broke consumer law by offering vouchers or re-bookings instead of refunds to passengers who were unable to fly during lockdowns. The practice is unpopular. In America complaints about airlines refusing to refund were up by 5,500% in 2020.

Facebook extended its suspension of **Donald Trump** for at least two years. As he is also permanently banned from Twitter, the former president will not have access to the social-media channels for America's mid-term elections. From now on Facebook will hold material from any politician in the world to the same standards it applies to content from regular users, but will grant a "newsworthiness allowance" to some political posts that breach those standards. Its policy change did little to assuage its critics.

El Salvador became the first country to accept **bitcoin** as legal tender, meaning that businesses will be compelled to accept it as payment along with the American dollar, the official currency. The government hopes the cryptocurrency will appeal to the 70% of the population without access to a bank account.

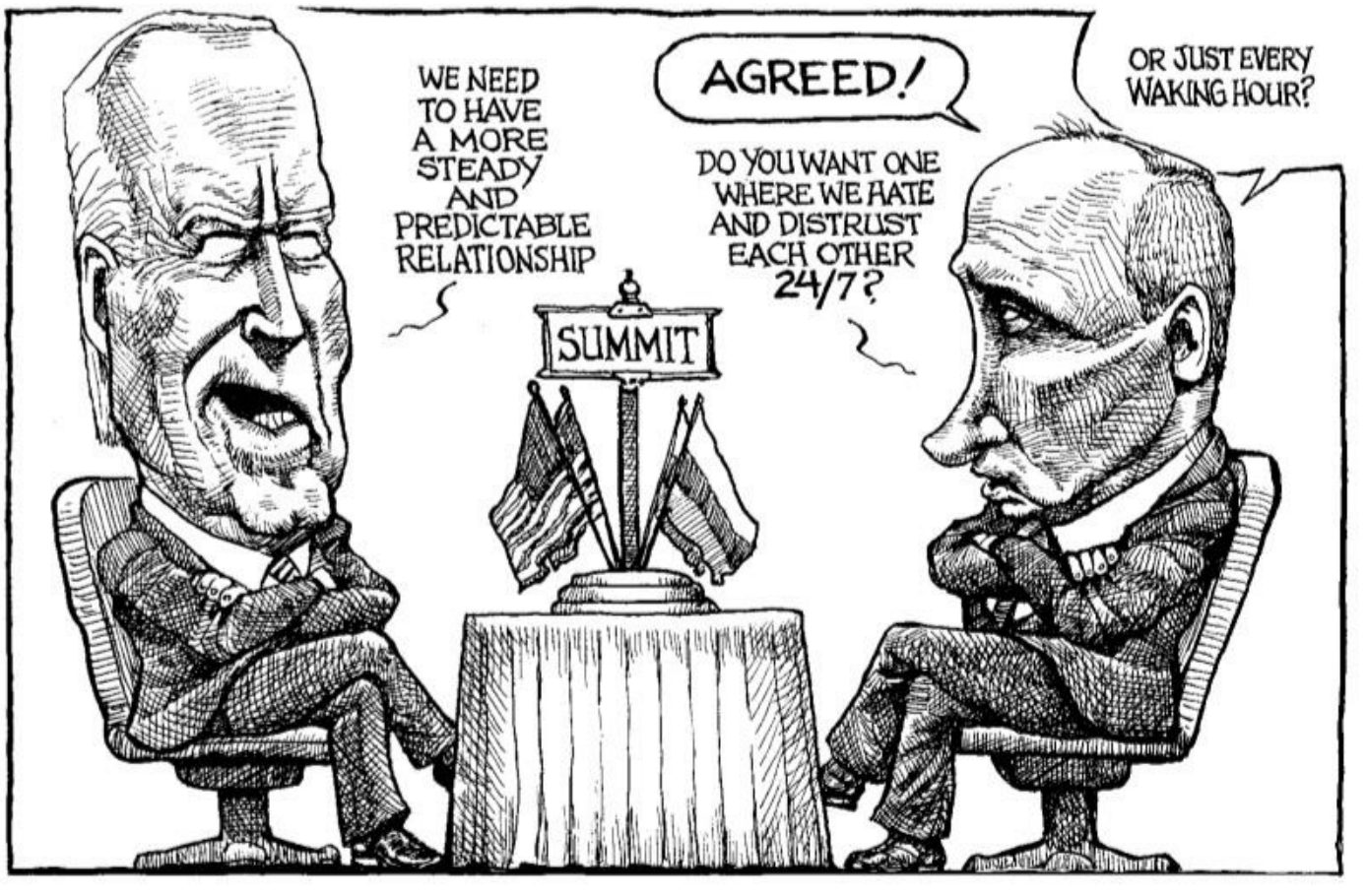
Meanwhile, America's Justice Department recovered most of the ransom paid in bitcoin to **Russian hackers** who had shut down a major pipeline. The FBI was able to seize the payment by tracking the bitcoin address used by the gang. It also emerged that JBS, the world's biggest meat-processor, paid $11m in bitcoin to cyber-criminals after they disrupted its plants.

The **Keystone XL pipeline** was officially scrapped following Joe Biden's decision not to grant it a permit to cross American territory. The project, opposed for years by greens and Native American groups, would have carried oil from Alberta's tar sands.

Jeff Bezos, Amazon's founder, is focusing on his long-standing passion for spaceflight. He and his brother will be among the first people to fly with Blue Origin, a rocketry company he founded in 2000, when it makes its first flight with crew to 100km above Earth's surface on July 20th. Mr Bezos is stepping down as Amazon's chief executive on July 5th.

Progressive, except on tax

Mr Bezos may well want to escape the blue planet for a while, after revelations by ProPublica, a collection of investigative journalists, that he and the 24 other **richest Americans** pay little or no federal income tax. Between 2014 and 2018 this ultra-rich group, which also includes Elon Musk and Mark Zuckerberg, paid $13.6bn in federal tax, amounting to an average tax rate of just 3.4%, according to ProPublica. For Mr Bezos it was 0.98%. The Internal Revenue Service is investigating how ProPublica got hold of data on thousands of America's wealthiest people.



Bunged up

A great green investment boom is under way. Bottlenecks are an underappreciated problem

As the world economy wakes back up, shortages and price spikes are affecting everything from the supply of Taiwanese chips to the cost of a French breakfast. As we explain this week, one kind of bottleneck deserves special attention: the supply-side problems, such as scarce metals and land constraints, that threaten to slow the green-energy boom (see Briefing). Far from being transitory, these bottlenecks risk becoming a recurring feature of the world economy for years to come because the shift to a cleaner energy system is still only in its infancy. Governments must respond to these market signals, facilitating a huge private-sector investment boom over the next decade that increases capacity. If they don't, they stand little chance of keeping their promises to reach "net-zero" emissions.

Scientists and activists have worried about climate change for decades. Recently politicians have shown signs of more commitment: countries accounting for over 70% of world GDP and greenhouse gases now have targets for net-zero emissions, typically by 2050. And there has been a dramatic shift in the attitude of business. Investors are demanding that firms change tack, spurred by the new reality that clean technologies are more cost-competitive. The giants of the fossil-fuel age, such as Volkswagen and ExxonMobil, are having to shift their investment plans, while clean-energy pioneers are cranking up capital spending fast. Orsted, a wind-farm champion, plans a rise of 30% this year; Tesla, an electric-car maker, a jump of 62%. Meanwhile a cool $178bn flowed into green-tinged investment funds in the first quarter of 2021.

This sudden shift in how resources are allocated is causing stresses and strains as demand surges for raw materials and a scramble occurs for the few projects with regulatory approval. We calculate that the price of a basket of five minerals used in electric cars and power grids has soared by 139% in the past year. Timber mafias are roaming Ecuadorean forests to find balsa wood used in wind-turbine blades. In February a British auction of sea-bed rights for offshore wind farms brought in up to $12bn because energy firms rushed to get exposure whatever the cost. The shortages extend to finance: as a mass of money chases a few renewable-energy firms, valuations have been stretched into bubbly territory. Although the weight of the renewable-energy industry in consumer-price indices is still small, some financiers fear that supply shortages over years could eventually fuel higher inflation.

What makes these signs of overstretch so striking is that they are materialising even as the energy transition is less than 10% complete (measured by the share of cumulative energy-investment needed by 2050 that has already taken place). It is true that some of the technologies which will be required barely exist yet and so are not available for investment. That is why so much research and development is needed. But in other areas the brain work has largely been done—so the 2020s must be the decade of brawn, ramping up established technologies with massive capital spending.

The figures for the coming decade are mind-concentrating. To stay on track for net zero, by 2030 annual production of electric vehicles needs to be ten times higher than it was last year and the number of roadside charging stations 31 times bigger. The installed base of renewable-power generation needs to rise three-fold. Global mining firms may have to raise the annual production of critical minerals by 500%. Perhaps 2% of America's land will have to be blanketed in turbines and solar panels.

All this will require vast investment: some $35trn over the next decade, equivalent to a third of the global fund-management industry's assets today. The system best equipped to deliver this is the network of cross-border supply chains and capital markets that has revolutionised the world since the 1990s. Yet even this system is underdelivering, with energy investment running at about half the level required, and skewed towards a few rich countries and China. Despite soaring metals prices, for example, mining firms are wary of boosting supply.

The main reason for the investment shortfall is that it takes too long to get projects approved and their expected risk and returns are still too opaque. Governments are making things worse by using climate policy as a vehicle for other political objectives. The European Union aspires to strategic autonomy in batteries and its green agenda directs a chunk of its budget to deprived areas. China is considering domestic price caps on commodities in its next five-year plan. Similarly, President Joe Biden's nascent green plan prioritises union jobs and local manufacturers. This mix of blurred goals and soft protectionism hobbles the necessary investment.

Governments need to be more hardheaded. There is a crucial role for an activist state in supporting the construction of key infrastructure, such as transmission lines, and in research and development. But the overwhelming priority must be to catalyse a bigger surge in private investment, in two ways.

First, by easing planning rules. The average global mining project takes 16 years to get approval; the typical wind project in America over a decade to get lease approvals and permits, which is one reason why its offshore-wind capacity is less than 1% of Europe's. Speed requires centralised decision-making, and will often mean disappointing local NIMBYs and conservationists.

Perfect is the enemy of good

Second, governments can help companies and investors deal with risks. They can provide certainty in some areas: for example, by guaranteeing minimum prices for power generation. Western governments also have a duty to provide cheap financing to lift investment in poorer countries. But the key is the introduction of carbon prices which embed market signals into millions of everyday commercial decisions and give entrepreneurs and investors more visibility over a long-term horizon. Today only 22% of the world's greenhouse-gas emissions are covered by pricing schemes, and those schemes are not joined up. Green bottlenecks are a sign that decarbonisation is at last shifting from being a theoretical idea to a reality. A powerful push is now needed to help make the revolution happen. ■

The G7 summit

Inoculation, inoculation, inoculation

For all their talk about international co-operation, America and its allies are failing the world

IMAGINE AN INVESTMENT that would earn a return of 17,900% in four years. Better yet, the initial outlay would be easily affordable. Who on Earth would pass up such an opportunity?

The answer, it seems, is the leaders of the Group of Seven (G7), a club of rich democracies which holds its annual summit this week. By failing to act fast enough to inoculate the world against covid-19, they are passing up the deal of the century. That is not just economically foolish, it is a moral failure and a diplomatic disaster, too.

On the face of things, the G7 is the very picture of concern. Boris Johnson, Britain's prime minister and the host of the summit, wants it to come up with 1bn doses of vaccine to donate. America alone plans to give away 500m doses. Joe Biden, America's president, says his visit to Europe, the first trip abroad of his presidency, is intended to prove that America and its allies have more to offer the world than China and Russia. His priority, he wrote in an article in the *Washington Post*, is "ending this pandemic".

As generous as the talk of donations sounds, in fact it is miserly. Britain, which has ordered five times the doses it needs, is only now giving any away. COVAX, the international effort to provide vaccines to ill-supplied countries, is billions of jabs short. For the G7 to do anything less than fund it in full, with a clear schedule for handing over cash and vials, would be a travesty.

To get roughly 70% of the planet's population inoculated by April, the IMF calculates, would cost just $50bn. The cumulative economic benefit by 2025, in terms of increased global output, would be $9trn, to say nothing of the many lives that would be saved. The cost amounts to just 0.13% of the G7's GDP—a fifth of the amount its members have pledged to spend each year helping other countries. If a group formed to wrestle with big international threats cannot resolve to make such a no-brainer of an investment on humanity's behalf, what can it do?

In his article in the *Post* Mr Biden acknowledged that America's reputation for solving global problems has taken a beating in the past few years, and that authoritarian states like China and Russia pose a grave challenge to the Western order. Yet America and its allies have struggled to present a united front to the world's autocrats in recent months (see Europe section). The EU signed an investment deal with China just before Mr Biden took office, to the new president's dismay. Germany seems determined to bankroll Russia by expanding a pipeline system through which it imports Russian gas.

Mr Biden likes to stress that "America is back". Despite the refreshing rhetoric, some of his administration's actions—in particular its Buy American edict that tightens rules obliging the federal government to favour domestic suppliers over foreign ones—look more like America First protectionism than a new internationalism. The world awaits more practical evidence of American re-engagement, and its ability to rally its allies behind it. The credibility of American leadership is vital not just for the struggle against the pandemic. It will be essential for the even greater global test on the horizon: grappling with climate change.

After four years when America often seemed more interested in kicking sand in the world's face than helping it to its feet, vaccines provide it with the ideal means to rehabilitate its image. The United States and its allies displayed great technological mettle by developing several highly effective vaccines and scaling up their production in record time. They therefore have something tangible and urgently needed to offer the rest of the world. Mr Biden is unlikely to get a better chance to demonstrate the benefits of American leadership, and the power of democracy and free markets to boot. Making sure that the rest of the world is inoculated as quickly as possible would be a shot in the arm for America and its allies, too. ■

Latin America

Peru in peril

A failure to reform is poised to produce a lurch to the far left

FOR MUCH of this century Peru stood out in Latin America as a success. The economy grew at an annual average rate of 5.6% between 2001 and 2016, while the share of those living below the national poverty line fell from above 60% to 21% over the same period. Inequality fell, too, as the incomes of people living in the Andes, long the poorest area, grew faster than the national average. Like Chile and Colombia, which also did well economically, Peru pursued free-market economic policies and export-led growth, eschewing the statist protectionism that has held back Argentina and Brazil.

Progress has largely halted, first because of political conflicts that produced four presidents (and eight finance ministers) in five years. Then came the pandemic, which has killed 190,000 Peruvians and pushed 3m into poverty. Now Peru's future has been held hostage by a divisive presidential run-off election. With nearly all the votes counted, Pedro Castillo, a rural schoolteacher, subsistence farmer and union leader, was winning by a hair's breadth against Keiko Fujimori, the daughter of Alberto Fujimori, the conservative who ruled the country as an autocrat in the 1990s (see Americas section). Neither candidate is a paragon of democracy.

Mr Castillo represents a cry for social justice from the Peru ▸▸

that has felt left behind, particularly during the pandemic. He is an admirer of Evo Morales, Bolivia's former socialist strongman; his party is led by an apologist for Cuban communism and Venezuela's dictatorship. He has little previous political experience, has given few interviews and scant indication of how and with whom he would govern. Ms Fujimori has plenty of baggage herself: when her party held a majority in Peru's Congress in 2016-19 it sought to sabotage an elected government, to destroy valuable education reforms and to capture independent institutions. But she attracted the support of many who fear a leftist adventure.

Peru now faces several perils. The first is of a fight over the result, which may not be declared for several days. Ms Fujimori has unwisely claimed electoral fraud, with no serious evidence. Mr Castillo's victory, assuming it is confirmed, poses two further risks. One is that he follows the leftist-populist script on which he campaigned: nationalisation of mines and the convening of a constituent assembly to write a new constitution which might allow him to seize near-absolute power, as Mr Morales did. Since his mandate will be flimsy (he won only 15% of the total vote in the first round) and he can count on only 42 of the 130 members of the new Congress, which would have to authorise an assembly, that might be hard. But if he buys popularity by, for example, seizing a mine or the central bank's reserves, it is possible. The other, more likely, risk is of a weak, incompetent government that chips away at the foundations of economic stability and prompts a prolonged crisis of confidence. The sol, long one of the region's most stable currencies, has already lost 8% of its value against the dollar this year.

The hope is that Mr Castillo realises that to govern the country successfully he needs to appeal to the half of it that rejected him. To achieve the improvement that he wants in the lives of poorer Peruvians in the interior requires a growing and sustainable economy. There is a precedent. In 2011 Peruvians elected Ollanta Humala, a former army officer who had campaigned against the economic "model". His government introduced some useful reforms while keeping the economy going. But Mr Castillo has less knowledge of the world and less time to adjust than Mr Humala had.

How Peru got here is a lesson in how to squander progress. It was long clear that the country needed to complement its market economy with a more effective state to provide much better public services, not least health care. To diversify the economy away from mining requires investing more in people, innovation and infrastructure. Instead, the conservative establishment set its face against change. The same failure to create more inclusive societies has plunged Chile and Colombia into unrest. As we have stressed in these pages in recent weeks, polarisation, fragmentation and populism are also afflicting Latin America's giants, Brazil and Mexico. But Peru's case, with 18 candidates in the first round, and then a choice between two extremes in the second, is especially severe. There may still be a moderate majority in Peru. It will need to make its voice heard. ■

Corporate tax

A new architecture

A less loophole-riddled system for taxing multinationals is within reach

When people come to look back on Joe Biden's presidency, they may, depending on events in the coming months, conclude that one of his most consequential economic achievements was to reverse a decades-long global boom in corporate tax-dodging. His administration's call for an end to the "race to the bottom" has reinvigorated multilateral talks on rewriting international rules that encourage multinationals to funnel vast profits to tax havens. Two months after that call, America and other rich countries have agreed on a road map for reform. The deal paves the way for the biggest corporate-tax overhaul in a century.

Mr Biden's motives are not pure: he is driven less by principle than a desire to squeeze more out of American firms to finance his post-pandemic spending priorities. Nevertheless, the G7 countries' proposals, which their finance ministers approved on June 5th, are welcome. The international tax system sits on foundations laid in the 1920s. For much of the following century policymakers' concern was to avoid double taxation, not curb abuse. The result has been a steady rise in avoidance, further fuelled by the growth of tech firms and intangible assets, to the point where 40% of multinationals' overseas profits are shifted to havens. The OECD estimates this costs exchequers up to $240bn a year—a tiny fraction of global economic output, but still a lot of unbuilt hospitals and unfixed roads.

Past attempts to plug this hole have been piecemeal. The G7 wants a more comprehensive fix. It has backed a global minimum corporate-tax rate of at least 15%, combined with a reallocation of taxing rights to give more to countries where firms have sales. Rishi Sunak, Britain's chancellor, who chaired the G7 talks, called its accord "seismic".

In fact it is only a first step. Reaching a global deal involves finding terms that 132 other countries, including China and India, can accept. Poor countries fear a rich-country stitch-up: the G7 could reap over 60% of the revenue gains from a minimum tax. Some havens will resist, including Ireland, which jealously guards its 12.5% corporate-tax rate—and has a veto on tax matters in the EU.

If these obstacles can be overcome, the reforms will still need to be passed into law. Many in America's Congress worry that they may hurt its companies' competitiveness. European countries want America to move first. America wants France, Britain and other countries that have introduced "digital-services taxes", targeting the sales of Silicon Valley firms, to scrap them immediately. Agreeing to put them on hold would help move the delicate diplomacy forward. Europe's levies have provoked retaliatory tariffs from America, which are currently suspended. The OECD reckons a tax-induced trade war would wipe more than 1% off global GDP.

Expectations also need tempering on how much of the revenue lost to avoidance will be clawed back. Most would come from the minimum tax. But a floor of 15% would raise global cor-

porate-tax revenues by as little as 2.7%. The $50bn-80bn that the combined reforms might raise is meagre beside multinationals' $6trn of global annual profits. The profit-reallocation part of the proposals looks like a lot of work for not much gain. Countries where an as-yet-undefined group of multinationals have sales would get to share taxing rights over at least 20% of any global profits those firms made above a 10% margin. The net gain from this fiddly exercise may not amount to much more than $10bn.

No going back

Nonetheless, a Rubicon has been crossed. The tenor of the debate on tax began to change after the global financial crisis and has now shifted fundamentally. Governments around the world agree that corporate-tax arbitrage has got out of hand and taxing rights must be better aligned with economic activity. Twenty years ago champions of tax competition had the upper hand. Now the dominant line of thinking is that tax sovereignty cuts both ways: countries have the right to set their own rates, but those undercut by low-tax jurisdictions also have the right to stop the plunder. Before the year is out, a majority of the world's governments may have agreed on changes that could obliterate the business models of zero-tax havens in the Caribbean.

Any deal emerging from the global talks would be far from perfect. It would raise only modest sums relative to covid-induced holes in budgets. It would curb, but not end, the use of loopholes; corporate tax departments are too clever for that. It is likely to give more to advanced economies than developing ones, meaning there will be pressure to revisit the deal. But it promises to reveal a route to a more rational, equitable tax system that is fit for an economy based on things you tap on a keyboard rather than drop on your foot. That is the destination negotiators need to keep in mind in the taxing months ahead. ■

Dementia research

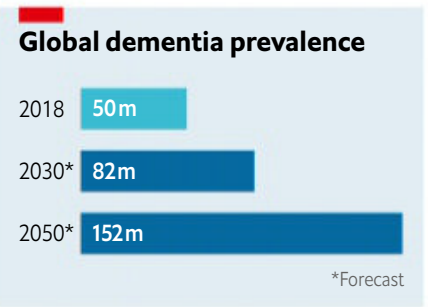
False positive

The approval of a new drug to treat Alzheimer's is premature, risky and wrong

On June 7th America's Food and Drug Administration (FDA) approved the first new drug since 2003 to treat Alzheimer's disease. The euphoric reaction in some quarters is understandable. A century of research has produced no effective treatment for Alzheimer's, which is marked by ever-worsening cognitive decline, and accounts for 60-80% of cases of dementia, a condition affecting perhaps 50m people worldwide and becoming ever more common as the world ages.

But, sadly, the FDA admits that it is not proven that the new drug, a monoclonal antibody to be sold under the name Aduhelm, actually works. The approval is misguided. It risks raising unrealistic expectations, wreaking financial harm on healthcare systems, damaging the FDA's reputation for scientific impartiality and perhaps even diverting attention from more hopeful approaches to treating dementia.

It is also hard to understand. Last November ten of the 11 members of the FDA's own expert advisory panel voted to reject the application by the producer, Biogen of Cambridge, Massachusetts, for approval of the drug (the 11th was "uncertain"). The FDA's approval does not mean it accepts that the data so far show that Aduhelm is effective in slowing cognitive decline. Biogen's trials were at best ambiguous on this point, and indeed in 2019 were called off as failures. Rather, the agency is rewarding the drug's success in clearing brains of beta-amyloid, a protein that clumps between neurons and disrupts their functioning.



An "amyloid hypothesis" holds that the protein is not just a symptom of the disease, but a prime cause. This is widely believed (all brains with Alzheimer's exhibit beta-amyloid build-ups). But it is just a hypothesis (not every brain with beta-amyloid exhibits cognitive impairment). The FDA has demanded a further trial, even as the drug goes into use, and has warned it may pull the drug if it is unsatisfactory. Biogen has said that the trial may take nine years. And if the drug is in wide use, withdrawing it would be difficult.

At $56,000 a year, the cost of Aduhelm treatment will create huge problems for health insurers and providers. Certainly the stockmarket has rewarded Biogen's shares in the belief that a new blockbuster drug has just been given clearance. It is recommended only for people in the early stages of Alzheimer's, diagnosed by a costly PET scan, and will require a course of monthly intravenous administration at a medical facility. Patients will require close monitoring as many develop brain swellings. But given the lack of any alternative, millions of Americans will be clamouring for the treatment for loved ones with Alzheimer's.

The FDA's approval also risks actually impeding some dementia research. Aduhelm might make it hard to recruit participants for clinical trials for new drugs, and to assess the results of them (if many patients are already taking the drug). And it may divert more resources into fresh efforts to validate the disputed amyloid hypothesis.

That the evidence argued against the approval of Aduhelm does not mean that research into treatments for dementia is going badly. On the contrary, whereas a few years ago some pharmaceutical firms were withdrawing from the field, having written it off as a dead end, some neurologists now expect big breakthroughs. A better understanding is emerging of how the risk of developing dementia can be reduced, by living a healthier life. The age-specific incidence of dementia is actually declining in some Western countries. Blood tests make it far easier to diagnose those at high risk before symptoms appear. And, according to Pharmaprojects, an industry database, another 148 drugs for Alzheimer's alone are in clinical development, only about 15% of which are directed at beta-amyloid.

Dementia remains one of the 21st century's greatest health, social and economic problems, and, for some neurologists, anything that stimulates greater efforts to understanding and treating it is welcome. That is why even some of those who have been baffled by the scientific basis of the FDA's Aduhelm approval have applauded it. Surely, however, hope lies not in lowering standards out of desperation, but in following the science. ■

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FACEBOOK

An insoluble problem?

The ambiguities in your leader on Israel and Palestine showed how difficult it is to explain the conflict through the lens of Western liberal reason-based logic ("Two states or one?", May 29th). This is a confrontation of religion, ideology and culture that simply does not have a "solution". History has many related examples, such as the co-existence of Muslims, Christians and Jews in medieval Spain, which was productive for all until the Christian takeover in the 15th century. In the end, ideas determine political results, not the other way round.

Nevertheless, sensible political steps may at least moderate the differences. A two-state arrangement might be helpful, if it were based on present realities (as *The Economist* recognises), and not on accounts of the past or aspirations for the future. A two-states deal might establish rules for matters that are essential for Palestinians and Israelis, such as boundaries, security, health, water, climate and economic activity, and yet leave each side relatively free. It would restrain the hot-heads on both sides. In a two-state reality, it is imaginable that there would be Jewish enclaves in Palestinian territory, in the way that there are Arab communities in Israel.

Regarding Jerusalem, I cannot think of better arrangements for the city than those that have developed over the past decades. In spite of fake information, Jerusalem is a relatively peaceful place, with many open possibilities for all and much daily-life interaction between Arabs and Jews. To divide the city again, something neither Jews nor Arabs propose (each side wants it all), would make things worse. Be under no illusion, however. Political steps may alleviate the strains, but they will not solve the ideological and religious tensions separating the communities.

PROFESSOR EVYATAR FRIESEL
Hebrew University of Jerusalem

On the MOVE

I agree with Buttonwood that the MOVE is now the true fear index, a better indicator of market volatility than the VIX (May 22nd). But do not let its current low level fool you. The MOVE carries a lot more lethal punch for government-bond portfolios today than its much higher levels of the past. That is because the portfolios are now so much more sensitive to even small changes in long-term interest rates, which are at or near all-time lows. Long-term rates are around 2%, up from 0.7% in the middle of the covid pandemic last August.

Setting aside the mathematical complexity of the non-linearity of the price moves to adjustments in interest rates, a half-a-percentage-point change will wreak more havoc to those portfolios today than 1-1.5% would have done in the past. So on a rate-adjusted basis, the MOVE is flashing red.

PADMESH SHUKLA
Head of investments
Transport for London Pension Fund
London

European optimism

You raised excellent points about European dynamism ("The land that ambition forgot", June 5th). As a citizen of the European Union, I share those concerns. However, I think you understated the case for optimism. Europe's tech sector is worth four times what it was just five years ago. Europe now attracts 15% of global venture capital, up from 4% in 2004. Europe's talent base remains extraordinarily strong. Companies like Klarna, Lilium, N26, Revolut, Spotify, UiPath and Wise are showing what is possible.

Stripe works with more than 100,000 of Europe's most innovative firms. There are many ways for policymakers to help these businesses become the next generation of global leaders. These companies want such things as a more streamlined common market, fewer impractical and ineffective regulations (like website cookie banners), better legal treatment of stock options and easier access to visas for highly skilled individuals.

That is to say, there is a lot of low-hanging fruit. If governments across the region focus on unlocking the unparalleled ingenuity of European innovators, I believe that there is no limit to what we can achieve.

PATRICK COLLISON
Founder and CEO
Stripe
San Francisco and Dublin

Avoiding evictions

I was glad to see you make the link between laws curtailing tenant evictions in America and public rent-relief ("Shelter in place", May 15th). Moratoriums on evictions and rent-control laws without public rent-relief lead to government control without government support. That is the kiss of death for any business, and will make housing more scarce and more expensive. As the owner of a mobile-home park, I hate the fact that, under current law, my only remedy if things do not work out with a tenant is eviction, which is life-shattering for them (and no fun for owners, either).

There are ways to square this circle. A publicly administered rental-insurance scheme, into which both landlords and tenants pay each month, coupled with an alternative dispute-resolution procedure for cases other than non-payment, would do a lot to ease the housing crisis.

JOHN KAUFMANN
Dobbs Ferry, New York

Roca star

"Rushing for the exit" (June 5th) described Julio Argentino Roca, a former president of Argentina, as a "dictator". Roca was a general and involved in military campaigns. But after his electoral victory in 1880, with a fair 69% of the electoral-college vote, he promoted a programme of deep economic, social and political reforms that laid the foundations of the modern Argentine state as we know it today. Roca's legacy includes Argentina's public-education system, public-registry offices, civil-matrimony laws, the modernisation of the armed forces and, most notably, the consolidation of Argentina as an agricultural powerhouse. He ran for a second time in 1898, this time winning 86% of the electoral college.

Remembered mostly for being a "conservative", Roca's avant-garde thinking made Argentina one of the world's most prosperous countries.

JUAN MANUEL RUIZ BALLESTER
Buenos Aires

Feeding the hungry

The obituary on Yuan Longping (May 29th), a Chinese agronomist who revolutionised rice production, brought to mind a quote from Jonathan Swift's "Gulliver's Travels":

> "Whoever could make two ears of corn, or two blades of grass, to grow upon a spot of ground where only one grew before, would deserve better of mankind, and do more essential service to his country, than the whole race of politicians put together."

JOHN MACDERMOTT
Cork, Ireland

Shabby conduct

You piqued my curiosity as to the meaning of *sha bi*, chanted by Chinese football fans and a "phrase not translatable in a family newspaper" ("Own goal", May 15th). Was it "foolish finish" (*shǎbì*), "closing remarks" (*shābǐ*), "a short-term detriment" (*shàbì*), or, heaven forfend, "shark thighs" (*shābì*)?

PROFESSOR DANIEL HARBOUR
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Post based at ESA Headquarters in Paris, France

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Missing ingredients

NEW YORK

Investments in renewables are ramping up. But bottlenecks in supply chains, site approvals and finance could still hobble deep reductions in emissions

At 107 metres, the three carbon-fibre blades of a Haliade-X marine wind turbine are longer than the wingspan of any airliner ever made. The generator which transforms their rotation—over 300km an hour at the tip—into power requires over 100 powerful magnets made of exotic metals and untold lengths of coiled-up copper. The blades, generator and associated gubbins, weighing around 900 tonnes all-in, have to be installed on a pylon so tall that the blade-tips reach almost as high above the waves as the pinnacle of the Transamerica Pyramid rises over the 600 block of San Francisco's Montgomery Street.

In May, President Joe Biden's administration announced the approval of Vineyard Wind, a wind farm off the coast of Massachusetts which will require GE, an American industrial giant, to supply 60 of these airliner-skyscraper-stick-insect hybrids. With a planned capacity of 800 megawatts (MW) Vineyard Wind would on its own increase America's offshore-wind capacity by a factor of roughly 25. But it will not be on its own. Mr Biden has set a target of 30,000MW (30 gigawatts, GW) of offshore wind by 2030, the equivalent of 37 such projects. Britain, China and Germany have ambitions on a similar scale. Bernstein, a research firm, reckons that the world's offshore-wind capacity may reach 254GW by 2030, more than seven times today's level.

A decade ago this would have seemed pure fantasy. Today companies are rushing to meet the demand. A battalion of European energy companies led by Equinor, Orsted and Royal Dutch Shell are competing to build in American waters. Equinor is backing a new wind-tower factory in Albany. Dominion Energy, a utility, is teaming up with a Texan shipbuilder to construct a vessel that can install turbines along America's east coast. In Britain a rush to secure offshore-wind leases in February led to companies bidding so much for the privilege that the returns risk being nugatory.

Similar booms are under way across the world of renewable energy and electric-vehicle making. The reason is simple. Governments have said they want to cut greenhouse-gas emissions dramatically. Decades of subsidy and support, along with some inspired entrepreneurialism, have made available a range of technologies ready to do so. The time is ripe to push those technologies as hard as possible—both to battle rising temperatures and, governments hope, advance their countries' role in a new green economy.

However, the fact that wind farms, solar farms and battery-powered vehicles are now cost-competitive does not mean they can be built at whatever pace politicians choose. They require raw materials—sometimes, as with the Haliade-X turbines, in prodigious amounts—siting permits, infrastructure for transmission, recharging and the like. They also need lots of capital. And the necessary materials, sites and capital are all, to various extents in different places, in short supply. The price of lithium has more than doubled in the past year. Copper prices are up by about 70%. Fights are breaking out over permits for new mines, wind and solar farms. Capital remains poorly allocated; while big companies rush for offshore-wind projects around Britain, poorer countries with rising emissions remain starved for investment. If efforts to ease those constraints fail, the world's decarbonisation plans will stall instead of soar.

The Paris agreement of 2015 calls for a world in which average temperatures nev-

er climb more than 2°C above those of the preindustrial age, and ideally rise no further than 1.5°C. To that end most large economies have now committed themselves to "net zero" emissions—a notional state where the amount of greenhouse gas emitted is matched by the amount absorbed by natural and artificial "sinks"—by the middle of the century. In the long term, meeting or even approaching those goals is going to require new technologies, even new industries. But any serious attempt also requires the prompt use of the tools already to hand. Over the coming decade urgent research and development aimed at creating future tools must take place in tandem with a massive deployment of technologies which already exist.

Greenie in a bottle

In the past, such energy transitions have been slow affairs, and also cumulative ones; new technologies such as those of steam and oil added to the total energy budget rather than simply replacing what was there before them. Climate action requires the current transition to be both fast and total. A lack of precedent does not make the challenge impossible. But it reinforces the need for foresight and imagination in trying to overcome impediments.

The deployment of renewable technologies is already, by the standards of the past, a remarkable success. In 2019 installed solar capacity was almost 15 times higher than it was in 2010; for wind power, which got started earlier, the figure was a more modest but still impressive 3.4 times. Building capacity has driven down prices, thus making more capacity affordable and driving prices down further. Over the past decade the "levelised costs" of solar, offshore wind and onshore wind—figures that take into account initial investment in equipment and construction, financing and maintenance—dropped by 83%, 62% and 58% respectively, according to BloombergNEF, a research group. Two-thirds of humankind now lives in countries where wind and solar power offer the cheapest new electrical-generating capacity.

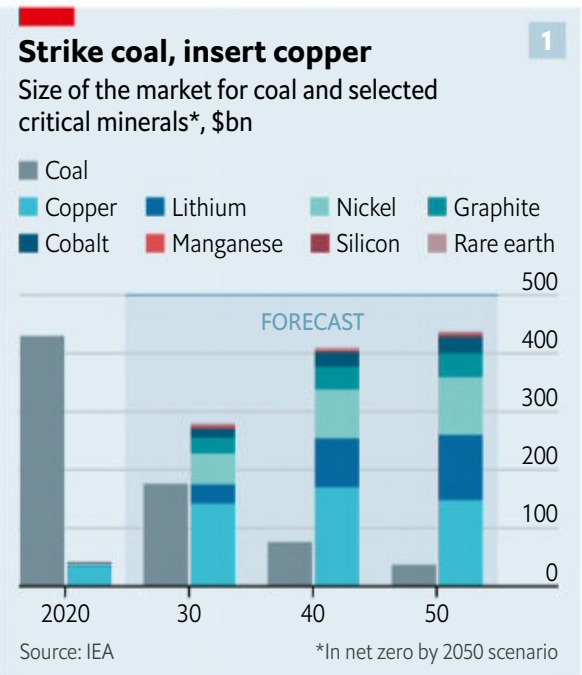
By the standards of the future, though, this is, if not paltry, certainly unsatisfactory. Without further intervention, says Seb Henbest, BloombergNEF's chief economist, "The natural rate of change is far, far too slow to achieve climate targets." In May the International Energy Agency (IEA), an intergovernmental group founded in the 1970s to protect access to fossil fuels, published a report on how to abandon them that underscored Mr Henbest's message.

Looking at pathways by which the world could reach net zero by 2050, the IEA confirmed that a lot of what was needed in the near term could be done with existing technologies. With a rapid expansion of renewable generation and electric cars through the 2020s electricity and transport could account for more than 70% of the envisaged drop in energy-related emissions. But following this path sees the world of 2030 building wind and solar farms at about four times the pace of 2020. 60% of new-car purchases would have to be electric, compared with about 5% today. Annual clean-energy investment, already at an all-time high, would have to exceed $4trn by 2030, three times its average over the past five years. And the market for key minerals needed to build clean-energy kit would expand nearly seven-fold.

There is an ethereal charm to replacing fuels won from the depths of the Earth with the barely corporeal powers of sun and wind. But doing so at scale still requires millions of tonnes of raw materials to be mined. Batteries depend on cobalt, lithium and nickel; neodymium and other rare-earth elements (which despite their name are not necessarily rare, though some are) make the magnets for electric generators and motors; the veins and arteries of the green economy run with copper.

The supply chains on which this all depends pose at least two big problems. The first is one of concentration. The mining and processing of minerals needed for renewables is far more geographically concentrated than the drilling of oil and gas; that should be troubling to anyone with a sense of how the distribution of fossil fuels has influenced history and geopolitics. Chinese firms control a large share of many crucial mineral supply chains and of the wherewithal for making batteries, a point anxiously underlined in a review of critical supply chains published by the White House on June 8th.

The second problem concerns underinvestment, particularly in metals. Revenues from coal, the dirtiest fossil fuel, continue to exceed those from the minerals that today's technologies for providing a cleaner future require (see chart 1). Investment in new projects for lithium, nickel and copper were rising before the pandemic, but at less than $25bn the figure in 2019 was only about 5% of the amount invested on upstream oil and gas. And mines require sustained effort; it can take well over a decade to get one up and running.



If the prospect of huge booms in renewables and electric vehicles has not encouraged investment, price signals produced by shortages as those booms get booming may do better. But there are issues that go beyond price. Some investors find a lot of the mining sector off-putting, either because of genuine ethical concern or because they fear tarnishing their environmental and social credentials. They have a point. Lithium mining in Chile has triggered legal fights over water in the Atacama. More than 70% of cobalt is mined in the Democratic Republic of Congo, with a history of corruption and what the sector euphemistically dubs "artisanal" mining by poor men, women and children.

American, European and Asian politicians are eager to boost mining within their countries' borders. Their citizens may prove less keen. Environmental opposition to a rare-earths mine in Greenland helped topple the ruling party in an election there in April. In Minnesota conservation groups are worried about a proposed copper-and-nickel mine's effect on creeks and rivers; in May Mr Biden's government agreed to reconsider the mine's permits. Its supply-chain review recommends both easing permitting for new mines and limiting their environmental impact; that looks likely to be a hard balancing act.

Rubbed up the wrong way

Benchmark Mineral Intelligence, a research group, recently concluded that in the second half of this decade the world's lithium demand might be more than twice the level of supply. Truly severe shortages could conceivably reverse the long-term trend towards cheaper batteries. Battery costs have declined by 83% since 2012. But those savings have come more from design and process improvements and economies of scale than from frugality with inputs. Raw materials now represent 50-70% of battery costs, up from 40-50% five years ago, making prices more vulnerable to expensive commodities.

Process changes will still reduce some of the supply gaps. Innovations which spare raw materials can spread very quickly—diamond wire saws, which reduce the amount of silicon wasted in the making of solar cells, went from novelty to industry standard almost overnight. There will be ever more scope for recycling. And there will be substitutions. Driven more by concerns over sustainability than price per se, turbine-makers are moving away from the balsa wood often used in their big blades. Andreas Nauen, the boss of Siemens Ga-

mesa, a turbine manufacturer, says his company will be using foam instead of balsa by the middle of the decade. In February Elon Musk, the boss of Tesla, an electric-car maker, called the availability of nickel the "biggest concern" as the business scales up; he would like to swap nickel-based cathodes for ones made with iron.

Ingenuity can be a powerful force. But it cannot be expected always to offset all the effects of the price signals which drive it. And it cannot do everything all at once. Tesla is still interested enough in nickel to have become an adviser to a nickel mine in New Caledonia.

Another potential shortage is land. Researchers at Princeton University have modelled transition pathways which take America to net zero by 2050. They found that the area occupied by solar and wind farms by 2030 might be about 160,000 square kilometres (62,000 square miles). That is less than 2% of the surface area of continental America. But it is around six times the area currently covered by the water in all the country's reservoirs—or a little more than the area of Illinois.

Land used for wind farms can be used for other farming, too, and turbines have spread across swathes of America's Great Plains without too much opposition. But for some technologies and places new projects may still depend less on resource abundance than on concern about local impacts and the political heft or legal budgets of those who live nearby. American offshore wind is still in its infancy in part because rich people who enjoy their views of the open ocean have fought hard to smother it in its crib—a cause which, in Massachusetts, has brought together Kennedys and Kochs. The problem is not restricted to well-off countries. In Indonesia, disputes over land rights have seriously slowed the deployment of renewables.

Building infrastructure to deliver green power from panels and pylons in plains and deserts to the places where it is needed faces some of the same challenges. Grids that are both bigger and smarter than today's are needed to make use of intermittent renewable sources at the scales being envisaged later this decade. "There will be no renewables without networks," says Armando Martínez, who leads the grid business of Iberdrola, a big utility. The IEA estimates that annual spending on electricity grids should more than triple by 2030.

But hurdles to grid investments remain stubbornly high. Disagreement over the siting of transmission lines from wind farms in Germany's north to factories and cities in its south has helped sustain southern coal- and gas-fired power stations. In America a transmission line must receive approval from each state it crosses and, in some states, approval from each county. The result is that such projects can take more than a decade to build, if they are built at all. In Vietnam the growth of solar power in recent years has overwhelmed the country's ability to transmit it to consumers. Forced curtailments of power from solar farms depress their profitability. Upgrades to the grid are sorely needed, but to date there has been little way for the private sector to provide it—Vietnam Electricity, or EVN, has a monopoly over the country's transmission and distribution.

Lighting the lantern

Such disincentives point to the biggest supply constraint, especially in developing countries: that of capital. Despite rising interest in green investment, serious attempts to meet the Paris goals will require a further surge in finance for green energy and electrification.

The biggest shortfall is in emerging economies other than China, which are expected to account for most of the rise in emissions in the coming decades. Those markets saw just $150bn in clean-energy investment in 2020, down 8% from a year earlier, according to new analysis from the IEA, World Bank and World Economic Forum. In 2019 India attracted just $8bn in clean-energy finance, less than a tenth of China's total and a sixth of America's, according to BloombergNEF. Other middle-income and poor countries saw even less investment (see chart 2).

Enel, an Italian utility, is the largest foreign investor in green energy in emerging markets. To warrant the company's investment, according to Francesco Starace, its boss, a country must have natural resources, such as ample sun or wind, be in need of infrastructure and, most important, "It has to have a legal and regulatory framework we can trust." A survey by BloombergNEF found that, on average, countries without policies to support clean energy, such as auctions for supply and liberalised electricity sectors, attract one-seventeenth as much clean-energy investment as emerging markets with clearer policies. Government support of entrenched domestic coal production and use, as in India and Indonesia, muddies prospects further.

Regulatory and political uncertainties push a country's levelised costs up. Renewable projects have low operating costs (the sun and wind are free) but require a lot of capital upfront. And in many emerging markets capital is expensive. The average cost of capital for a wind project in Indonesia is about four times that of one in Germany. Investors and politicians in rich countries claim to want to help, but they are not yet doing enough. Signatories to the Principles for Responsible Investment, convened by the UN, aim to promote sustainable finance, but some 90% of signatories are not active in emerging markets. Rich countries have failed to provide the $100bn a year in climate finance that they promised developing countries in Paris.

Politicians and investors are just starting to face these constraints. The G7 meeting on June 11th-13th may see well-targeted green aid announced. Vietnam is contemplating reforms to encourage private investment in its grid. Investors are working to harmonise disclosure of climate risks; governments may do the job for them. The most important catalyst to broader green investment, argues Ed Morse of Citigroup, a bank, would be pricing to account for the environmental and social costs of carbon.

Such measures point to a new phase in the green revolution. The engineering which allows the spinning blades of a single wind turbine to power a thousand homes, or uses lithium from desiccated lake beds to store power from sunlight in the floor of a sedan, is remarkable. But it has to be fed the materials it needs, found places to stand, integrated into the rest of the world's infrastructure and paid for. Innovation and investment in mining, pressure on the politics of land use and new catalysts for private investment, especially in emerging markets, are less iconic. But they are no less necessary. ■

NATO

Summit season

With Donald Trump gone, NATO plots its future

"OVER THE last four years we had some challenges in the transatlantic relationship," says Jens Stoltenberg, NATO's secretary-general, drily alluding to the diplomatic pandemonium of the Trump years. Now, he says, "We have a unique opportunity to open a new chapter in the relationship between North America and Europe." But will NATO's leaders take it?

On June 14th the leaders of all 30 NATO members will convene for a meeting in Brussels, sandwiched between the G7 summit in Britain and an EU-US summit. They will discuss the future of the alliance. The mood will be lighter than at past gatherings, when Mr Trump physically jostled one prime minister, threatened to withdraw from the alliance and stormed out early after being mocked by fellow leaders. Yet the challenges facing NATO have not dissipated with the arrival of Mr Biden.

In recent months Russia has massed troops around Ukraine, Belarus has forced down a European airliner to seize a dissident and America has announced the withdrawal of its troops from Afghanistan—a process more than half-complete by June 8th—forcing NATO to follow suit. Yet the point of the summit is to reorient the alliance in more fundamental ways.

NATO's strategic concept, a document spelling out its *raison d'être*, was last updated over a decade ago, at a time when Russia was assumed to be a potential partner and China an irrelevance. In Brussels leaders will enjoin Mr Stoltenberg to produce a new version, a process that may take a year or so. It will reflect a broadening of NATO's aperture, embracing new challenges such as climate change, technological threats and the rise of China.

Things are already changing. Mr Stoltenberg points to rising European defence spending (see chart) and more exercises, including large-scale drills now under way involving 9,000 troops and both British and French aircraft-carriers (see next article). The alliance is also busily rethinking the basics of military power. It is writing a new strategy for artificial intelligence and has finalised its first new cyber-defence policy in seven years. At the summit, leaders will establish a "transatlantic technology accelerator" to connect suppliers of cutting-edge military technology to investors.

One of NATO's motivations for this technological rejuvenation, says Mr Stoltenberg, is a fear that China—"a country that doesn't share our values"—is pulling ahead in key areas like artificial intelligence. "It's not obvious that we will maintain the technological edge...that was never the case with the Soviet Union during the cold war," he adds. The discussion of China is a pivotal moment, says Tim Sayle, author of "Enduring Alliance", a history of NATO, mark-

ing "a fundamental break with what the alliance has done in its first 70 years".

Yet the biggest question of all is whether the transatlantic rift under Mr Trump was a passing ruction or something more lasting. Mr Biden has made the right noises, speaking warmly of NATO and reversing Mr Trump's troop cuts in Germany. His eight-day trip to Europe will culminate in a summit with Vladimir Putin, Russia's president, in Geneva on June 16th. In theory that allows Mr Biden to form a common front with allies before facing Mr Putin, who on June 9th upped the ante by banning groups linked to his main political rival, the jailed Alexei Navalny.

Mr Biden cannot, however, placate all his friends at once. Take the example of Nord Stream 2 (NS2), a nearly finished gas pipeline from Russia to Germany that will bypass Ukraine and increase European dependence on Mr Putin. The Biden administration had opposed the project, but on May 19th said it would nonetheless waive sanctions. That pleased the German government, but alarmed those who favour a tougher approach to Russia. "The mood across Central Europe is souring after the NS2 decision," notes Michal Baranowski, an expert at the Warsaw office of the German Marshall Fund, an American think-tank. "The feeling is one of betrayal."

Then there is the fact that the landscape of European defence has shifted irrevocably in recent years. The shock of Mr Trump's election and the departure of Britain from the EU catalysed a surge of activity by the bloc, from joint defence projects to a common fund for the defence industry.

Many European officials, mindful of the radical turn in America's Republican Party and the prospect of populist successors to Mr Biden, are eager that such schemes should preserve the momentum they acquired in the Trump years. Many are complementary to NATO, such as an EU effort to make it easier for military forces to move across the continent. In practice, an element of competition is inevitable. In response to Mr Stoltenberg's push for an increase in the pool of common funding for NATO—unchanged since 2014—Florence Parly, France's defence minister, shot back: "All this money is money that won't go towards increasing national budgets and a European defence effort."

What is more, European officials know that all American presidents, Mr Biden included, have lots to worry about. America's military presence in Europe remains substantial, but its newest weapons are now typically sent to the Pacific first. So are officials. The first overseas trips of Anthony Blinken, America's secretary of state, and Lloyd Austin, its defence secretary, were to Asia. "There is considerable scepticism in Washington that a divided, self-interested Europe will ever manage much support for US efforts against China," argues Jeremy Shapiro of the European Council on Foreign Relations, another think-tank.

Even so, the geopolitics of Europe and Asia are unavoidably entwined, not least because America's national defence strategy in 2018 explicitly discarded the requirement for the country to be able to fight two wars at the same time. "We urgently need European NATO to be able to handle more of the conventional deterrence burden in Europe," says Wess Mitchell, a former American official who co-chaired a panel of experts for Mr Stoltenberg last year, "so that in the event of a major crisis the United States can focus on China without calling into question the stability of the European theatre." Having seen off Mr Trump, NATO has no time to rest on its laurels. ■

Naval power

Found at sea

ABOARD THE CHARLES DE GAULLE

A glimpse of Anglo-French co-operation

UNDER AN AZURE sky in the western Mediterranean, two aircraft-carriers sail eastwards in tandem. One, the *Charles de Gaulle*, a French nuclear-powered vessel, has 20 years of service behind it. The other, *HMS Queen Elizabeth*, Britain's new flagship, is on its maiden operational tour. For the first time the two carriers are taking part in three days of joint exercises. Code-named "Gallic Strike", this involves war games and simulated sea-to-land strikes by 15 vessels and 57 combat aircraft, including ten American fighter planes and two destroyers.

Far from the recent political posturing off Jersey, the French and British navies are busy with the unfashionable business of working together. Aboard the *Charles de Gaulle*, which that day is serving hamburger *frites* to its 1,200 sailors, Rear-Admiral Marc Aussedat points to the "historic dimension" to the exercises. Britain's Admiral Tony Radakin, the head of the Royal Navy, speaks of "bold steps towards ever greater interoperability" after meeting his French and American counterparts. The three naval bosses declare a "shared commitment to this great partnership of navies".

An aircraft-carrier is not just about warfare. Florence Parly, France's defence minister, described the *Charles de Gaulle*'s successor, due in 2038, as "75,000 tonnes of diplomacy". The huge ship, she said, is "an instrument of power and sovereignty". Britain would agree. The *HMS Queen Elizabeth* is off to the Indian and Pacific oceans as a maritime demonstration of "global Britain". The French, for whom "global France" requires no sloganising, regularly patrol in the South China Sea. This year they sent a nuclear submarine there.

An unaffordable vanity project? Or a bid by two mid-sized powers to stay relevant? Big aircraft-carriers, of which only 18 are in service worldwide, remain controversial. But for three days in June rivalry and gesture politics are set aside. Training over, Britain's carrier continues eastwards. The *Charles de Gaulle*, after a four-month tour off Syria and the Persian Gulf, circles back and heads home.

Diplomacy by the displaced kilotonne

Sex and gender

Trans-national

Europe enters the gender wars

DEBATES ABOUT transgender rights have raged most angrily in the Anglophone world, but they are now intensifying across Europe. Last month the Spanish parliament voted against a bill that would allow people to determine their own gender. A day later Germany's voted down two such bills. Few newspapers took any notice.

Self-ID, as it is known, is the idea that people be allowed to change the legal markers of their sex simply by saying so, without jumping through any medical hoops. Trans-rights groups say this is crucial for trans people, who face daily prejudice. In Germany one of the bills, put forward by the Green Party, proposed that children be allowed to have gender-reassignment surgery from the age of 14, even if parents oppose it. It would also have introduced a fine of €2,500 ($3,045) for referring to a trans person based on their natal sex.

As elsewhere, the debate has split the LGBT community. "It is intolerable that trans people continue to be subjected to lengthy and expensive court proceedings with assessments that are degrading," said LSVD, one of Germany's largest groups, in response to the defeat. Some feminist and gay-rights groups, however, say that such a law could endanger women and lead to more gay teenagers being told they might be trans and steered towards hormones and surgery. The proposals are "an authoritarian move dressed up as a liberal one", says Melli Beinhorn of LGB Alliance Deutschland, a gay-rights group.

The bill in Spain was proposed by Podemos, a left-wing party. It would have set no age restriction for self-ID, allowed puberty blockers and hormones for minors and let males who identify as women play in women's sports. France allowed self-ID in 2016 with little public debate. Ireland did so in 2015. Italy does not yet allow it.

In Scandinavia doctors are leading a pushback. In May the Karolinska University hospital in Stockholm, which contains Sweden's largest adolescent gender clinic, released new guidelines saying it would no longer prescribe blockers and hormones to children under 18. This challenges protocols proposed by the World Professional Association for Transgender Health (WPATH), a body that says only "affirmation" of a child's proclaimed gender is the "standard of care".

Research has had an impact. In a paper in 2015, a Finnish psychiatrist, Riittakerttu Kaltiala-Heino, found that more than 75% of adolescents applying for sex-reassignment surgery needed help for psychiatric problems other than gender dysphoria. (Another paper, published this year, found 88% needed such help.) Finland last year adopted strict guidelines prioritising therapy over hormones and surgery.

Much more to say

Defeat of the bills was more because of domestic politics than because people understood the issues and rejected them, says Amparo Domingo of Women's Human Rights Campaign in Valencia. "Most Spanish people don't know what it is all about." Four new bills on "gender identity" (two proposing self-ID) have been drafted. If the Greens do well in German elections in September, they may re-introduce their bill, too. The debate is far from over. ■

Narcotics in Europe

Party lines

AMSTERDAM

Drug use proves immune to covid-19

ONE MIGHT have expected that a pandemic that put a stop to parties would also reduce the use of party drugs. Indeed, wastewater samples in some European cities showed that residues of cocaine and MDMA (also known as ecstasy) fell during the covid-19 lockdowns of early 2020. But by last summer Europeans were riding high again. In many cases, consumption simply moved from club to living room.

Thus concludes this year's report by the EU's European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). Police, aided by surveillance of messaging apps (such as the Trojan Shield sting announced this week), are confiscating more cannabis, cocaine, ecstasy and crystal meth than ever. In 2020 inspectors at the port of Rotterdam seized almost 41 tonnes of cocaine, seven more than in 2019. In one week this spring they discovered 2.7 tonnes hidden among Ecuadorian bananas and Malaysian computer parts. In the port of Vlissingen divers found a crate chained underwater to a freighter.

Yet the supply of drugs is ample. Retail prices are constant, and the potency goes up every year. On average, cocaine in Europe was 57% purer in 2019 than ten years earlier. An ecstasy pill contained almost 2.5 times as much MDMA, and cannabis had 56% more THC (the narcotic bit).

Those with a laissez-faire attitude may not find this worrying. The most-used recreational drug by far remains cannabis, which has relatively few harmful effects. But number two, and growing, is cocaine. After opioids it is the drug most likely to send users to hospital, present in 22% of overdoses. And whereas ecstasy and amphetamines are typically manufactured in Europe, cocaine must be imported.

That has fuelled the growth of powerful crime syndicates. In the 2000s, networks that initially imported hashish from North Africa began bringing in cocaine. They set up distribution operations stretching from Spain to Scandinavia.

Such groups, including the so-called Mocro Mafia in the Netherlands and gangs such as Death Patrol in Sweden, are the source of much of the most lurid violence in Europe these days. Ridouan Taghi, a Moroccan-Dutch man arrested in 2019 in Dubai, is on trial in Amsterdam, suspected of ordering hits on informants and on a lawyer. (He denies the charges.) Swedish gangs have taken to using hand-grenades as a gesture of intimidation. In Dijon last summer, there were street battles between drug-dealers of North African descent and hundreds of Chechen immigrants.

The total number of drug-related killings is small. But because they are often gory and linked to immigrant communities, they create the impression of a crime wave. Although overall murders in Europe have declined sharply in the past two decades, killings linked to the drug economy have not, according to Marieke Liem of the Violence Research Initiative, a project based at Leiden University. "There are no written contracts and no court of settlement, so if there is a dispute, either people reach an agreement or you get violence," says Jan Meeus, a Dutch crime reporter.

Criminality spills over into other industries, too. At the port of Rotterdam, couriers used to sneak in to collect drugs from shipping containers. Today they are likely to infiltrate a big transport company, acquire certification and drive out with the entire container. Covid-19 has accelerated ▸▸

the shift to larger scales. "You can't have people swallowing packages of drugs and flying in from Latin America any more. That's why we see so much coming in with the banana shipments," says Andrew Cunningham of the EMCDDA.

Europe has been spared two of this century's grimmest drug problems. Although the overuse of prescription painkillers led to an opioid epidemic in America, in Europe they are still mainly used by ageing addicts. Sensible policies on methadone and other substitution therapies have helped. Methamphetamines are relatively rare in Europe, too. But recently crystal meth has made some inroads, particularly a cheap variety made in Afghanistan directly from the ephedra plant. And while many American states have decriminalised cannabis over the past decade, few European countries have done so. That may have perverse consequences. As the cocaine industry shows, illegal networks that spring up to supply one drug are likely to end up being used for others. ■

Italy and climate change

How green is my Draghi?

ROME

A daunting ecological task for the new prime minister

OF ALL THE appointments to Mario Draghi's cabinet, arguably the least expected was that of Roberto Cingolani, his minister for ecological transition. A physicist and former science director of the Italian Institute of Technology, Mr Cingolani came into government from a senior job in the defence industry, an odd background for an eco-warrior.

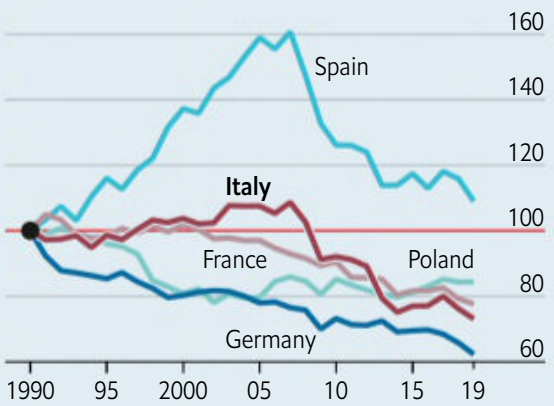
Mr Cingolani counters that he has taught courses on sustainability but that, anyhow, his new brief touches on so many different aspects of science that no one could be an expert in them all. His ministry's remit is certainly vast: it is charged with overseeing the allocation and spending of the biggest chunk of the €235bn ($285bn) that Mr Draghi plans to devote to post-pandemic recovery, mostly comprising grants and loans from the EU, but with a sizeable top-up from Italy's own resources. The ministry for ecological transition is responsible for handling some €70bn, or almost 30% of it. And since Italy will get more than any other EU country from the European Commission, there should be scope for it to play a decisive part in helping the EU reach its target of cutting greenhouse-gas emissions to 55% below the level of 1990 by 2030.

So how do its plans for eco-transition

Better than some

Greenhouse-gas emissions, CO_2 equivalent

1990=100



Source: European Environment Agency

shape up? The commission will take at least another month to pronounce. But the environmentalists' verdict is in—and it is damning. Green Recovery Tracker, a project launched by two German NGOs to assess EU members' plans, estimates that only 16% of the overall amount that Italy expects from the commission will help slow climate change—the lowest share of any big recipient (though at least, unlike France and Germany, Italy is not proposing schemes that the German NGOs think will actually make things worse).

On June 4th a group of more than 200 Italian individuals and associations, including some notably moderate ones such as the Italian Meteorological Society, announced legal proceedings against the government, claiming it was failing in its duty to future generations. Further pressure may come from within the governing coalition, from the ecology-minded Five Star Movement, now that it has settled an internal dispute that had prevented a former prime minister, Giuseppe Conte, from assuming the party leadership.

Mr Draghi's ministers had just 11 weeks in which to revise the previous government's recovery scheme. Mr Cingolani says his strategy has been to use the new plan to pluck "the low-hanging fruit of decarbonisation". By far the biggest element in his programme is the extension of a "superbonus" introduced by the previous government that allows 110% of the cost of works to boost domestic energy efficiency to be set against tax. Letting the programme run to the end of 2022 for private householders and until mid-2023 for social-housing associations will cost almost €14bn, nearly a fifth of Italy's allocation to green projects.

Mr Cingolani says he would personally have favoured a less generous tax break. But, he adds, "Italy has a lot of old buildings, so it makes a lot of sense to [augment the] energy-efficiency of homes." In a statement on April 30th a group of Italy's leading environmental organisations decried the fact that the government's proposals would do nothing to make factories more energy-efficient. In 2018 houses and offices accounted for almost a fifth of Italy's greenhouse-gas emissions, but industry accounted for more.

On the supply side, Mr Cingolani says his approach is to "electrify all that can be electrified". Much of that falls beyond his remit. Other ministers will oversee the spending of a projected €13.2bn on new high-speed rail links, for instance. But Mr Cingolani is largely responsible for changing driving habits in a country with proportionately more cars than anywhere else in the EU bar Luxembourg (663 per 1,000 inhabitants, against 574 in Germany and 482 in France). In Italy only one journey in ten is by public transport. Mr Cingolani wants to spend more than €7bn on new, cleaner mass-transit systems and to retire old diesel buses and trains. But he has been criticised for allocating barely a tenth of that sum to creating a network of charging points for electric cars. "More will be needed," he agrees. "But we have to make supply and demand grow together."

If Italy is to meet its 2030 target it will need by then to have around 70 gigawatts of renewable power-generating capacity. That implies adding 8GW a year. The current rate is a tenth of that. Mr Draghi's government has introduced legislation to simplify the bureaucracy that has ensnared previous energy projects. But in so doing it has raised other concerns.

One is that simplification will remove checks needed to prevent corruption and infiltration by the mafia. Another is that without detailed scrutiny projects could be approved that would scar Italy's magnificent landscape, puncturing its horizons with wind farms and smothering its valley floors with solar panels. Mr Cingolani says he is determined to move what he can offshore. But he adds: "There's no such thing as a free lunch. We have to find compromises. You can't say 'no' to everything." ■

The shape of things to come

Charlemagne | The many faces of Sebastian Kurz

Austria's chancellor is a strangely familiar figure

A SENSE OF *déjà vu* surrounds Sebastian Kurz, the Austrian chancellor. It is certainly not due to his appearance. At 34, he is a decade or three younger than most European leaders. A slicked-back bob stands out against the near-mandatory short back and sides of his peers. Nor does it extend to his personality. Where most politicians enjoy grandstanding, Mr Kurz is renowned as a listener. While leaders can be brusque, Mr Kurz is relentlessly polite, cultivating the image of a well-mannered son-in-law.

It is Mr Kurz's approach to politics that is familiar, odd though that may appear at first glance. Although he became Austria's youngest chancellor in 2017, aged 31, his career has been decidedly bumpy since then. His first government collapsed in a corruption scandal in which his booze-soaked coalition partner was taken in by someone pretending to be a Russian oligarch's niece. Once hailed as an admired force within European politics, Mr Kurz became the loudest critic of the EU's response to covid-19. Back home, a series of sprawling inquiries into the previous government is circling closer to Mr Kurz and his allies. A potential perjury charge now hangs over the Austrian leader, for allegedly lying during one of those inquiries. He has defended himself by lashing out at the judiciary. Mr Kurz's career is quite a tale. But similar versions of it have been told before.

In his relationship with the EU Mr Kurz best resembles David Cameron, Britain's former prime minister, who called and lost the Brexit referendum. Among Eurocrats a comparison to Mr Cameron is not a compliment. Like Mr Cameron, Mr Kurz is happy to attack the EU, taking credit for any of its achievements yet shifting blame to Brussels for any problem. When the EU's vaccination rollout was sluggish, Mr Kurz was among its loudest and most trenchant critics. The Austrian was among the hold-outs determined to limit the EU's €750bn ($915bn) recovery fund. Though happy to bash the EU, he is not stupid enough to want to leave it. Instead he sees the EU as a resource that can be exploited endlessly without any need for replenishment.

When it comes to domestic politics, Mr Kurz's approach is one in which the acquisition and retention of power, rather than principles or policies, is his guide. In this he most recalls Mark Rutte, the Dutch prime minister, one of the continent's longest-serving leaders. Mr Rutte has clung on by doing deals with anyone willing to keep him in office, whether it be a tie-up with soggy liberals, a "grand coalition" with the centre-left, or a peg-on-the-nose deal with Geert Wilders, a far-right populist.

Mr Kurz has shown similar adaptability. His first coalition was with the far-right Freedom Party. When that collapsed, he hopped into bed with the left-wing Green Party. He may think of himself as a liberal Christian Democrat, but the truth is that he is not much of either. Far from being a true liberal, he regularly questions the compatibility of "political Islam" with European values. Nor is there much Christian about his Christian Democracy: his belligerent stance against asylum-seekers has been criticised by the church. Staying in power has been his guiding principle.

Some comparisons are considerably less benign. Critics of Mr Kurz sometimes compare him to Viktor Orban, Hungary's nationalist leader, who has overhauled the state to embed himself in power. When asked which EU country most worried him, Martin Schulz, the former leader of Germany's Social Democrats, suggested Austria rather than any of the bloc's usual trouble-makers farther down the Danube.

Those in the Kurz camp bristle at the comparison. Mr Orban has total control of the levers of state power, thanks to a supermajority in parliament, which lets him change the constitution at will; Mr Kurz relies on a rickety coalition with the Greens. Austria is an established democracy, albeit quite a cosy one, with rigorous institutions. What Mr Orban and Mr Kurz share, however, is a belief that the system is rigged against them. Mr Kurz has taken to criticising Austrian prosecutors, accusing them of making mistakes in cases against his allies as well as being in hock to his political rivals. Paranoia, whether sincerely or cynically felt, is not a healthy trait in a politician.

As scandals gather around Mr Kurz, comparisons are now made to another prime minister who long managed to maintain power amid swirling allegations of wrongdoing: Binyamin ("Bibi") Netanyahu, the Israeli leader. The two have become unlikely buddies. Mr Kurz flew the Israeli flag on government buildings during the recent violence in Israel. When chiding the EU for its slow vaccine rollout, Mr Kurz met Mr Netanyahu to discuss Israel's speediness. None of the accusations against Mr Kurz matches the buffet of charges against Israel's prime minister. But Mr Kurz would be happy to copy Mr Netanyahu's ability to win elections repeatedly amid chaos and recriminations. He is banking on outrage fatigue, with voters taking each revelation a little less seriously than the one before, until any fresh accusation is not worth much at all. Things may look dark for Mr Kurz, but Bibi-esque tenacity—especially as the chancellor's polling numbers are just about holding up—may save him.

A snail crawling along the edge of a razor

Each of Mr Kurz's doppelgangers has in the end run into trouble. Mr Cameron is a byword for political disaster. Mr Rutte is stuck in negotiation over the next Dutch government, with no guarantee that he will keep his job at the end of it. Where Mr Orban once ruled supreme over what even he has called an "illiberal democracy", today he is jittery about his liberal opponents, who seem to have finally managed to gang up. And Mr Netanyahu is at last poised to lose office. Mr Kurz needs a new, more original approach to avoid such fates. Get it right and he has the potential to dominate Austrian politics for a generation. Get it wrong and a very long retirement beckons. ■

The job market

Something to celebrate

PETERBOROUGH

For the first time in decades, power is shifting from firms to low-paid workers

PETERBOROUGH, A MID-SIZED city 100 miles north of London, is at the forefront of Britain's recovery. It has a lot going for it: a pretty town centre built around an imposing medieval cathedral, reasonably priced housing and a council that is keen on development. But best of all, it offers easy access to the motorway network.

That was important before the covid-19 pandemic. It is even more important now. Amazon, an online retailer, built a 500,000-square-foot distribution centre in the city in 2010, and has become the biggest local employer. The firm is now looking to add another 110,000 square feet. In recent years IKEA, a Swedish furniture purveyor, and Tesco, Britain's largest supermarket chain, have also moved distribution depots to the outskirts of the town. All of this means it is a good time to be looking for warehouse work in Peterborough.

But it is not just warehouse workers who find themselves in demand. In Peterborough, and across the country, the reopening of bricks-and-mortar retail and hospitality businesses has triggered a surge in hiring. Bosses complain of labour shortages. For the first time in decades, bargaining power is shifting from firms to low-paid workers.

It is an unusual situation for Britain. After the global financial crisis, the country experienced a job-rich, pay-poor recovery—thanks to a flexible labour market created by deregulation in the 1980s and 1990s. Employment rates reached record highs, but wages did not regain their pre-crisis levels until 2020. Economists were repeatedly forced to revise estimates of how far unemployment could fall before generating sustained wage pressure. It was only a year or so ago that "we were starting to see what a tight but flexible jobs market would look like," says Gavin Kelly of the Resolution Foundation, a think-tank. Then the pandemic hit and recession followed.

Peterborough's economy, which began its recovery early, offers a glimpse of the future. An analysis of labour markets in 63 urban areas by the Centre for Cities, another think-tank, found that in April distribution hubs were seeing the fastest growth in vacancies. Online advertisements for positions in Peterborough were already 4% above pre-pandemic levels before retail and hospitality reopened (at a time when they were still down by 15% in the capital). As more firms have reopened, demand for workers has stepped up. Bars and cafés in central Peterborough are littered with "help wanted" posters. A local pub owner says he has stopped serving lunch because he is unable to find a chef.

Rising vacancies have not yet been accompanied by rising wages. But that may change. Pawel Adrjan, an economist at Indeed, an online-recruitment company, notes that advertised pay in food preparation and service has nudged up from £9.25 ($13.11) at the start of the year to £9.40 now. Asked if he might have to raise wages in order to attract a chef, the Peterborough pub owner pauses for a moment, before admitting "it might come to that". For employers accustomed to being able to hire at will, at a price that suits them, the past few weeks have come as a shock.

It is not just the post-pandemic recovery that is causing shortages. Although the exact number is unknown, lots of migrants appear to have left the country—something that is proving especially difficult for firms that rely on seasonal workers and in sectors with low pay and long, anti-social hours. Unless tweaked by the government, the post-Brexit immigration regime will continue to reduce the number of low-paid workers who are able to make it to Britain. ▸▸

Participation rates have also dipped among older workers, suggesting the recession prompted 60-somethings to bring forward their retirement. Some younger folk are reluctant to work, too. Covid-19 vaccine bookings in England only opened for 25-to-29-year-olds on June 8th, meaning most 20-somethings remain at a higher risk of infection. Bosses note that many are reluctant to work in crowded rooms.

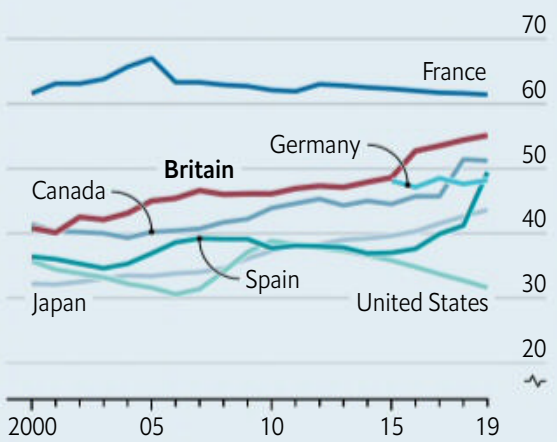
Some of these disruptions will ease over the coming months. Youngsters will receive their jabs. Martin Beck of Oxford Economics, a consultancy, notes that 5m EU workers have applied for settled status in Britain since Brexit. "Even if a lot did go home during the pandemic, the obstacles to coming back won't be particularly onerous," he points out. Most forecasters expect unemployment to rise later in the year, as support is pulled back. Tom Clougherty of the Centre for Policy Studies, a think-tank, suggests that the end of the furlough scheme, due to be tapered away by September, "will be a real test of just how strong the labour market is".

Yet even if some bargaining power shifts back to employers, workers in these industries will benefit from a rising wage floor. The bite of Britain's minimum wage, the ratio of that wage to median earnings, has increased markedly in recent years relative to other rich countries (see chart). The government is aiming to increase it further, to 65%, by 2024. The hope is this will force firms to train staff, invest in technology and thus raise productivity.

Poor Britons had a miserable time of it last year. They were the most likely to see their incomes fall from either job losses or from being furloughed. But after being at the centre of the storm, they now find themselves at the heart of the recovery. Unlike in America, Britain's government has not committed to "running the economy hot". A rise in unemployment could put an end to wage pressure. But for the moment, at least, low-paid workers are enjoying their first taste of bargaining power in almost 20 years. ■

Turning French

Minimum wage, % of median earnings



Source: OECD

Rural life

Carry on glamping

BRADFORD-ON-AVON

Why farms are moving into solar energy, campsites and natural burials

"I'M A FIFTH-GENERATION farmer, although I don't do much farming now," admits Tim Bowles. Instead, he runs Campwell, a trendy campsite on the family farm outside Bradford-on-Avon, a town in Wiltshire. Young professionals flock to stay in log cabins, yurts and bell tents—with compost loos—and to enjoy activities like yoga, wild swimming and sheep herding. "It'd probably blow my great-grandfather's mind," Mr Bowles says.

In the past decade, the number of holdings in England has fallen by a fifth, reflecting dwindling incomes, consolidation and also definitional changes. To survive, farmers are turning to new ways of making money. According to official figures, 65% of English farms now do more than just grow crops or raise livestock, up from 58% in 2013. The phasing out of the common agricultural policy—an EU subsidy scheme—provides an extra incentive to find new sources of cash. Green subsidies provide a reason to build solar farms, as many are.

Yet farmers are not just diversifying, they are doing so in increasingly diverse ways, too. The covid-19 pandemic has seen them branch out into home deliveries, milk-vending machines and holiday accommodation. One farmer is creating a natural burial site. A shorthorn-cattle farm in Scotland now offers speedboat trips on its loch. Another in Norfolk is opening an outdoor theatre.

Farms are also taking inspiration from their urban neighbours. Many are now opening places to work, after the success of a farm in Leicestershire, called Burrough Court. It opened a 22-acre office park in 2000, complete with a yoga studio. "The local agents said my father was barking mad," recalls Becky Wilson, the marketing manager. Now it is expanding.

The average farmer is 60 years old, and resistant to change. But that is less true of their children. Matt Lobley of the University of Exeter says that many avoid traditional agricultural training by going to university, often to study business or marketing, before starting an independent career. "They then come back with a whole load of different ideas...and are often really quite innovative," he notes. Richard Bower is one such example. His parents discouraged him from farming, so he went off to work in food marketing. He has now returned, and has spent £1.8m ($2.5m) setting up a café, adventure playground and soft-play centre. "Historically farmers said 'Get off my land'," says Mr Bower. "Nowadays we are saying 'Get on my land'."

The government wants to encourage this new breed. On May 19th George Eustice, the environment secretary, launched a consultation about the idea of paying older farmers a lump sum (of up to £100,000) to retire. Farms would then become more innovative places, or so the theory goes. Outside Bradford-on-Avon, Mr Bowles's father shows no lack of entrepreneurial zeal, running self-catering cottages. There is, however, a clash in styles. Mr Bowles says his father can often be seen wheelbarrowing dead sheep through the farm while guests arrive. "He'll just say, 'Oh, it's a farm, isn't it?'" ■

Bagehot | Geordie Tory

A new version of Essex man is born in the north

VIZ, AN IDIOSYNCRATIC combination of adult comic and satirical magazine, has been compulsory reading in all civilised households since Chris Donald started producing it, in 1979, from his bedroom at his parents' house in Newcastle. It features characters who go to the heart of modern Britain: Millie Tant, a ranting feminist; Sid the Sexist, who gives Millie plenty to rant about; Roger Mellie, a disgusting television personality; and dozens more whose names cannot be mentioned in a respectable newspaper. This columnist would like to suggest a new subject for *Viz* to lampoon: Geordie Tory. It seems odd, to say the least, for the north-east's premier publication to remain silent about a political revolution that is turning a former Labour stronghold Tory blue.

The London-based commentariat has convinced itself that Geordie Tory is a left-behind loser who voted for a Brexit and Boris spit-roast to express his rage at globalisation. This is only a small part of the story. For the hidden truth about Geordie Tory is that he is actually doing rather well for himself. He did not go to university (thus avoiding a pile of student debt), but quickly found a job at a local firm, and his money goes much further in the north than it would in the south. He lives in a four-bedroomed semi-detached, has a couple of cars in the drive and can rely on two sets of grandparents to chip in with child care. He zips to work or Asda in a few minutes, thinks the local school is doing an acceptable job and looks forward to his next holiday in Florida, providing the government can stop faffing about. He pities his school friends who went to university, moved down south and now either live in a crowded flat or (before the covid-19 pandemic) spent a couple of hours a day on a packed train.

Geordie Tory's world has been transformed by a combination of de-massification and bourgeoisification. The Labour Party's power was based on industries (such as coal, steel and shipbuilding) and companies (such as Swan Hunters and Vickers-Armstrong) that employed thousands of unionised workers. The new economy is built on a combination of skills and flexibility. There is a handful of (mostly de-unionised) big companies (Flymo-Electrolux in Spennymoor, Cummins Engines in Darlington and Nissan in Sunderland), but they co-exist with hundreds of smaller firms that manufacture car parts, switch gears, air-conditioners and specialist equipment for the oil-and-gas economy. Twenty years ago towns such as Amble in Northumberland did not have much upmarket entertainment. Now they are so chock-a-block with restaurants, microbars and fancy cafés that the locals complain that you can't find anywhere to park.

Geordie Tory has long been attracted by the Tory party's pro-business, low-tax philosophy, but continued to vote Labour out of habit. Two things gave him permission to switch: Brexit and Jeremy Corbyn. Whether he voted for Brexit or not he was unhappy with attempts to overturn "the people's will". And the north-east is to Britain what the south is to America. It has provided the country with soldiers, sailors and airmen in numbers far exceeding its share of the population, and its landscape is littered with stone memorials to the fallen (South Shields lost a higher proportion of its citizens in the second world war than any other town). Geordie Tory was damned if he was going to vote for a man who mistook valour for warmongering and made excuses for the IRA.

He is nevertheless far from being a defender of the government, let alone a Tory activist. He thinks about politics as little as possible, except when it impinges on his life. But something profound has changed in the past few years. The "sod you" factor that has always been such an important aspect of regional politics has found a new target. During Labour's glory days from 1945 to the early 21st century the "sod you" factor favoured the left. The Tories were the party of the southern elite with its soft hands and namby-pamby ways. Today it favours the right. Geordie Tory doesn't so much like Boris Johnson as loathe the *Guardian*-reading, Britain-bashing, virtue-signalling metropolitan establishment that holds Mr Johnson in contempt.

Feeling blue

How reliable a Tory will Geordie prove? Though he thinks Sir Keir Starmer is an improvement on his predecessor, the Labour Party is no longer relevant to his life. The local party caters to two exotic (and largely incompatible) groups of voters. It continues to draw support from the truly disadvantaged in old mining towns such as Ashington. But its biggest success is in Newcastle, particularly posh suburbs such as Tynemouth and Whitley Bay, to the east of the city, and Gosforth and Jesmond (birthplace of *Viz*), to the north, where the public-sector aristocracy (doctors married to lawyers, civil servants married to teachers) enjoys a life-style as plush as any in the country.

Geordie Tory certainly wants something in return for his vote. It is one of his articles of faith that the north-east is being short-changed by a southern England that simultaneously grabs an unfair share of national resources and produces nothing of value. (Geordies, regardless of their politics, are convinced that people who wear more than T-shirts and shorts in the depths of winter, as southerners tend to, are too "soft" to be productive.) But the truth is that Mr Johnson does not have to deliver all that much to be regarded as a success. The conversion of the A1 north of Morpeth into a dual carriageway, the restoration of the South-East Northumberland railway, a few high-profile projects that put cement mixers and excavators in the right places, and that should be enough. One of the greatest tricks in politics is to put yourself at the front of a victory parade and to declare yourself its leader. By a bizarre combination of circumstances, involving both Brexit and the long-term transformation of the Geordie economy, this is exactly what the quintessential southern Tory, Alexander Boris de Pfeffel Johnson, seems to have done in the north-east. ■

Iranian politics

The rise of Raisi

DUBAI

Iran has rigged its election to favour a hardliner. Voters may stay at home

IT IS PROBABLY a bad sign when one of the few memorable moments in a presidential debate is an admission that the ballot is rigged. The candidates in Iran's spent much of the televised event, held on June 8th, criticising an incumbent who is not even on the ballot. Perhaps they felt there was little to discuss: most are hand-picked conservatives put there to lose. It fell to Mohsen Mehralizadeh, a former provincial governor of little note, to point out the obvious. The regime, he said, had aligned "sun, moon and the heavens to make one particular person the president".

There are no free elections in Iran, where clerics wield ultimate authority and candidates may be disqualified for the flimsiest of reasons. Even by these standards, though, the presidential election scheduled for June 18th is shaping up as a farce. Nearly 600 candidates applied to replace Hassan Rouhani, who took office in 2013 and is barred by term limits from running again. The Guardian Council, a group of clerics and lawyers who vet candidates, allowed only seven on the ballot.

The cull removed any serious challengers who favour better economic and political ties with the West. Among them was Ali Larijani, a former speaker of parliament whose brother sits on the Guardian Council. Eshaq Jahangiri, the current vice-president, did not make the cut, nor did Mostafa Tajzadeh, a former deputy interior minister who spent six years in prison for fomenting anti-regime protests. Mahmoud Ahmadinejad, the only layman to have served as president, was also disqualified, for the second time.

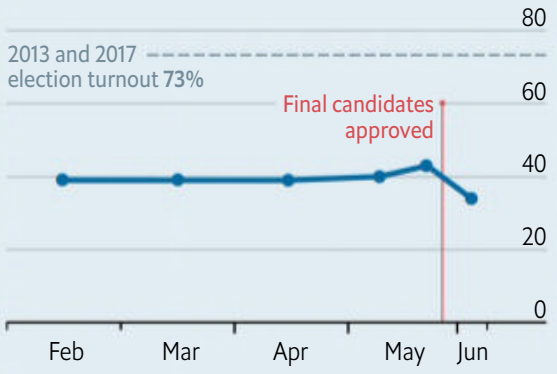
This is not meant to be an election, in other words. Rather it is meant as a coronation of Ebrahim Raisi, the head of the judiciary and a staunch hardliner who helped orchestrate the mass execution of political prisoners in the 1980s. Even he seems a bit embarrassed by the brazenness of the rigging. "We should make a more competitive election scene," he said last month. Mr Rouhani was more direct, calling the election "a corpse".

Apart from Mr Raisi, the meagre choices include Saeed Jalili, a former secretary of the national security council, and Mohsen Rezaei, a former head of the Islamic Revolutionary Guard Corps (IRGC). Both are conservatives who made unsuccessful bids for the presidency in 2013. The only non-hardliners are Mr Mehralizadeh and Abdolnasser Hemmati, who led the central bank until last month. On his watch the rial crashed, losing two-thirds of its value in three years, largely owing to American sanctions reimposed in 2018 when Donald Trump disavowed the nuclear deal between Iran and world powers.

Hardly an alluring CV, that. But some Iranians have settled on Mr Hemmati as a protest candidate. The others have reacted accordingly. In the first two debates the lower-ranked candidates spent much of their time ganging up on Mr Hemmati, who complained that they were providing "cover" for Mr Raisi. The front-runner, a soporific speaker, tried to float above the fray. The Guardian Council has reminded Iranians that it may disqualify candidates up until election day—a warning, perhaps, that Mr Hemmati could be banished if he seems too popular.

Turned off

Iranians who say they will definitely vote in the election on June 18th 2021, % responding



Source: Iranian Students Polling Agency

There may be little risk of that. Many Iranians seem inclined simply to stay at home. A survey published earlier this month by a semi-official agency found that 32% would not vote "under any circumstances". Just 34% said they would definitely vote, down from 43% in mid-May, before the Guardian Council winnowed the candidates (see chart). Calls for a boycott are mounting. There are even signs of discontent inside the IRGC, some of whose officers would like to wrest more power from the clerics. The Guardian Council barred some of the IRGC's favoured candidates, such as Saeed Mohammad, a former guardsman who runs a huge construction conglomerate. Another, Hossein Dehghan, a former defence minister, withdrew.

All of this would suggest a repeat of last year's parliamentary election, which saw reform-minded candidates disqualified en masse. The turnout then was just 43%, down 19 points from the previous ballot and the lowest in Iran's history. Though the regime cares little for democracy, it likes to maintain a respectable façade. Low turnout is seen as an embarrassment. Ali Khamenei, the supreme leader, declared voting a religious duty and called failing to participate a "great sin". In a speech on June 4th he also said that some candidates had been "wronged" by the vetting process and asked the Guardian Council to "restore their honour". It refused.

The risk of mass protests, like the ones that followed a fishy presidential election in 2009, which Mr Ahmadinejad won, seems remote. Most Iranians have lost faith in the system, reformists included. Mr Rouhani's eight years in office brought economic decline and scant social change. Still, Mr Khamenei could have overruled the council and added more candidates to drum up enthusiasm. He chose not to.

His reasons may be partly tactical. The looming election of a hardliner has put pressure on American negotiators to conclude an agreement for re-entering the nuclear deal. The parties, sequestered in a Viennese hotel, are said to be making progress on a timetable for America to lift sanctions and for Iran to reimpose curbs on its nuclear programme. Mr Raisi, they fear, would toss a spanner in the works. His advisers would take time to get to grips with the file and might include ideologues like Mr Jalili, whose negotiating style involves hours-long lectures on theology.

The supreme leader, who is 82, may also be writing his legacy. He has consolidated power in a narrow group of clerics as he prepares the country for his eventual successor. Mr Raisi is thought to be a leading candidate, as is Mojtaba Khamenei, the supreme leader's second son. Some Iranians wonder if Mr Raisi's selection as president is in fact meant to undermine his chances of getting the top job. Most Iranian presidents, even those genuinely supported by voters, leave office with their popularity in tatters—and Mr Raisi, the likely winner of a sham election with a low turnout, will not have much popularity to start with. ■

Morocco

Pottery in pieces

SAFI

Why are famed artisans paving roads in the desert?

A LITTLE MORE than a century ago, Boujemâa Lamali, an Algerian by birth, was recruited to Morocco by its French colonial administrators. His mission: to revive the country's tradition of artistic pottery. So Lamali set up a school in Safi, on the Atlantic coast. The city became a hub for artisans. Before the pandemic some 2,000 of them officially worked in Safi's 212 registered potteries. Thousands more toiled off the books. In total, Morocco's craft sector employed 2.3m people, a fifth of the country's workforce, and accounted for 7% of GDP.

Today, though, the winding alleys of Safi's famed Colline des Potiers (Potter's Hill) are quiet. The tourists who thronged the streets—and bought the pottery—have gone, because of covid-19. Morocco's GDP fell by around 7% in 2020. A large number of Safi's potteries have closed. For the first time in generations, most of its artisans are jobless or hanging on by a thread.

"Divorces have skyrocketed," says an elder. "What can a man do when he comes home each day with nothing for his family?" The government has tried to help the jobless, but only those who worked formally are eligible for its monthly handouts of $220. Locals say artisans have been moving "in droves" to the desert in search of work as day-labourers on a big road-building project.

To help businesses, the central bank reduced interest rates last year to a record low of 1.5%. State-backed loan-guarantee programmes disbursed 50bn dirhams ($5.56bn) to 80,000 small and medium-sized firms. Still, in September the government estimated that 35% of craft businesses had closed for good.

"Credit alone won't help," says Abdelkarim Boudlal, who manages a store selling pottery in Marrakesh. "What we need are ways to lower our operating costs, like rent relief. We don't want to get into debt when there are no customers." That is the main problem for many of Morocco's artisans. "Most of our clients are from Europe and America, so when there are no planes, there are no tourists, no clients, no demand," says Hicham Tabii, a potter from one of the oldest families in Safi.

The government is working on that, too. A quarter of Moroccans have had at least one dose of the vaccine, more than in most developing countries. The aim is to save lives, of course, but also to send a signal to tourists that the kingdom is safe. On June 15th most international flights will resume.

Even if the tourists trickle back, Safi's artisans could learn a lesson from other communities. The Berber pottery village of Tamegroute, to the east, has not suffered as much. Its artisans have been selling their wares online for over a decade. Perhaps more of Safi's craftsmen will soon do the same. Mr Tabii points out that the city's potters have weathered crises, including war, in the past. "We change our strategy," he says.

Not a makers' market

Migration

Go west, habibi

Lebanese move to west Africa, escaping the crisis at home

When banks started to fail and protesters began filling the streets in 2019, Moussa Khoury resisted the temptation to leave his native Lebanon. After a massive explosion flattened part of Beirut, the capital, last year, he fixed his broken windows and stayed put. But in the end he could not withstand the collapse of Lebanon's currency. Mr Khoury runs a startup selling vegetables grown in hydroponic planters. His customers paid him in liras, while his suppliers demanded hard currency. So in April he accepted an offer from an acquaintance who promised to invest in the business—if Mr Khoury moved it to Ghana.

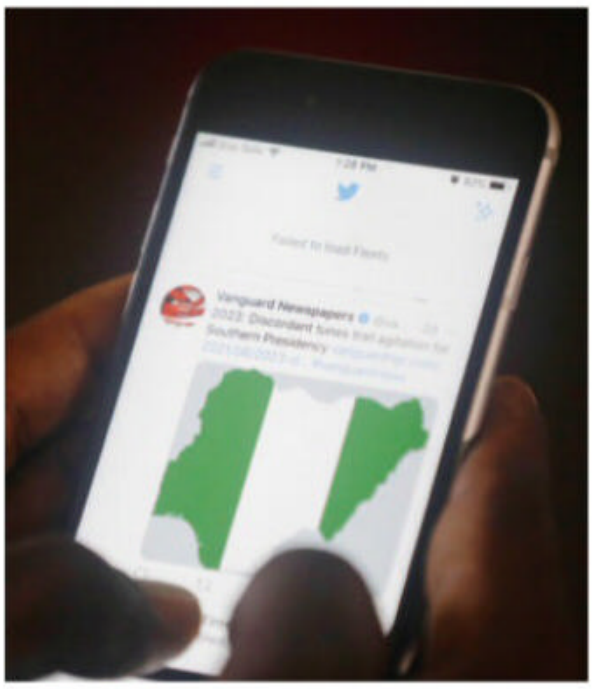
More than 250,000 Lebanese probably live in west Africa. It is impossible to know how many have moved there since Lebanon's economic crisis began in 2019, but the evidence suggests the number is large. A pilot of Lebanese descent living in Togo says Lebanese pack his flights to west Africa. Lebanon's embassy in Nigeria reports a "noticeable increase" in Lebanese moving to the country. Guita Hourani, who leads a centre that studies migration at Notre Dame University-Louaize in Lebanon, says her office is flooded with calls from locals who want advice on how to track down relatives abroad, including in Africa.

Many Lebanese came to west Africa in the 19th century, disembarking (some say by mistake) from ships heading for America. The new arrivals proved remarkably successful, first as middlemen between locals and colonising powers, later as business owners and commodity traders. Today, for example, Lebanese reportedly control many of the companies in Ivory Coast that handle exports of coffee or cocoa.

Over a century of conflict, crisis and famine have scattered Lebanese all over the world. But these days Lebanese find it much easier to obtain visas from west African destinations than from America or European countries. Jobs are easier to get hold of, too. Someone always knows someone who has an opening, says Karim Maky, a Senegalese of Lebanese descent. Skilled workers are paid well. And most west African countries already have Lebanese churches, mosques and schools.

Some newcomers plan to stay for a while. Take Ibrahim Chahine, a young mechanical engineer who left Lebanon last year. Canada's visa process was too cumbersome, he says. His applications to Gulf countries went unanswered. So when he got a job at a company run by Lebanese in Nigeria, he didn't think twice. Within two weeks he had moved to Abuja, the capital. He expects to stay for ten years.

Mr Khoury is not so sure. He had hoped to use his startup to boost agricultural production in Lebanon, which currently imports nearly all of its food. Instead he is building a greenhouse in Accra, the capital of Ghana, with the aim of selling baskets of kale, leeks and lettuce to local supermarkets, restaurants and hotels. He plans to spend at least a year there. But his extended family is back in Lebanon. And he's kept his operation there open. That's because of nostalgia, he says, not profits. ■



Social media in Nigeria

Do not rinse and retweet

ABUJA

A ban on Twitter prompts ridicule—and fear

Snuffing out free expression used to be pleasingly simple for autocrats. Back in 1984, when President Muhammadu Buhari of Nigeria first ran the country, as a military dictator, he simply arrested journalists and then decreed retroactively that any person who had published something that brought the government "ridicule or disrepute" was "guilty of an offence". On June 4th the self-described "converted democrat" was at it again, suspending the local operations of Twitter, an American social-media service.

Ridicule, the great fear of the young Mr Buhari, came thick and fast. "Idiots! You announce your ban of Twitter on Twitter," noted one Twitter user. Others were worried by the silencing of a service used to publicise the arrest of activists and journalists or to highlight police brutality. "We definitely see Nigeria sliding into authoritarianism," warned Ayisha Osori of the Open Society Initiative For West Africa, an advocacy and philanthropy group. Several foreign embassies criticised the ban.

Regardless, the government ordered telecoms companies to block access to Twitter. The national bar association argued that there was no legal basis for the move. Yet court workers are on strike, so rights groups cannot sue to have the ban overturned. The National Broadcasting Commission has directed all radio and television stations to remove their Twitter handles and to stop using the service as a source of information, since doing so is "unpatriotic". The government has also announced plans to require other social media and messaging services such as WhatsApp to apply for licences.

Surveys show that Nigerians are among Africa's biggest supporters of the right to unfettered access to the internet and social media. Many of them use Twitter for work, too. NetBlocks, a British-based watchdog, reckons the ban is cutting economic output by $6m a day. The damage to Nigeria's image among would-be foreign investors may be more costly still. Nigerians are also outraged that Mr Buhari is focused on banning Twitter while failing to solve more pressing problems, such as soaring kidnappings or killings by jihadists.

Many suspect the ban is partly petty payback. The government was annoyed in April when Twitter chose Ghana over Nigeria for its African headquarters. Just days before the ban Twitter removed a tweet by Mr Buhari which invoked Nigeria's devastating civil war in Biafra in the 1960s and said those "misbehaving" would be dealt with in "the language they understand". Some saw this as a threat of violence towards the same region today. The ban also reflects Mr Buhari's desire to restrict social media, which many in his government blamed for a spate of protests against police brutality last year.

Some Nigerians are using specialist services, known as VPNs, to bypass the block on Twitter. The attorney-general has responded by threatening to prosecute people who tweet. Yet the government has refused to specify what, if any, law is being broken by people who do so. In any case, the government may soon run out of bluster. It initially said Twitter would be suspended "indefinitely" but later talked of a "temporary" hiatus. Now it says it is in talks with the firm.

Still, as *The Economist* went to press Twitter remained inaccessible in Nigeria without VPNs. Mr Buhari once promised to take Nigeria to the "next level". Few imagined that he meant he would place Nigeria in the company of China, Iran, North Korea and Turkmenistan by blocking his citizens from sharing their views. ■

Mauritania

Turning over a new leaf

NOUAKCHOTT

Troubled Mauritania may slowly be changing for the better

"FIRST I WILL buy food," says Fatou, smiling as she receives 2,000 ouguiya ($55) in crisp notes. She needs the help. Her lodgings, a few small rooms in a seedy quarter of Nouakchott, Mauritania's capital, are home to her elderly mother, her sister and five children. The cash is part of a government effort, backed by foreign donors, to help the poorest in the country through the pandemic. The government has other anti-poverty schemes that will outlast the pandemic, too. By the end of the year it plans to reach Mauritania's 100,000 poorest households with payments of 1,500 ouguiya ($37) per quarter. It promises to more than double that amount soon.

Such aid is unusual in this country of about 4.7m people, where inequality often runs along old divisions between former slave-owners, most of whom are lighter skinned, and the usually darker former slaves. Slavery was officially abolished only in 1981 and criminalised only in 2007.

Black Mauritanians who are not the descendants of slaves have also been persecuted. In 1989 tens of thousands of them were deported to Senegal. Hundreds more were massacred. Of those who remain, many are still poor. Though GDP has doubled since 2000, in the same period Mauritania has fallen from 135th to 157th on the UN's Human Development Index, a measure that includes life expectancy, schooling and average income. Frequent coups and corruption are part of the problem.

But there are encouraging signs of change, starting with the presidential election in 2019. Though deeply marred by the arrest of opposition candidates, it nonetheless marked Mauritania's first peaceful transfer of power. Mohamed Ould Abdel Aziz, who had taken power in a coup in 2008, did not stand and was replaced by his old friend and minister of defence, Mohamed Ould Ghazouani. Many suspected the new man would be a puppet. Instead he broke decisively with his former boss and let parliament investigate corruption under the ex-president.

The resulting report alleged that the previous government had presided over a slew of dodgy deals. In March the authorities charged the former president with corruption, money-laundering and illicit enrichment. He was put under house arrest, complaining that he was the "victim of a settling of old scores". About ten others, including two former prime ministers, have also been charged. Such arrests are "extraordinary and unheard of", says Mohamed Ould Maouloud, an opposition leader who ran for president in 2019.

Mr Ould Ghazouani has struck a conciliatory tone with opposition groups, too, broaching the topics of race relations and electoral reform. He has also met Biram Dah Abeid, a charismatic anti-slavery leader and presidential candidate who has suffered political persecution in the past.

The government is also trying to get the economy moving. It recently launched a new investment-promotion agency headed by Aïssata Lam, a high-flying 35-year-old black Mauritanian. She hopes to encourage investment beyond the staple of mining. "We don't even make a can of sardines," laments Nana Mint Cheikhna, an opposition MP.

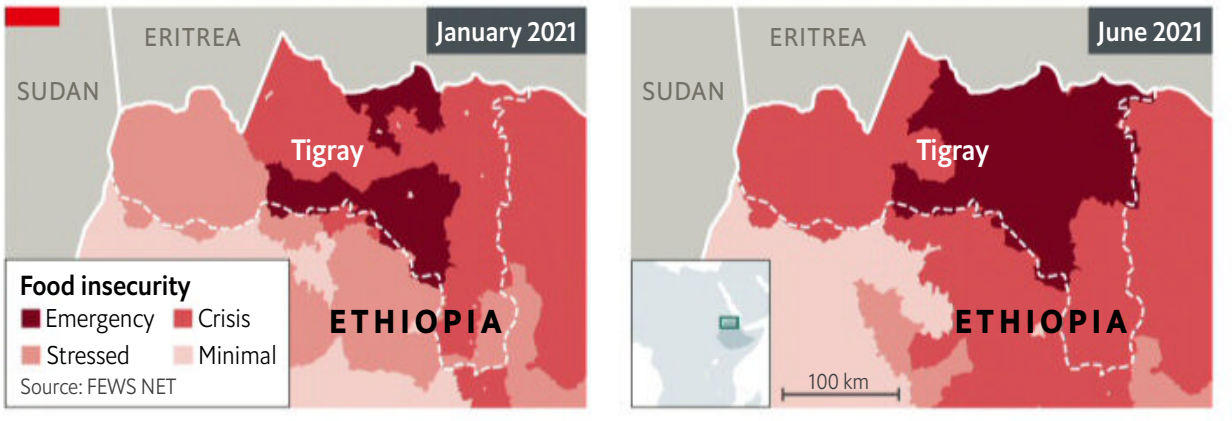
The biggest boost should come from gas, if the government avoids the twin pitfalls of corruption and reckless spending. Mauritania has bigger reserves of gas relative to its population than any other African country bar the tiny petro-state of Equatorial Guinea. The best prospect is the Greater Tortue Ahmeyim project, which Mauritania shares with Senegal. Production is expected to begin in 2023. It could boost government revenue by $14bn over the next three decades. Much of that may come in the later period, but the government is already eyeing a lift in revenue of about $60m in 2023, rising to $100m soon after. Exports should soar. Gas-fired power stations could provide cheap electricity.

Spending on the poor, engagement with the opposition and efforts to manage public finances better amount to a "grand revolution", says Mohamed Lemine Ould Dhehby, the finance minister. Yet there is still much to do.

The government has edged towards being franker about slavery. It recently let in a delegation from the Abolition Institute, an American pressure group that had previously been kept out. Mr Ould Ghazouani's prime minister hails from the Haratine, a dark-skinned Arabic-speaking ethnic group, many of whom are descendants of slaves. The government now admits there may be a few remaining cases of slavery, rather than flatly denying any holdouts, as it used to. Even so, says Salimata Lam of SOS Esclaves, a local anti-slavery organisation, "nothing has changed fundamentally." The courts have overseen only a handful of convictions for slavery. Rights groups reckon Mauritania still has tens of thousands of slaves, many working as domestic servants. It is still hard for former slaves to get the identity documents needed to receive government benefits.

Progress on women's rights has been limited. Rape is still only loosely defined in law. Sexual relations outside marriage are deemed criminal, so women who report rape are sometimes locked up themselves. The government has for years been sitting on a proposed law on violence against women. Islamist parties oppose it, but the government, which has a majority in parliament, "does not have the courage" to pass it, says Aminetou Mint El-Moctar, a veteran women's-rights activist.

Mr Ould Ghazouani's conciliatory approach has raised expectations of more change, but fulfilling them will be hard. With gasfields lifting economic hopes but covid-19 dampening immediate prospects, frustration is likely. Mr Ould Ghazouani has to juggle demands from the army, from influential tribal leaders and from Islamist groups. The opposition's goodwill may run out, too. The president still has a "golden opportunity", says Mr Ould Maouloud, but "now there must be action." ■



Facing famine in Tigray

A civil war between Ethiopia's federal government and the ousted ruling party of the northern region of Tigray has caused widespread hunger. The UN's humanitarian chief, Mark Lowcock, has warned it could spark the world's worst famine in a decade amid evidence that forces allied to the government are using "starvation as a weapon".

Literacy

The reading wars

WASHINGTON, DC

Mississippi, a state not often associated with pioneering reforms, is teaching the rest of the country to read

PHONICS, WHICH involves sounding-out words syllable by syllable, is the best way to teach children to read. But in many classrooms, *ff-on-ics* is a dirty sound. Kymyona Burk, who implemented Mississippi's statewide literacy programme, says that some teachers have had to sneak phonics teaching materials into the classroom, like some kind of *samizdat*. Teaching reading any other way is "malpractice", says Ms Burk. And yet for reasons that include politics, partisanship and personal experience, most American children are taught to read in a way that study after study has found to be wrong.

The consequences of this are striking. Less than half (48%) of all American adults were proficient readers in 2017. American fourth graders (nine-to ten-year olds) rank 15th on the Progress in International Literacy Study, an international exam. And that was before covid-19 closed schools. According to UNESCO, American schools were closed either fully or partially for 56 weeks, compared with 47 in Canada and 27 in the United Kingdom and China. In theory the need to make up for lost schooling could be an opportunity to try something new. But America remains stuck in debate about teaching children to read that has been rumbling on for decades.

Some advocate teaching symbol-sound relationships (the sound *k* can be spelled as c, k, ck, or ch), known as phonics. Others support an immersive approach (using pictures of a cat to learn the word *cat*), known as "whole language". Most teachers today, almost three out of four according to a survey by the EdWeek Research Centre in 2019, use a mix called "balanced literacy". This mash-up of methods is ineffective. "You can't sprinkle in a little phonics," says Tenette Smith, executive director of elementary education and reading at Mississippi's education department. "It has to be systematic and explicitly taught."

Mississippi, often a laggard in social policy, has set an example here. In a state once notorious for its low reading scores, the Mississippi state legislature passed new literacy standards in 2013. Since then Mississippi has seen remarkable gains. Its fourth graders have moved from 49th (out of 50 states) to 29th on the National Assessment of Educational Progress, a nationwide exam. In 2019 it was the only state to improve its scores. For the first time since measurement began, Mississippi's pupils are now average readers, a remarkable achievement in such a poor state.

Ms Burk attributes Mississippi's success to implementing reading methods supported by a body of research known as the science of reading. In 1997 Congress requested the National Institute of Child Health and Human Development and the Department of Education to convene a National Reading Panel to end the "reading wars" and synthesise the evidence. The panel found that phonics, along with explicit instruction in phonemic awareness, fluency and comprehension, worked best.

Yet over two decades on, "balanced literacy" is still being taught in classrooms. This method, based on Kenneth Goodman's "whole language" theory developed in the 1960s, views reading as a natural process that is best learned through immersion, similar to learning to speak. Goodman argued that reading is a "psycholinguistic guessing game". He claimed that proficient readers do not identify every element in a text, so whole-language in-

structors encourage pupils to guess unknown words. Imagine a child is reading the sentence, "The rider leapt onto the back of his h___", but is stuck on the last word. According to this philosophy, a child would be encouraged to look at pictures in the text and think about what would make logical sense as the next word, based on the meaning of the sentence, grammar rules and the spelling of the word.

For most of the 20th century, reading methods were based on theory and observation. But advances in statistics and brain imaging have debunked the whole-language method. So why is it still being taught? One reason may be its appeal to personal experience. To the teacher who is a proficient reader, literacy seems like a natural process that requires educated guessing, rather than the deliberate process emphasised by phonics, explains Mary Clayman of the DC Reading Clinic, which trains teachers in Washington, DC. Teachers can imagine that they learned to read through osmosis when they were children, she explains. Without proper training, they bring this to classrooms.

Politics is also to blame, says Timothy Shanahan, who was one of the authors of the National Reading Panel study. Balanced literacy continues today as a political compromise among teachers and administrators. "It settled down the reading wars," Mr Shanahan explains. "You give everybody something they want." The compromise extends to teacher-training programmes too. Columbia University's teachers' college has two reading programmes: one is based on the science of reading and includes phonics, while the other is sending out teachers skilled in debunked balanced literacy.

Phonics has also become partisan. But (as was not the case with covid-19) here the Republican Party is on the side of science. Many states have noticed Mississippi's success and have passed similar legislation. North Carolina passed a literacy bill in April mandating instruction based on the science of reading; Alabama's literacy law, passed in 2019, does the same. Tennessee and Florida plan to leverage federal covid-19 relief funds for their science-based reading programmes. Each state has a Republican-led legislature. All but North Carolina have a Republican governor.

Meanwhile, Democrats worry that these literacy policies will hurt racial minorities and disadvantaged pupils, explains Ms Burk. In California, a Democratic state senator proposed removing a certification exam required for elementary-school teachers. The exam, implemented by Pete Wilson, a Republican governor, in the 1990s, assesses mastery of phonics, but has a high failure rate. Some blame this exam for California's teacher shortage in low-income schools. Keeping pupils is also a concern. Mississippi's bill holds back third-graders who do not achieve reading proficiency. Opponents worry that this will also hurt minority pupils most.

Ms Burk disagrees. "This is an equity law," she says of Mississippi's much-imitated programme. "These things are already happening in our higher-performing schools, but they're not happening in our lowest-performing schools." Implementing good reading policy in states is difficult, warns Mr Shanahan. "I love this idea of the states being this laboratory of democracy where we try things out in one state, and if it works, we take it someplace else," he says. "But if you're going to do that, you actually have to take what those successful states did. Not just a piece of it. All the hard parts." ■

Immigration enforcement

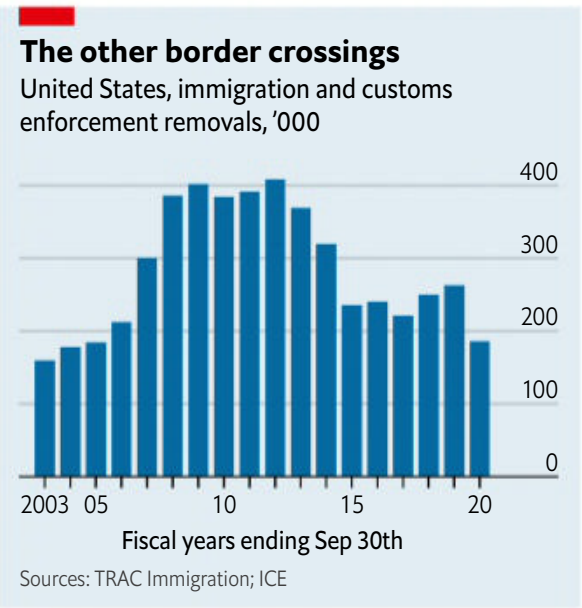
Lowering the bar

DALLAS

Deportations are at a record low, and no one is completely happy about it

ALTHOUGH DONALD TRUMP talked the fiercest nativist game about illegal immigration, it was Barack Obama who oversaw the removal of more undocumented immigrants from America during his presidency, earning him the nickname "deporter-in-chief". During his first term, Mr Obama deported over 60% more people than Mr Trump (see chart). Now Joe Biden is breaking records in the opposite direction.

In April the US Immigration, Customs and Enforcement agency (ICE), completed just 2,962 removals, the lowest number on record. Since February ICE agents have averaged around 2,300 arrests per month, a fifth of the monthly average in 2019, before the epidemic began. The figures show how Mr Biden is trying to craft policies that treat immigrants living illegally in America more humanely than his predecessors, without giving his critics on the left and the right too much ammunition.



There are two reasons for the recent decline in deportations. One is practical. In February the interim director of ICE, Tae Johnson, issued a memo telling staff to prioritise certain people for deportation, mainly those who had arrived in the country recently or posed a threat to national security and public safety (such as engaging in terrorism or gang activity). This marks a shift in strategy from the Trump administration, when all illegal immigrants were deemed priorities, regardless of how long they had been in America or whether they had committed crimes. "It was about instilling fear in immigrant communities as a means of enforcement," is how Theresa Cardinal Brown of the Bipartisan Policy Centre (BPC), a think-tank, summarises Mr Trump's strategy of deterrence.

The other reason for the recent decline in deportations is philosophical. Mr Biden campaigned promising a pathway to citizenship for many of the 11m unauthorised immigrants already in America, who are seen as enmeshed in communities and productive members of society. To deport them before any solution is brokered in Congress "feels heartless to the Biden administration", says Ms Cardinal Brown.

However, brokering some sort of compromise that offers a legal pathway for citizenship is far from guaranteed in Washington, DC. It is not an immediate priority: the infrastructure bill is occupying the White House and Congress. Nor is history on Mr Biden's side. It has been 35 years since comprehensive immigration reform was passed by Congress. One of the reasons why Mr Obama pursued enforcement so aggressively was the hope of inducing Republicans to compromise on an immigration bill, which they never did. When Mr Biden entered office, he even went so far as to issue a 100-day halt to deportations. (His plan was scuttled after a lawsuit by the state of Texas, when a court blocked the deportation moratorium.)

What comes next? The problem of immigrants attempting to cross the southern border illegally, which is distinct from immigration reform and from providing permanent status to those already in America, complicates Mr Biden's ambitions. The numbers of people arriving are higher than at any time since before 9/11, after which border security was tightened. Kamala Harris, the vice-president, travelled to Guatemala this week to discuss the root causes of migration and try to discourage more arrivals. Republicans have used the opportunity to paint Mr Biden's immigration policies as toothless. Meanwhile, headlines about the border being out of control hurt perceptions of immigrants already in America. According to a poll by

BPC and Morning Consult, a data outfit, those who have heard about the situation at the border recently are more likely to say that immigrants will hurt America's long-term economic recovery from covid-19.

Immigration has become such a super-charged issue that Mr Biden is managing to please no one, despite being the president with the most progressive immigration platform in recent history. Immigration advocates and progressives question whether ICE should still be funded at Trump-era levels, as the agency's 2022 budget proposes, and say the White House has not done enough to reverse Mr Trump's policies. Naureen Shah of the American Civil Liberties Union points to the continuation of "287(g)" agreements, which enable local police officers to enforce federal immigration law under ICE supervision. These were expanded under Mr Trump, from 34 such agreements to 151, most of which are still in effect. According to Austin Kocher of Syracuse University, which collects immigration data, there is a "sceptical hopefulness" among many immigration lawyers that Mr Biden will reverse more of Mr Trump's policies.

Meanwhile, enforcement hawks say that Mr Biden's decision to adopt a gentler approach to deporting people who are residing illegally in the country will only further the impression that America is now welcoming immigrants and encourage them to try their luck at the southern border. Mr Biden will not earn the title "deporter-in-chief", but that does not mean the insults will stop. ■

Portland

Plaid shirts and plywood

PORTLAND

Once a byword for tattooed vegan microbrewers, Oregon's biggest city has become infamous for something else

PLYWOOD WINDOWS can be only so inviting. On what seems to be every block, they still decorate downtown Portland a year after racial-justice protests began peacefully, turned violent, and were met with tear-gas and federal shock troops. They have not been removed because of sporadic bouts of anarchy euphemistically called "direct action". A recent May Day riot left another round of vandalised buildings and broken windows in its wake.

The federal courthouse remains boarded-up; an Apple store has installed fortifications fit for the demilitarised zone ("Apple stands with you in the fight for racial and social justice", says a sign outside); Tiffany & Co has put up large, rather chic boards that try to lift the mood by declaiming meaningless platitudes like "Love is love". Colourful social-justice art adorns much of the plywood, endorsing Black Lives Matter or other progressive causes. ("Expression against oppression" declares one; "Capitalism, why are you like this?" groans another.) Homeless encampments spread along the pavements.

Portland's woes are especially acute, but they resemble those of many prosperous west-coast cities: a febrile political climate where social-justice activism is ascendant, rising crime rates, declining trust in the police and widespread street homelessness. These pose a threat to the cities' engine of prosperity.

Before covid-19 downtown Portland housed 1m jobs, the heart of the city's (and to a large extent, the state's) economy. Its reputation has taken a bruising hit. The Urban Land Institute, a think-tank, runs annual surveys ranking the desirability of cities to property developers. In 2017 Portland ranked third. Now it has dropped to 66th out of 80. Polling in May for the *Oregonian* newspaper found that 53% of residents in the metro area felt safe downtown during the day; only 20% felt safe there at night. More than 60% of residents worry about protests, crime and homelessness. Ratings for the city government's handling of those are pitiful. As in most American cities, violence is up markedly. There were 55 homicides in 2020, the most in 26 years. This year looks even worse. Already there have been more than 40 murders.

Data on population and unemployment show that the city's recovery from covid-19 has not been unusually slow, notes John Tapogna of ECONorthwest, a consultancy. A mass exodus of businesses does not appear to be under way. But a decline in reputation can certainly lead to one. Working out how to recover from a brutal year requires a sense of what went wrong. And yet there is little agreement on that.

The optimists see the tumult as temporary. "Our major employers downtown have said that they're committed. We'll start to see people coming back. And as we have more street life, I think we'll have fewer street problems," says Mingus Mapps, a former urban-politics professor and member of the city council. Hotel bookings are up, he notes, and "we're demilitarising our public-safety systems". Andrew Hoan, president of the Portland Business Alliance, the chamber of commerce, is also upbeat: "It's not that there's this moment like a butterfly emerging from its chrysalis [but] we're seeing longer and longer gaps between when we noticed destruction, or bad behaviour occurs, or political violence is breaking out."

Then there are the pessimists, divided into mutually loathing "woke" and "anti-woke" camps. Portland is a progressive town, with a vocal activist class that sees institutions like policing and capitalism as irredeemably racist and oppressive. Because the unrest is a symptom of legitimate grievance, it may not dissipate unless entire systems are dismantled. "I have never once cried over a window. I do cry over the murder of people who look like me," Gregory McKelvey, a progressive campaign operative, told the local *Willamette Week*.

Mr McKelvey was the campaign manager for the progressive challenger Sarah Iannarone, who narrowly lost to the more centrist incumbent mayor, Ted Wheeler, in an election in November. Ms Iannarone's campaign advocated defunding the police, arguing that "it is time to stop wasting ▸▸

money and stop putting good money after bad" and accusing the force of inflicting "waste and violence" on the community. She got 41% of the vote—just five points shy of victory.

The other pessimists think that Portland's accommodation of anarchy and lawlessness in the name of social justice augurs bleak times ahead. "What's happening is unchecked progressivism, resulting in bad governance that is jeopardising the ability of normal citizens to go about normal life," says Bret Weinstein, a prominent critic of lefty identity politics. "When municipal authorities withdraw the police—because the claim is that the police are the source of violence—what we then get is the emergence of a policing authority among the anarchists, and it is always brutal."

The police department is similarly despondent. "The message of social justice and racial equality was overrun, it was overtaken by a group of anarchists," says Daryl Turner, president of the police union. Many police officers have left, either retiring or resigning. Local progressive organisations like Unite Oregon campaigned for the city government to defund the police by at least 50%, rather than the more modest $3m cut (about 1%) already made.

The *Oregonian*'s polling from May also found that 50% of residents thought policing needed to be increased downtown; only 15% thought it should be decreased. Mr Turner predicts that things will get worse before they get better. "The city is in a state of hopelessness," he says. In a few months' time, it will be clear whether such pessimism has firm foundations. ■

Actually I think you're misinformed

Hispanics and QAnon

Conspiracy as a second language

PROVIDENCE

QAnon's conspiracy theories are thriving among Hispanics

IF YOU VISIT Segadores de Vida, a Hispanic megachurch in the outskirts of Miami, you will probably get more than your average church service. Its Dominican-born pastor, Ruddy Gracia, has been teaching conspiracy theories alongside the Bible. Pastors who have not resisted lockdown orders are "in line to get the mark of the beast", he told his parishioners. He called Anthony Fauci, a public-health official, a "wild beast" and reckons Mr Fauci is importing face-masks from China to profit from the pandemic (that sermon's title was "The Big Lie"). The canards are amplified by Mr Gracia's social-media following, which numbers several million domestically and across Latin America.

Multiple surveys have found conspiracy theories, such as QAnon, are most popular among white Americans, particularly evangelicals. But Hispanics seem to gravitate towards them as well. In a Pew Research poll from July 2020 they were the ethnic group most likely to believe a group of powerful people were behind the covid-19 pandemic. A recently published survey from Public Religion Research Institute (PRRI), a pollster, confirmed white evangelicals as the strongest supporters of QAnon, but it also found Hispanic Protestants drawn to the movement. They are just as likely as white evangelicals to agree with QAnon's core theory—that "the government, media, and financial worlds in the US are controlled by a group of Satan-worshipping paedophiles who run a global child sex-trafficking operation".

One reason why QAnon is making headway among Hispanic Protestants is that many are conservative evangelicals and hold similar views to their white counterparts. Natalie Jackson, head of research at PRRI, says QAnon fits into Manichean beliefs about good and evil. Mr Gracia, for example, has conjectured that covid-19 is a plot concocted by a group of elites, chief among them Bill Gates, to undermine individual rights and people's patriotism and lay the foundation for a global government that will be run by the Antichrist.

Over the past few election cycles misinformation analysts have noticed more attempts by political groups to spread propaganda and conspiracies among Spanish-speakers, especially in Florida. These efforts have been successful, in part, because limited news coverage in Spanish of certain issues leaves "data voids", says Saiph Savage, a computer scientist who researches the spread of conspiracy thinking.

Although the misinformation is primarily about news in America, researchers point out that some of the biggest influencers are in Latin America, particularly Colombia and Venezuela. Informativo G24, a Colombian talk show, has more than 500,000 subscribers on YouTube and covers subjects such as the deep state and the end times. A few months before the presidential election, the show hosted a panel on the global battle between good and evil. "I am convinced Donald Trump...is the only one who can do something for humanity," said one of the panellists.

Jaime Longoria, a researcher from First Draft, a non-profit that fights misinformation, says other influencers provide daily commentary on transliterated articles from far-right websites such as Breitbart and Gateway Pundit (whose founder was banned by Twitter in February). And some seem to have noted the crackdown by tech giants on content related to QAnon. A popular YouTube influencer based in Colombia does not mention the movement in his videos but claims to have the largest Telegram group of Latino QAnon followers, with more than 30,000 members.

Fact-checkers face several obstacles when countering Spanish-language misinformation. Much of it circulates in encrypted texting apps, such as WhatsApp, making it harder to moderate. Another problem, says Claudia Flores-Saviaga, a fellow at Facebook's research division, is that tech companies use English as the primary language to train machine-learning models that automate the detection of disinformation. Bizarre conspiracies in Spanish can evade them.

Groups such as First Draft are training fact-checkers, and the National Latino Evangelical Coalition, which represents about 3,000 Hispanic churches in America, has joined the Department of Health and Human Services to host webinars in Spanish about covid-19. Changing the minds of Mr Gracia and others who are convinced that this is a spiritual battle will not be easy, though. "We have to obey God and not man," he says. ■

College life

Dorm norms

WASHINGTON, DC

Proposed changes to Trump-era guidance show how fiendishly hard it is to prosecute sexual assault on campus fairly

A FEW WEEKS after he had a one-night stand with a fellow student, Daniel (not his real name) received a text message from a mutual acquaintance. It said the woman had been drunk and had not wanted to have sex with him. It wished him luck finding a new university. "Unfortunately that was about right," says Daniel, who claims his protests that the encounter had been consensual were ignored—including by university authorities after his accuser made a formal complaint. A university panel refused to hear the witnesses Daniel and his lawyer requested, including people who had seen him and his accuser together after they had had sex. Neither he nor his lawyer was allowed to cross-examine his accuser; they could pass questions to the panel but had no control over whether they were asked. "The process felt completely one-sided," he says.

After Daniel was found guilty of sexual assault his university, which cannot be named for legal reasons, suspended him and he finished his degree elsewhere. He worries that the episode will mar his attempts to launch a career. "I'm no longer as desperate and depressed as I was about the worst thing that has ever happened to me," he says. "But I feel like the damage is done."

Had Daniel been accused of sexual assault a few years later, things might have turned out differently. The process of investigating and adjudicating claims of sexual assault that he and his accuser went through in 2015 had been substantially shaped by guidance introduced by the Obama administration in 2011 and 2014. Many believe that guidance gave short shrift to the rights of the accused. In 2020 Betsy DeVos, Donald Trump's secretary of education, introduced a rule to restore those rights. The Biden administration may now usher in yet more changes. This week, following an executive order signed by the president in March that directed the Department of Education to consider rescinding the Trump-era rule, a hearing gathered views on that.

It is one of the great failings of the justice system in America, as elsewhere, that perpetrators of sexual assault are too rarely charged or convicted. Only a few years ago victims of sexual abuse on campus were routinely ignored or encouraged to drop their claims. It was with the aim of correcting this that the Obama administration introduced guidance on Title IX, a law passed in 1972 that prohibits discrimination on the basis of sex.

Though the guidance did not have the weight of law, the Office for Civil Rights threatened to cut off federal funding to institutions that did not comply with the guidance, which was sweeping. It said educational institutions must adopt the lowest possible burden of proof, what is known as a "preponderance of evidence" (often conceived as a 51% likelihood of guilt), rather than the standard of "clear and convincing evidence" (thought of as around a 75% likelihood).

Judge and jury duty

The guidance also undermined the right to be considered innocent until found guilty. It made it difficult for the accused to question their accuser or see the evidence against them. It recommended a "single investigator" model in which a university employee plays judge, jury and prosecutor. And it introduced some vague definitions, including sexual harassment as any "unwelcome conduct of a sexual nature".

Jenna Parker, a lawyer in California who has represented students in civil lawsuits after they have been found guilty by their university panels, says that this guidance sowed confusion. Some universities have been accused of eliding "non-consensual" with "unwanted" (a feeling that may follow consensual sex but can also be separate from it). Some hold that drunken students cannot give consent, which would seem to invite miscarriages of justice.

The fact that many universities were ill equipped to administer this parallel form of justice became evident in the flood of litigation claiming due-process violations that followed. Title IX For All, which keeps a database of such lawsuits, says nearly 700 have been filed since 2011. Cynthia Garrett, co-president of Families Advocating for Campus Equality, says a system that required civil litigation put poor students at a particular disadvantage.

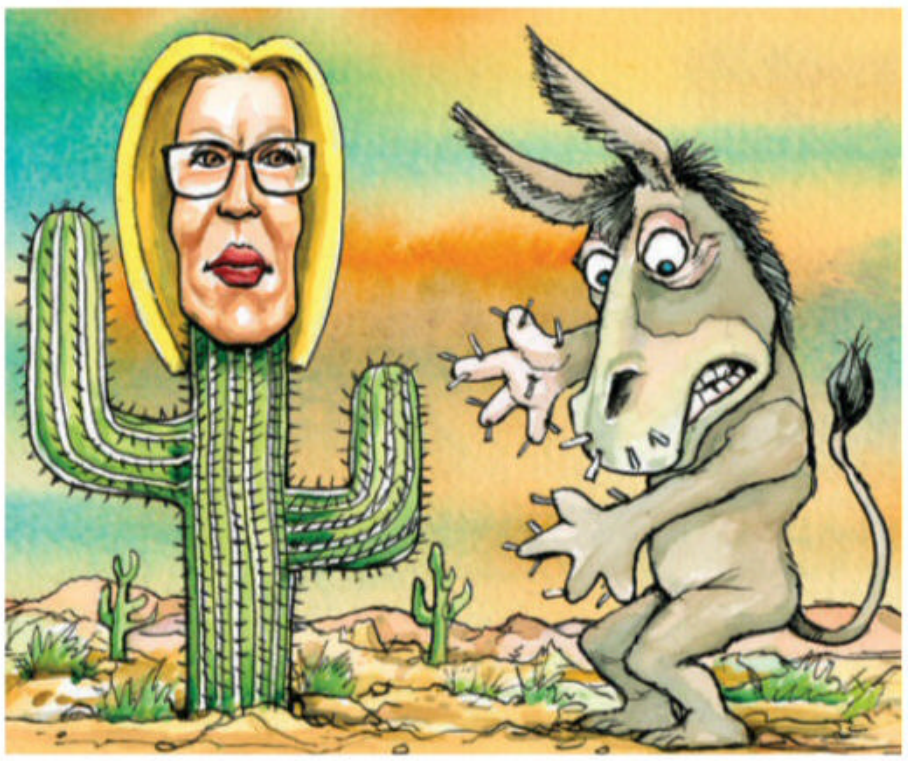
The regulation introduced by Mrs DeVos in 2020 undid much of that guidance. It allowed universities to use the "clear and convincing" evidentiary standard. It restored balance to the processes that followed, including by not allowing only one side to cross-examine. These changes are fairer than the regulation that preceded them, though some critics of the Obama directives worry that the new definition of sexual harassment—as unwelcome conduct that is "severe, pervasive, and objectively offensive"—may deter victims from seeking redress. The covid-19 epidemic has meant the regulation has not been tested as it would otherwise have been.

Wider criticisms have been levelled at the Trump-era rule by groups that believe the new process gives too much weight to the rights of the accused. "We've heard a lot of schools saying to victims, 'This process is so scary, do you really want to go through with it?'" says Sage Carson, manager of Know Your IX, an advocacy group.

Yet a complete reversal of the Trump-era rule is unlikely. It has survived several legal challenges. A series of court decisions have accepted sex-based discrimination claims by male students penalised under the Obama-era guidance. This suggests future changes would lead to legal clashes. It also suggests that the previous guidance led to too many unjust punishments, the effects of which may be lasting. ■

Lexington | Sinema's technicolour moderation

The senator from Arizona is better at upsetting Democrats than working with Republicans



When Kyrsten Sinema first sashayed into the Senate, liberal hearts fluttered. The 42-year-old was one of the youngest women elected to the chamber, the first Democratic senator from Arizona for three decades, and exuded cosmopolitan élan. By repute a "Prada socialist" with a charismatic personality, she was also the first openly bisexual member of Congress. Did Mike Pence look uncomfortable as he swore her in—on the constitution, given her admitted irreligiosity (another novelty in Congress)? Or did the pious former vice-president hang onto her hand a trifle too long? Liberal tweeters were in raptures over such questions.

Their hearts are now broken, since Ms Sinema has shown herself to be anything but a left-wing crowd-pleaser. Though Joe Manchin of West Virginia has drawn most of his party's flak for refusing to vote down the legislative filibuster, she holds the same position as immovably. She says the 60-vote threshold was designed to foster bipartisanship, though it was more a procedural accident. She claims it remains a force for "comity", which is a word rarely used outside the Senate these days, though the quality is seldom witnessed inside it. Many Democrats have decried this, their fear of Republican lawmaking—a much bigger reason for the filibuster's endurance—having recently been trumped by fear of the gridlock it causes. The singer Cher called Ms Sinema a "traitor", notwithstanding their shared fondness for colourful wigs.

The senator's transgressions against her party line, of which her support for the filibuster is only the latest example, can be equally flamboyant. Eight Democratic senators opposed a provision in the covid-19 stimulus bill to raise the minimum wage to $15 an hour; only one signalled her opposition—to a cherished progressive initiative—with a Caesarean thumbs-down and derisive curtsy. Having called on her Republican colleagues to back a bipartisan commission into the mob attack on the Capitol in January, Ms Sinema outraged her party by failing to show up for the relevant vote (she claimed this was for family reasons). Despite her professed commitment to bipartisanship, she has meanwhile initiated no ambitious legislation nor formed notable partnerships in either party. She almost never speaks to journalists. Senior Democrats say they do not know what issues she is most interested in. She is described as "isolated"; also "very strange".

Some of this tension can be attributed to the always-underestimated fact that Ms Sinema owes her position to a lot of voters who dislike her party. Arizona is a conservative state. To win there Democrats need a plurality of unaligned voters, who tend to be somewhat conservative. That Arizona has two Democratic senators and narrowly elected Joe Biden is the result of Donald Trump's toxicity. And this is an advantage that Ms Sinema and her fellow Arizonan Mark Kelly will hope to increase. Mr Trump's continuing influence on Arizonan Republicans—as shown by their lunatic obsession with non-existent electoral fraud—is likely to swell the ranks of disaffected conservatives further.

Yet a comparison with Mr Kelly also shows how gratuitous Ms Sinema's performance can be. The former astronaut also defines himself against his party (especially on the southern border, a preoccupation for Arizonans) and preaches bipartisanship. But his carping is more selective and fact-based. He has meanwhile won plaudits for pushing gun control, with which his family is deeply concerned, and building relationships on both sides. He is more popular with Democrats on and off the Hill. Though both senators have solid ratings in Arizona, Mr Kelly scores better with Democrats and Ms Sinema with Republicans. Her provocativeness, in other words, is as much a political choice as an imperative.

It probably owes something to her most glaring potential vulnerability: a Damascene conversion from far-left protest politics. A former Naderite, who railed against capitalism and addressed anti-war demos in a pink tutu, she once prided herself on being the most left-wing member of the Arizona legislature. Yet she quickly tired of being the star of a Democratic minority so small it was known in Phoenix as the "pizza caucus" (because one large pizza could feed it). She proceeded to write a vapid but semi-amusing book on coalition-building ("Let go of the bear and pick up the Buddha…to be your most fabulous political self") and campaigned for Congress as a pragmatic problem-solver. In the House she made a small mark on veterans' affairs, low-hanging fruit for the aspiring conservative, and backed more of Mr Trump's bills than almost any other Democrat.

Americans tend to be relaxed about political makeovers; yet Ms Sinema's is unusual not only for its suddenness but also for the combination of attributes it has left her with. Blue-dog Democrats like Mr Manchin, whom she claims as a model, tend to be socially conservative but progressive on economic policy. She is the opposite, even as the right has largely abandoned its interest in economics for the culture wars. If she protests her newfound moderation too much, it is in part because that is her wont; but it is also an effort to shut this potential weakness down.

Don't mess with her tutu

It helps that Arizona has a tradition of mavericks—including John McCain, whom she often praises. "We have that 48th-state attitude out here," chuckles a veteran Arizonan Republican strategist. "We act like the juveniles that we are." Perhaps that makes her as good a match for the state as the Democrats can hope for.

Certainly, a standard progressive could not win there. And, when not picking fights with her party, Ms Sinema quietly votes with it most of the time. Democrats should remember that. Even so, the hollowness of her grandstanding is depressing. It does not represent, as she claims, the perpetuation of a great bipartisan tradition. It represents its diminution, notwithstanding her larger-than-life performance, to such an extent that significant bipartisan co-operation now hardly exists. ■

Peru

The man with the straw hat

LIMA

A left-wing outsider appears poised to become president of a divided country

PEDRO CASTILLO often began his campaign rallies by saying, "I come from *el Perú profundo* [the heartland, in effect], from a modest family." He went on to tell his life story. Born in a remote village in the Cajamarca region of the Andes to illiterate peasant farmers, he paid for his studies to become a teacher by selling ice creams on city streets. As a union leader, he travelled to forgotten towns and villages. That story resonates with the poorer half of the country. And it has taken him to the verge of his country's presidency—but only by the narrowest of margins.

With the count in the presidential runoff election held on June 6th almost complete, Mr Castillo (pictured above, centre) had won 50.2%, a lead of just 70,000 out of 17.5m votes over his conservative opponent, Keiko Fujimori. She claims fraud, but has presented little evidence. International observers found none. The electoral authority has still to adjudicate some 300,000 disputed votes and will take days to arrive at an official result.

None of this seems likely to undo Mr Castillo's surprising victory. He campaigned on a populist-leftist platform, promising a more statist economy and a constituent assembly to write a new constitution—the blueprint used by leftist leaders in Bolivia, Ecuador and Venezuela to entrench themselves in power. But Mr Castillo will inherit a country split down the middle, both geographically and socially, and he has a weak mandate.

Peru has a taste for electing outsiders. But none had as little political experience or knowledge of the world, or stood on such a radical leftist platform as Mr Castillo. In his only previous bid for elected office he stood in 2002 for mayor of a small town in Cajamarca and lost. In mid-March he was little known, although he led a three-month teachers' strike in 2017. In a fragmented field of 18 candidates in the election's first round, he topped the ballot, but with just 15% of the total vote. He campaigned the old-fashioned way, sometimes on horseback, always with his trademark farmer's hat of cream palm-fibre. He drew on the networks of the teachers' union, of the churches (his wife is evangelical; he is Roman Catholic) and of the *rondas*, the vigilante groups, originally against rustlers, that are a local power in the Andes.

Ms Fujimori and her allies warned against "communism". But Mr Castillo embodies change in a country crying out for it. His slogan was "no more poor people in a rich country", a reference to Peru's mineral wealth, which he claims is not shared around enough. "Why did we have to wait for the pandemic to reveal the precariousness of the state?" he asked, saying that health care and education should be the right of all Peruvians. The country has suffered the world's highest death rate from covid-19 relative to its population. All this was enough to bring Mr Castillo victory in much of the interior, as well as among Andean migrants in coastal cities.

Assuming his victory is confirmed, Mr Castillo faces an almost impossible balancing act of trying to govern pragmatically for the majority while keeping his radical base happy. This week he showed his first clear sign of moderation. "We will be a government respectful of democracy, the current constitution...[and of] financial and economic stability," he told jubilant supporters. If so, that may bring an early ▸▸

clash with his own party, Perú Libre. An avowedly Marxist-Leninist outfit, its founder and leader, Vladimir Cerrón, is a doctor who is an admirer of Cuban communism and Venezuela's dictatorship. Barred from running because of a sentence for corruption from when he was a regional governor, he recruited Mr Castillo only months ago. Mr Cerrón "is not totally intransigent but he will want to control things", says a veteran activist who knows him.

During the campaign Mr Castillo gained the support of more moderate left-wingers. This week Pedro Francke, one of his new advisers, praised the central bank, promised to respect its autonomy, rejected price and import controls and said mines would face a tax renegotiation rather than nationalisation. Mr Castillo "knows the value of hard work and would never consider policies that would confiscate assets", says Gonzalo Alegría, a former banker who is another new addition to his team.

To govern effectively, Mr Castillo is likely to have to look beyond his current advisers. The first imperatives for the new team will be handling the pandemic and ensuring economic recovery. Peru is fortunate that its caretaker president since November, Francisco Sagasti, has laid the basis for this after much mismanagement by his predecessor, Martín Vizcarra. Mr Sagasti has got vaccination going at an accelerating rate and organised oxygen supplies. Having contracted by 11% last year, the economy is rebounding. The World Bank forecasts growth of 10.3% this year. Some private forecasters think the figure could be as high as 13% provided politics is not too unstable.

Mr Castillo's biggest political headache is likely to be the new Congress, which has a broadly conservative majority. On paper, he has the support of only 42 of its 130 members. And more than half of Perú Libre's 37 representatives are beholden to Mr Cerrón. The outgoing Congress clashed with the executive and approved populist giveaways. Its replacement may not be much better. "We could be faced with a Congress wanting to make life hard for the president," according to Luis Benavente, a political consultant.

Approving the setting up of a constituent assembly requires 66 votes in Congress and then a referendum. The demand for a new constitution is weaker in Peru than in Chile, which recently voted to write one. Candidates committed to an assembly won less than a quarter of the total vote in the first round. Many of the voters who backed Mr Castillo in the run-off did so only to stop Ms Fujimori. Peru's Congress has developed a habit of impeaching presidents. If he is to last his five-year term, Mr Castillo would be wise to avoid a constitutional collision and settle for achieving some of the many reforms his country needs. ■

Mexico's elections

Clipped wings

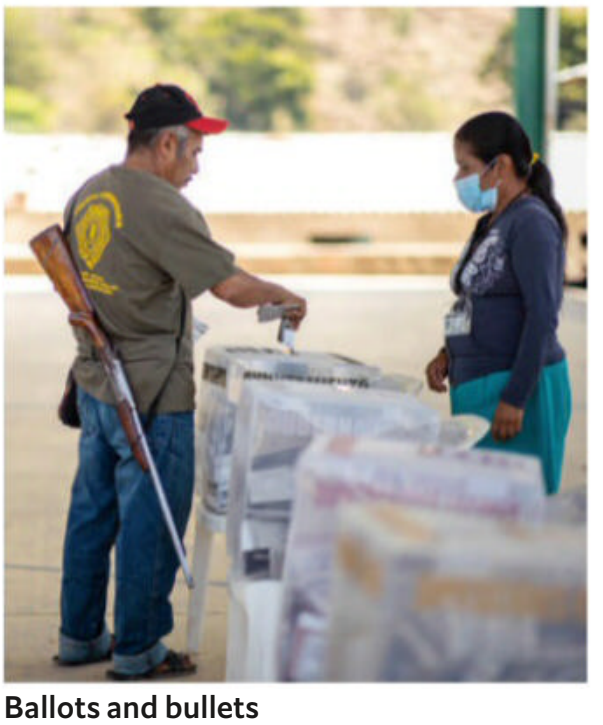
MEXICO CITY

Mid-term elections have weakened the populist president

THE PRESIDENT, Andrés Manuel López Obrador, was not on the ballot, but Mexico's mid-term elections, held on June 6th, were largely a referendum on his polarising performance. Voters selected representatives to the lower house of the national legislature and 30 of the 32 state congresses, as well as governors of 15 states and thousands of local posts. Although Mr López Obrador's party, Morena, and the parties in its coalition won a majority in the national legislature's lower house, it lost its two-thirds supermajority. The results are a blow to the president's ambitions to transform Mexico.

Parties in power tend to lose seats in mid-terms, so the result is not entirely surprising. Morena dropped from 256 of 500 seats in the lower house to around 198. Even with the help of its allies, it falls well below the 334 seats needed for a supermajority. More gallingly for Mr López Obrador, the coalition of established parties did well: the National Action Party (PAN), which held the presidency from 2000 to 2012, will be the second-biggest political force, followed by the Institutional Revolutionary Party (PRI), which ruled the country for seven decades until 2000.

The president will now have to negotiate with other politicians to pass laws. That could put constitutional reforms beyond reach, since he would need around 40 opposition lawmakers to side with him. The party also suffered losses in Mexico City, long considered a bastion of leftism. Still, Morena remains the most popular party, bagging the most seats in the legislature. It also won 11 of the 15 governorships, and most of the state congresses. This suggests the party has a future after Mr López Obrador's term ends in 2024.



Ballots and bullets

It is likely that Mr López Obrador's agenda will remain much the same, thinks Carlos Elizondo Mayer-Serra, the author of a book on the president. He can easily ignore the disapproval of urbanites. (He accepted the results overall but blamed Morena's battering in the capital, where he was once mayor, on a "dirty war".) And enough people still support Morena for him to feel he has a mandate. Outside a polling station in Mexico City's posh Roma neighbourhood, María Teresa Crespo, a pensioner, says she is "very happy with the government", as she feels it is tackling corruption.

Morena and its allies' majority in the lower house will allow the president to continue to set the budget. Mr López Obrador can still dole out funds for pet projects, such as social programmes to support the young, who are given a stipend while they complete an apprenticeship, or to old folk in rural areas, who are paid to plant trees.

But the lack of a two-thirds majority will limit Mr López Obrador's chances of enshrining in the constitution his energy policy, which seeks to boost state-owned firms. It also curbs his ability to damage Mexico's institutions, such as the electoral body, which he has threatened to disband altogether. Indeed, despite a violent campaign—at least 36 candidates were murdered—Mexico's largest-ever elections were a success. At least 53% of more than 93m eligible voters turned out, the highest for a mid-term election in this century.

Some fear that Mr López Obrador may try to advance his agenda by calling for small referendums, or by going after judges. He has called for investigations into a judge who ruled against one of his energy initiatives. On June 7th the government enshrined in law its controversial extension of the term of the Supreme Court's chief justice, who is considered friendly to Mr López Obrador. The president is unlikely to tone down his divisive rhetoric, which distinguishes between the people and the elites. He will continue to scold his critics in his rambling daily press conferences.

The fact that Mr López Obrador will have to compromise and work with other politicians is undoubtedly a good thing. Indeed, many who voted for the opposition said they did so for this reason alone. However, the opposition's lack of focus will complicate matters. The PAN and PRI formed a coalition to compete in the elections, but on a platform of curbing Mr López Obrador rather than to advance shared policies. In fact, the PRI may yet work with Morena. That would raise eyebrows, but Mr López Obrador's desire for power could trump his political principles. ■

Nicaragua's opposition

Democratic deficit

Months before an election, Daniel Ortega turns on his rivals

On June 2nd Cristiana Chamorro, an opposition hopeful in Nicaragua's forthcoming presidential election, was placed under house arrest. It came a day after she announced that she would run as a contender for a relatively new party, Citizens for Liberty (CxL), to unite a fractured opposition. On June 5th another opposition politician, Arturo Cruz, was detained for "conspiring against Nicaraguan society". Three days later two more presidential hopefuls, Félix Maradiaga and Juan Sebastián Chamorro (a cousin of Cristiana), were detained, too.

Nicaragua is heading for the "worst possible elections" on November 7th, says Luis Almagro, secretary-general of the Organisation of American States in Washington. Voters will elect a president and members of the National Assembly. Daniel Ortega, the strongman president who governs with his wife as vice-president, plans to run for a fifth term.

Mr Ortega, a former Marxist guerrilla, first came to power in 1979 by force of arms. He stepped down after losing an election in 1990 but was elected president again in 2007. Now he appears determined not to let power slip once more. In 2018 he ordered a crackdown on anti-regime demonstrators that left perhaps 450 people dead and sent over 100,000 into exile. To ease international sanctions, he released some political prisoners in 2019. But more recently he has reverted to his old tricks.

Since late last year a flurry of new laws has tried to smother the opposition. One targets NGOs that receive foreign funding. Another bars "traitors" from running for office and redefines treason along absurdly broad lines (Messrs Cruz, Maradiaga and Chamorro are the first people to be ensnared by this law). A third doles out lengthy prison sentences to anyone found guilty of spreading fake news. But now the regime seems increasingly brazen. On May 4th the National Assembly, controlled by Mr Ortega's Sandinista National Liberation Front, appointed five Ortega loyalists to the electoral council, banned independent election monitors and gave the police powers to shut down party meetings and campaign events. One of the two main opposition parties has been banned.

Mr Ortega is right to fear Ms Chamorro. She is the daughter of Violeta Chamorro, a former president who unseated Mr Ortega in 1990, and thus a scion of Nicaragua's most famous political family. A poll released on May 28th ranked her as the most popular politician in the country.

The detention of these candidates "sends a direct message to the United States", said Mr Chamorro, in a defiant interview with *The Economist* before his arrest. Ms Chamorro was detained while Antony Blinken, the US secretary of state, was visiting Costa Rica to discuss the erosion of democracy with Central American officials. The other candidates were arrested while Kamala Harris, the American vice-president, was in Guatemala and Mexico.

Such autocratic behaviour could backfire. The United States has already announced new sanctions, and is considering more. Members of the European Parliament are calling for the suspension of an agreement governing around $380m in exports each year. And by banning one of the two main parties, Mr Ortega has forced rival politicians to overcome differences and band together in CxL. ■

CoronaVac chronicles

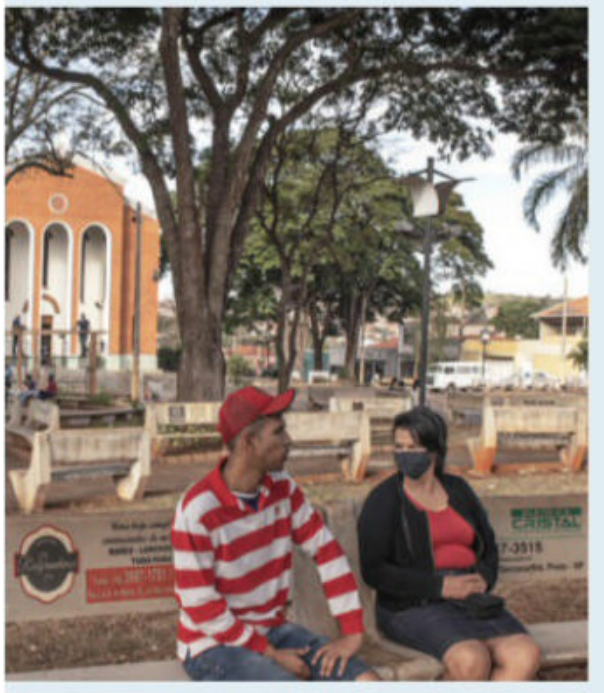
Now for some good news

SERRANA

A town in Brazil has vaccinated nearly everyone against covid-19

Before the pandemic, Celso Vigo walked for 90 minutes each day through the streets of Serrana, a town of 45,000 people surrounded by sugarcane fields in the state of São Paulo. But when covid-19 hit, the 75-year-old retired bank clerk, who played football "well into my 60s", was reduced to doing loops around his house. It reminded him of how Brazil, too, was going in circles. After a second wave killed 87,000 people in April, cases and deaths remain high.

But Serrana was given a way out. Between February and April, all adults were offered jabs as part of a study by the Butantan Institute, which produces CoronaVac, a vaccine developed by Sinovac, a Chinese firm. More than 95% of *serranenses* got jabbed, despite Jair Bolsonaro, the president, claiming that it was unsafe. Preliminary results released on May 31st showed that symptomatic cases and deaths fell by 80% and 95%, respectively. Only two covid-19 patients remain hospitalised in the local clinic (both refused the vaccine). Mr Vigo is once again pounding the pavements.



Almost like normal

Serrana is a tantalising glimpse of an alternative reality in Brazil—one in which Mr Bolsonaro did not squander his chances to mount an effective public-health campaign and, later, to buy vaccines. But the study also has global implications. In phase three trials, CoronaVac had efficacy rates as low as 50%, the minimum required by the WHO. The lower the efficacy, the higher the share of people who must be jabbed to slow contagion. The trial in Serrana sought to discover that share. The town was split into four cohorts, that got jabbed in successive weeks. Contagion dropped dramatically after three out of the four had received two doses of the vaccine, suggesting that herd immunity is attained at around 75%.

These results could boost vaccine uptake across Brazil, hopes Ethel Maciel, an epidemiologist. But 75% is a long way off. Only 11% of Brazilians are fully vaccinated, and the rate has slowed because of a shortage of ingredients for CoronaVac, which are imported from China. Chile, which has vaccinated 45% of its population, mostly with CoronaVac, is also suffering near-record cases.

But Serrana itself has become an oasis. On a recent morning, children ran round a fountain in the plaza. Across the street a fabric shop that caters to elderly women had a steady stream of customers. A gang of old men occupied their usual benches. They discussed Mr Bolsonaro's decision to host the Copa América, a football tournament, even though a third wave seems imminent. "Stupid," a 97-year-old said. Half of them scattered when an outsider showed up. "We're still scared," explained Florivaldo Leandro, a retired police officer. Serrana's calm came at a cost, he said. "We lost friends, neighbours and relatives. Our conscientiousness was forced upon us."

Afghanistan after America

1989 and all that

KABUL AND KANDAHAR

As America rushes towards the exit, Afghans hear echoes of the Soviet withdrawal

On April 14th President Joe Biden declared that all American troops will be out of Afghanistan by September. Now it seems possible that they will be gone as soon as July. The generals reckon that the packing up and handing over is nearly half-finished.

Violence from the Taliban-led insurgency is swelling, but Mr Biden is in no mood to tarry. He has long been a critic of America's involvement in Afghanistan, and the faster the troops go, the fewer casualties America will suffer (though, in truth, they are already very low). The vast air base in Kandahar, once home to scores of jets, helicopters and drones, is deserted. The equally enormous air base in Bagram, near Kabul, is next in line to be handed over to the Afghan government. Other NATO forces are racing the Americans to the exit. The Afghan army will have to face the Taliban on its own.

For Atiqullah Amarkhel, it is a familiar sensation. The former general was a commander in Afghanistan's air force when Soviet troops departed in 1989. The government they left behind, headed by a strongman president, Muhammad Najibullah, was expected to collapse within weeks under assault from the *mujahideen*, Islamist guerrillas backed by America and Pakistan. In fact Mr Amarkhel and his comrades held off the militants for three years, even as the *mujahideen* launched a series of costly and unsuccessful offensives on cities such as Jalalabad, near the border with Pakistan. It was only later, when Russia stopped paying the bills, that Najibullah fell and the country descended into anarchy.

In a place weighed down by the horrors of the past four decades, history's echoes have a way of being heard. Afghans are debating what the parallels might be for the government of President Ashraf Ghani as it faces a resurgent and increasingly emboldened Taliban.

Mr Amarkhel believes the departing Russians left him and his comrades better equipped to hold off the militants than the Americans are leaving his present-day counterparts. "I never for a moment thought we couldn't succeed," he says. "The army we had built then was very much stronger than the one the Americans have left behind." In particular, he says, the fleet of aircraft he commanded was bigger and better provided-for than the air force bequeathed by the Americans.

One of his enemies from that time concurs. As leader of the faction of the *mujahideen* called Hezb-e-Islami, Gulbuddin Hikmatyar received the lion's share of the aid the CIA and Saudi Arabia funnelled via Pakistan in the 1980s. Sitting in his office close to the parliament building, he says that the army the Soviet Union left behind to fight him was "no doubt" stronger than the one NATO has laboured to raise. It boasted tanks, heavy armour, artillery and an air force. By contrast, in the past two decades, America and its allies in NATO have assembled only a lightly armed internal-security force that is designed to quell an insurgency.

Yet comparing the relative strengths of the Afghan forces then and now is only one ▸▸

element in predicting what comes next, says Jonathan Schroden of CNA, a military think-tank. The guerrillas of the 1980s received lavish cold-war support which extended even to anti-aircraft missiles. The Taliban may still have havens in Pakistan, and at least appear more united than the fractious *mujahideen*, but they are also a lesser fighting force. "Militarily, I think Ghani is in a somewhat better position than Najibullah," says Mr Schroden.

The pace of the American withdrawal nonetheless appears to have encouraged the Taliban's leaders, who believe that they have a chance of a military victory. America's attempts to get the two sides to sit down and negotiate a settlement have stalled. The military balance between the adversaries now looks set to be determined in a summer of fighting, with the Taliban trying to put pressure on the government by capturing territory and towns. Somewhere between half and 70% of the countryside is either contested or under Taliban control, according to a UN assessment published on June 1st.

The rank-and-file police and soldiers who make up the bulk of the government forces have repeatedly melted away when attacked in recent months. Even the better-equipped NATO forces struggled against the Taliban's guerrilla tactics, including ambushes and homemade mines. But Afghan police manning outposts also often go unpaid, and lack food and ammunition, say tribal elders in the districts outside Kandahar.

When the Taliban masses against them, they have little stomach to fight. Their surrender is sometimes quick and negotiated via the locals. Sher Mohammad, a farmer in Panjwai district, recalls being pressed into service by a local Taliban commander during an offensive late last year. He was ordered to knock on the door of a local base and give the troops an ultimatum to leave. "I shouted and there was no answer. I made my way in and found it deserted. The soldiers had already gone," he says. That was before the Americans left.

Dozens of small outposts and bases have changed hands like this in recent months. With the police and regular soldiers struggling, the government increasingly relies on its well-trained special forces. These commandos have often worked closely with NATO troops and, although thinly stretched, they have repeatedly proved able to beat the insurgents. They are rotated from hotspot to hotspot, pushing back guerrilla offensives and retaking districts. Death tolls on both sides and among civilians are high.

The Taliban are also pressing up against large cities, but have so far been unable to capture them, or to hold territory against concerted counter-attacks by special forces. Most analysts expect that to continue, because the Taliban do not have the numbers or equipment to prevail.

American generals say they are keen not to repeat Russia's mistake by cutting funding prematurely. Yet exactly what support they will provide once they have left is unclear. The Pentagon said on June 2nd only that its backing would be largely financial—to help pay the salaries of security forces—with some aircraft maintenance thrown in.

After the Soviet Union departed, Najibullah's unexpected longevity was not only thanks to his army and Russian money. He also proved a surprisingly flexible and astute politician, who was given a largely free hand by Russia to do what was necessary to survive, says Mr Schroden.

Here Mr Ghani may be in a more precarious position. He must unite the opportunistic and bickering factions of the Afghan state, all the while under pressure from the Americans to cut a deal with the Taliban. His chief task in the next few months will be to keep Afghanistan whole and prevent it from fracturing into competing fiefs.

With the Taliban buoyant and forecasts from Washington looking sombre, military morale may be the key. "It is mainly psychological now. If we can get through the pressure of this summer, then we will be fine," reckons one Afghan diplomat. Mr Amarkhel agrees: "If our forces can last for two months, they can survive." ■

Trouble in Sri Lanka

Push the boat out

COLOMBO

An influencer's rant overshadows an ecological disaster

FOR TWO weeks an inferno blazed on the *X-Press Pearl*, a container ship, off Sri Lanka's western coast. Its cargo—everything from frozen fish to hazardous chemicals and tiny plastic pellets known as nurdles—burned up or spilled into the ocean. Eventually, on June 2nd, the ship sank. Nurdles and other debris are washing up on beaches. Hard questions have been asked about why the vessel, which was known to have a leaky container of acid, was allowed to enter Sri Lankan waters.

So naturally all that many Sri Lankans have discussed for the past week is Piumi Hansamali, a 28-year-old model and actress. On the same day that the ship sank, police in the capital, Colombo, bundled Ms Hansamali and more than a dozen other people into an old bus and drove them to Passara, a distant village, for a compulsory two-week quarantine. Ms Hansamali had earlier been arrested and released on bail

20,428 likes and counting

for attending a birthday party on May 30th for Chandimal Jayasinghe, a beautician and beauty-pageant impresario, in a five-star hotel, in violation of a lockdown that started in the middle of May.

Ms Hansamali, an accomplished social-media influencer with over 400,000 followers on Facebook and another 1.6m followers on Instagram, shot back with an angry, finger-pointing Facebook Live broadcast from the bus. Wiping sweat off her brow, she heaped wrath on a television journalist who had urged police to punish the revellers (he later complained to police of death threats).

The online rant was viewed over 34,000 times and set off a social-media firestorm about class, influence and privilege. When allegations later emerged that Sarath Weerasekera, the public-security minister, had ordered the bus to turn round so that its occupants could pick up clothes, the maritime disaster was all but forgotten. On June 5th a local news website wryly noted that searches on Google for Ms Hansamali and Mr Jayasinghe far exceeded those for the sunken ship. Ms Hansamali, for her part, made the best of a bad situation and took to posting pictures on Instagram of her quarantine digs (pictured).

The episode reflects a deeper unhappiness with the government's enforcement of lockdown rules. For days before the bus incident, police had cracked down on violators, in some cases physically carrying them off the streets. But the partygoers were detained only after pressure from the media. Nor was the hotel punished for allowing the bash. Three recent deaths in custody—including one on June 6th, in which a man seeking food for his family was detained for breaching travel restrictions and died after falling from a police vehicle—have sharpened the sense of double standards. Mr Weerasekera addressed Parliament two days later, to defend him-

self against allegations that he gave Ms Hansamali special treatment after she called him.

Yet the embarrassment for the government is minor compared with the political headache the sunken ship is threatening to become. Dead turtles and dolphins have started washing ashore, fishing is disrupted and hundreds of soldiers are still scooping nurdles from the coastline. Fears abound of leaks from the vessel's fuel tanks. A criminal investigation is under way. Five expert groups are assessing the damage with a view to securing maximum compensation from the ship's owners. But gone is any public interest in the firefighting capacity of the port of Colombo or whether chumminess between local shipping agents and officials played a part in the vessel being waved through. Ms Hansamali and her friends may have meant to cause the government grief. In reality they did the opposite. ■

The pandemic in India

Multiply by six

More evidence emerges of the true death toll from covid-19

As India's fearsome second wave of covid-19 recedes, the fact that fewer are falling ill is not the only cause for relief. On June 7th Narendra Modi, the prime minister, announced a policy switch that should make it easier for more Indians to get vaccinated. Instead of forcing individual states to compete in procuring vaccines, the central government will now itself buy all the jabs and give out 75% free of charge. The move may restore some faith in Mr Modi's leadership, after his early promises of a world-beating vaccination programme crashed into the grim reality of surging deaths and shrinking supplies of shots.

Yet as Indians emerge from lockdowns, it is not easy to shake off the gloom. True, the official death toll has fallen steadily for the past month, to half its peak of over 4,000 a day in mid-May. But evidence continues to accumulate that the government's numbers represent a disturbingly small fraction of the real figure. This discrepancy does not just mean that the true level of India's suffering has been glossed over. It has made the crisis worse, for instance by causing authorities to underestimate demand for oxygen and drugs.

News organisations including *The Economist*, as well as independent epidemiologists, have speculated that India has suffered perhaps five-to-seven times more "excess deaths" than the official number of covid-19 fatalities, currently just over 355,000. A recent paper by Christopher Leffler of Virginia Commonwealth University in America analyses data on excess mortality from different parts of India to emerge with a rough estimate of between 1.8m and 2.4m deaths from the disease since the start of the pandemic. Another recent study of one state, Telangana, based on insurance claims, suggests that the virus has killed as many as six times more people than official numbers admit.

Such estimates have been extrapolated from patchy and often unreliable local-government data, from company records—including of deaths among staff—and from analysis of such things as obituaries. Evidence from another source, opinion surveys, corroborates the higher numbers. One, conducted in May by Prashnam, a new polling group, asked 15,000 people, across mostly rural areas in Hindi-speaking states in the north, whether anyone in their family or neighbourhood had died of covid-19. One in every six, or 17%, said yes.

Rajesh Jain, Prashnam's founder, then compared this result with surveys in America that had asked a similar question, including one conducted in March by the University of Chicago, which found that 19% of respondents had a close friend or relative who had died in the pandemic. Given the closeness of those results, Mr Jain says that India's overall covid-19 mortality rate is likely to be closer to America's, at 1,800 deaths per million people, than to its official figure of 230 per million. If India's rate does match America's, the number of deaths in India so far would be about 2.5m, he says.

An older polling group, CVoter, has since June last year been collecting daily data on covid-19 from a wider pool of respondents in ten languages across India. Its team consistently posed a slightly different question from Prashnam's, asking if any immediate family members had died from the virus. Following India's first wave, in September, the number who answered yes predictably rose, and then lingered at around 1%. But in April and May it shot up, peaking at 7.4%. Given that India counts some 250m households, Yashwant Deshmukh, CVoter's chair, calculates that the likely number to have died from covid-19 by mid-May was around 1.83m. The trend line from the survey matches the official figure, suggesting the survey is broadly accurate (see chart).

Why does India's government, as well as its press, cling so firmly to misleading official numbers? Mr Deshmukh, who says he is very confident of his own figures, partly blames journalists for what he describes as poor numeracy. But he is dismissive of the excuse that India's many layers of government lack the capacity to generate solid statistics. "This is not about capacity, but intent," he says. "And it's not about the central government or a particular party. It is about data suppression at every level, no matter who is in charge." ■

Same but different

India, covid-19

Sources: CVoter; Our World in Data

*Survey of 14,881 adults
†Seven-day moving average

Vaccine lotteries in the Philippines

Have a cow, man

MANILA

Inoculation is a gamble, in more ways than one

In San Luis, in Pampanga province, it is a cow. In Sucat, a district of Manila, it is 25kg of rice. And in Las Pinas, nearby, it is two motorcycles and a brand new house. These are some of the prizes politicians in the Philippines have in store for winners of local raffles. The entry criterion is simple: get vaccinated.

Filipino society is divided on the subject of vaccination against covid-19. In a recent survey by Social Weather Stations (SWS), a pollster, a third of respondents were keen to get a jab, another third were not and a final third remained unsure. Politicians are betting that the last group, at least, can be persuaded to risk it. "For us to attain our goal, we have to think of a strategy," Jayson Sagum, the mayor of San Luis, told a Manila newspaper. "And we know Filipinos like a game of chance."

They are not the only ones. Inducements have been attempted elsewhere, including in several American states, where they seem to be working. But officials in the Philippines have a problem their Western counterparts do not: Chinese vaccines. In the same survey SWS found that, given a choice, 63% of respondents would prefer an American brand of vaccine, doses of which are in short supply in the Philippines. Only 19% wanted a Chinese brand, supplies of which are relatively abundant.

The government reckons that it must ▸▸

Banyan Quad wrangle

An informal defensive coalition of four democracies has to prove its mettle

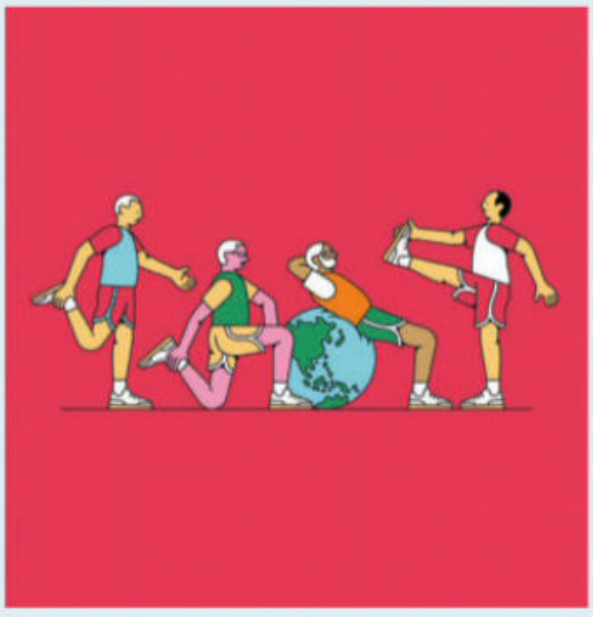
ON AGAIN, OFF AGAIN for years, the security grouping known as the Quad appears in recent months to be gaining purpose at last. Not least, the two members who are not part of the G7, Australia and India, have been invited to attend that club's summit in Britain between June 11th and 13th, joining the two who are, America and Japan. A virtual gathering of the Quad's leaders organised by Joe Biden in March was one of the American president's first foreign-policy moves. There is talk of the group's first in-person summit later in the year. Meanwhile, Congress has thrown its weight behind legislation designed to counter China. Among other things, it gives backing to the Quad by boosting co-operation in military and tech matters.

For the Quad's new purpose has everything to do with China. Four decades of engagement, say some, have not made China a friendlier state nor moderated its behaviour. China's competitive edge, notes Lisa Curtis, a former American official involved with Indo-Pacific policy and now at the Centre for a New American Security, a think-tank in Washington, "has sharpened across the military, economic, diplomatic and technological domains".

All four members have felt the effects, including a deadly brawl last year on India's border with China, embargoes China has slapped on exports from Australia and military incursions around Japan's Senkaku islands, which China claims as the Diaoyu islands. The Quad's talk of a "free and open Indo-Pacific" once sounded like waffle. But increasingly assertive behaviour by China, from expanding its presence in the contested South China Sea to seeking influence through murky infrastructure deals, represents a challenge to the relatively open way in which the Asia-Pacific region has long operated.

Leaders in Beijing accuse the Quad of being an anti-China bloc bent on perpetuating American hegemony. That charge was easier to make when Mike Pompeo, Donald Trump's secretary of state, and others were spouting bombastic rhetoric and urging Asian countries to take sides. With a change of tone from America under Mr Biden, Quad members are now "focused on what they seek to achieve, not merely what they want to counter", another former official, Danny Russel, argues in the *Diplomat*, a magazine.

American naval patrols in the South China Sea have expanded. A new "Blue Dot" infrastructure network, aimed at countering China's Belt and Road Initiative, promotes transparency and environmental sustainability. And a vaccination programme unveiled at the virtual summit in March aims to get jabs into Asian arms. The point, Mr Russel says, is not to force smaller Asian states to choose but to ensure they have viable options. That is broadly welcome: China is all but alone in the region in denigrating the Quad.



Its effectiveness, however, remains unproven. The Quad lacks even a secretariat. The promise of Asian vaccinations was predicated on supplies from India, which that country's enormous second wave stymied. Even security co-operation among Quad members has limits. Not only is India, long averse to formal alliances, reluctant to join "freedom of navigation" patrols in the South China Sea; so too are Australia and Japan, treaty allies of America.

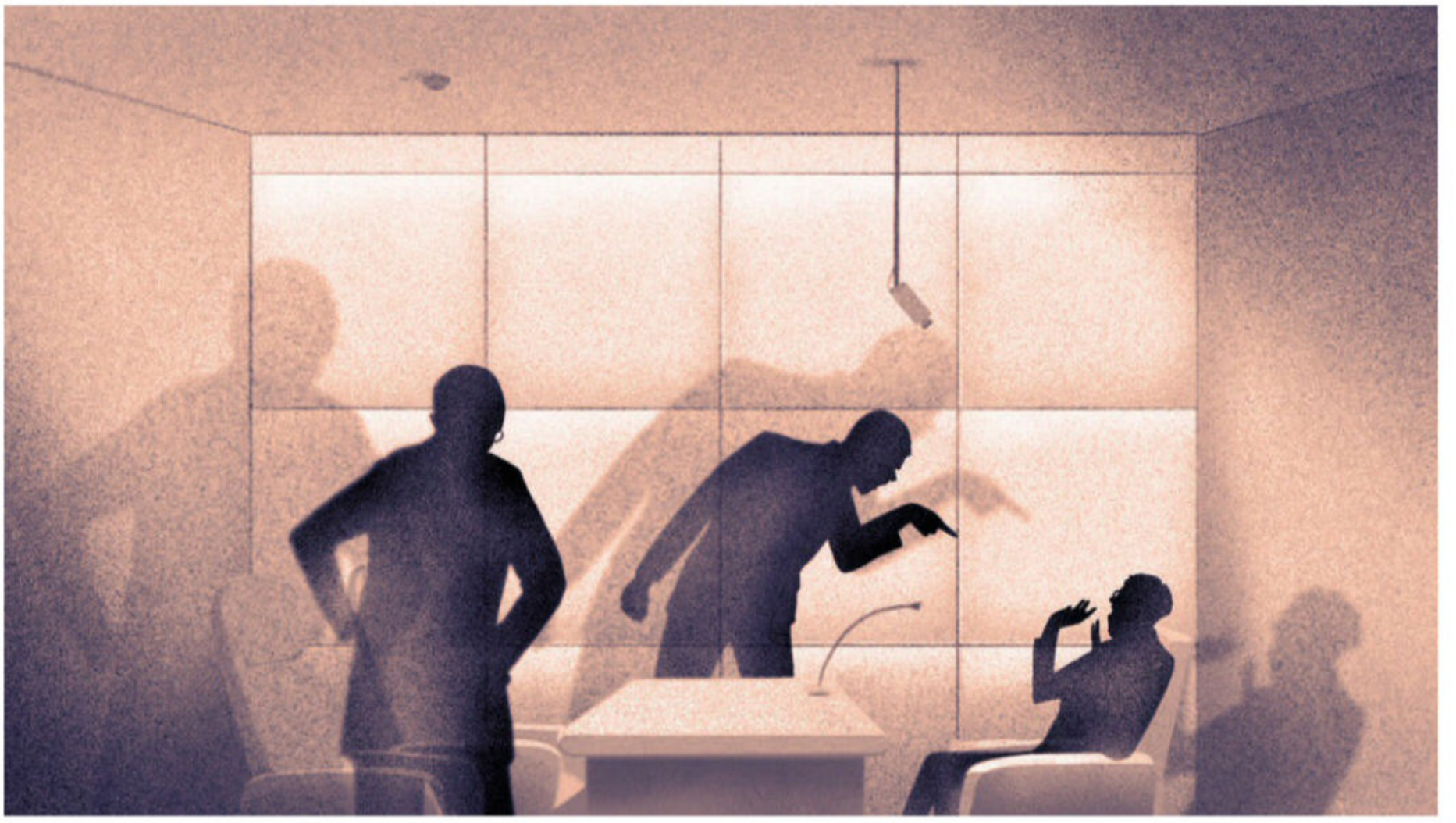
Unofficial "Quad-plus" partners have grown in importance as a logical next step, argues Michael Auslin of Stanford University's Hoover Institution. Post-Brexit Britain wants to increase trade and security ties in Asia. A new British aircraft-carrier, with accompanying warships, is heading for the Pacific. A French submarine recently patrolled the South China Sea. By themselves these gestures may not amount to much, says Mr Auslin. But added to the surveillance and other efforts of its core members, the Quad can muster a "very robust presence" and send a strong signal to China.

Smaller Asian countries would be appalled to be seen joining security efforts against China. By contrast, non-defence co-operation could well grow. South Korea and Taiwan, which together make two-fifths of the world's semiconductors, are both willing to help American-led initiatives to ensure chip supplies. They also seem willing to work with Quad members against Chinese cyber-attacks and cyber-theft. Ms Curtis highlights scope for broader co-operation on next-generation telecoms standards. Loose coalitions rather than hard structures: it is now up to the Quad to show these to be the most effective grammar of modern Asian diplomacy.

administer vaccines at the rate of 500,000 doses a day if it is to achieve herd immunity by November. But in the first week of June it managed an average rate of only around 110,000 a day. Just 4.6m first doses and 1.7m second doses have been administered, in a country of 110m, since the drive began on March 1st. A government survey found that the main reasons for hesitancy to submit to inoculation were fears of side-effects, negative posts on social media and doubts about efficacy. Filipinos have reason to be cautious: a botched rollout of a vaccine for dengue fever in 2016 damaged public confidence in inoculations.

There was little sign of such misgivings in a shopping mall in Manila in mid-May, when hundreds of elderly people crowded a vaccination post, having been told that they would receive the Pfizer vaccine, the only American brand available in the Philippines. The authorities grew alarmed, fearing that mobs of senior citizens might run wild, ignore social-distancing rules and spawn a superspreader event.

So the government changed its approach, announcing that people would be told what brand they were getting only just before the needle went in. If anybody objected, they would be sent to the back of the queue. As Rodrigo Duterte, the president, put it, "Whether you are a millionaire or a pauper, you get what is given to you. You can't choose." His words might have carried more weight if he had been less choosy himself. Mr Duterte had shunned the widely available vaccine made by Sinovac of China and opted to receive another Chinese vaccine, made by Sinopharm, which was available only to himself and his bodyguards. For everyone else, getting jabbed remains a game of chance. ■



The legal system

Who watches the watchmen?

The party's feared anti-graft unit has emerged from a bureaucratic reshuffle with even more power than before

At midnight on June 1st Shi Zhaoqing, a local boss in China's new anti-graft super-ministry, was working late on a case in the central city of Qianjiang. It was coming to a head; his team was exhausted. But before leaving the office he told the duty officers that investigators had to play by the rules, according to an admiring official account. "We must use the correct procedures to collect evidence and handle the case in a civilised manner," he said.

The Communist Party is trying to polish the image of its feared internal-investigation arm, the Central Commission for Discipline Inspection (CCDI), which handles cases of corruption and political disloyalty. In 2018 the CCDI—though keeping its separate identity—became the core of a new super-agency called the National Supervisory Commission. For the first time the CCDI would operate within a legally constituted organisation and therefore be subject to law. This followed an announcement by China's leader, Xi Jinping, that the party would abolish its secret interrogation system for party members. It was called *shuanggui*, meaning "double designation", because suspects had to present themselves at a designated place and time for questioning. They were then held incommunicado, without access to lawyers.

But it is becoming clear that rather than curbing its power, the party has given itself more. The new body is just as unaccountable and secretive as the CCDI itself (indeed, the National Supervisory Commission is, in effect, just a different name for the CCDI). The new commission is drafting rules to supplement the law that created it. Taken together, these legal documents dramatically expand the jurisdiction of the party's graft-busters and contain loopholes that allow them to behave much as before. Not surprisingly, there is no mechanism for public scrutiny of the new commission's activities: no one watches the watchmen. One concession the new body has made is to gather public comments on the draft rules. The deadline for submitting these is June 15th, but it is unlikely that the commission will make them public, let alone revise the regulations in response.

The rules allow the commission to investigate anyone who exercises "public power". That includes civil servants, head teachers, hospital managers and bosses of state-owned firms. The remit is so broadly worded that it could apply to staff of foreign firms that have government contracts or joint ventures with state-owned businesses, says Jeremy Daum of the Paul Tsai China Centre at Yale Law School.

By giving the commission such vast powers, outside the normal justice system, the party can keep a wide range of misconduct and abuses of power from public view and continue to work with minimal legal restraint, says Mr Daum. But the party insists otherwise. It says it is making its procedures fairer by tightening the rules. The *shuanggui* interrogation system has been replaced by one with a more obvious meaning: *liuzhi*, or detention.

Unlike its predecessor, *liuzhi* comes with legal stipulations: audio and video recordings must be made of interviews, and any death in custody must be reported to the commission's headquarters within 24 hours. There has been a push to build "standardised" interrogation rooms with padded fittings. Rules say detainees should be held no longer than six months, their "ethnic customs" should be respected and they should be provided with proper food, rest and medical care (there must be a ▸▸

first-aid kit to hand). At a glance it sounds, as Mr Shi might put it, very civilised.

But suspects still have no right to a lawyer and no way of complaining about any abuse except to the new commission. In May 2018, two months after the organisation was established, a 45-year-old man who had worked as a government driver died while in *liuzhi*. His sister told *Caixin*, a news publication, that when she arrived to get his body, she found his face had been "disfigured". The family asked in vain to see the interrogation video. Internet censors swiftly blocked *Caixin*'s report from circulating on Chinese-language forums.

The way the CCDI has gained more power fits a pattern under Mr Xi. Since he took over as party leader in 2012, he has been trying to put the party more firmly in control of all aspects of state and society, while insisting that the party is also becoming more accountable. He has stressed the importance of law (in party documents, rule of law and rule by law are often used interchangeably), while using his investigators to target political enemies. Some of those detained by the CCDI have been accused of disobeying the party line as well as of graft.

In 2018 Mr Xi launched a three-year campaign called "sweep away black and eliminate evil". The targets were said to be organised crime syndicates and their accomplices in the party and government. But the dragnet swept up thousands of other people seen as threatening, including religious figures, leaders of rural clans and wealthy businessmen.

Mr Xi's purges have sown fear within the bureaucracy. That is their aim. Regulations issued in 2016 state that when being criticised or questioned, officials should be "red-faced and sweating". Mr Xi says he wants them "not to dare to be corrupt", "not to be able to be corrupt" and ultimately "not to want to be corrupt". But making sure of that is the party's task alone. "The party must manage the party," he insists, repeating a dictum of its founders.

The party shows no sign of relinquishing its power to toss those it finds threatening into "black jails", as critics often call them. These facilities lack the trappings of the formal prison system, such as the need for a trial before incarceration and provision for visits from family members. The party's "political and legal" committees, which oversee law and order, are particularly fond of using such lock-ups to detain people who petition against local injustices, as well as members of Falun Gong, a banned spiritual movement. In the far-western region of Xinjiang, these committees have led the creation of a new gulag to which the party has sent more than 1m ethnic-Uyghurs without trial, purportedly for vocational training to help with their "de-radicalisation". (Most are Muslims who have shown no radical tendencies.) Some experts believe the authorities have begun to take some of the camps' inmates and send them for formal trial, leaning on the courts to give them harsh sentences on dubious charges of extremism.

The glowing account of the exploits of Mr Shi, the anti-graft boss in Qianjiang, describes how he instructed investigators to deal with a detainee in 2019. "Continue to increase the intensity of interrogation," he says firmly. "And don't let him lead you by the nose!" The suspect soon decided to co-operate and the case was cracked. The party always gets its man. ■

Museums

Build big, show little

China says it wants to be a "museum power" by 2035

CHINA HAS big plans for the year 2035, if somewhat lacking in clarity. It will "basically achieve socialist modernisation" by then, whatever that means. Its army will be modernised, too. Late in 2020 it also said it would become a cultural and sporting power (isn't it both already?), and an "education power" to boot. Last month it declared a new goal: to become a "museum power". It even gave some detail. Between ten and 15 of its museums, it said, would become "world-class".

China is building museums at a frenetic pace. In 2000 it had fewer than 1,200 of them. By the end of last year there were nearly five times as many. Helped by a decision in 2008 to allow free entry to most government-run ones, visits have also soared. By the end of 2019 the annual number had increased more than fourfold, to 1.2bn. There was a huge drop last year because of the pandemic, but new museums still opened at a rate of nearly five a week (officials admit that obtaining enough good stuff to put in them is difficult).

Looney dunes

The new plan does not name any museums in the running for world-class status. But architecturally, several stand out. One is the Ordos Museum of local history, which opened in 2011 in the city of that name in Inner Mongolia. The huge amorphous blob, covered in polished metal tiles (pictured), is intended to evoke the dunes of the nearby Gobi desert. In Beijing the privately owned X Museum of contemporary art, which opened last year, is another that boasts a striking new building.

But Chinese museums must be mindful of the Communist Party's wishes. The plan for 2035 says the party must exercise "all-round leadership of museum development". The document's list of worthy themes for exhibits includes the Belt and Road Initiative—a global infrastructure-building project launched by China's leader, Xi Jinping—as well as more universally acknowledged engineering marvels such as the Great Wall and the Grand Canal.

Officials hope that museums will boost national pride and thereby support for the party. Two new museums have opened since 2018 dedicated to China's claims to contested islands in the South and East China Seas. Last year the National Museum of China put on an exhibition about Taiwan, aimed at backing China's assertion to sovereignty over that island as well. The same museum was the destination of Mr Xi's first public excursion after he took over as leader in 2012. It was there he first used what was to become his most famous catchphrase, saying there was a "Chinese dream" of renewed national greatness.

Occasionally, private citizens dare to open museums that explore sensitive topics. In late April feminists launched what they described as one on the theme of "internet violence". It was really a work of protest art: a hillside dotted with 700 violent online messages that had been sent to Chinese women, displayed on red banners across a distance of three kilometres. Pictures of this were posted online, but the organisers kept quiet about where it was.

Only in Hong Kong have museums been allowed that truly challenge the party line. But on June 2nd officials there closed a tiny museum dedicated to the crushing of the Tiananmen Square protests on June 4th 1989. They cited a licensing problem. However, the move coincided with a ban on an annual vigil commemorating the bloodshed. In this case the pandemic was given as the reason, but many activists fear the massacre is becoming taboo in Hong Kong, just as it is on the mainland. The party's all-round leadership of museums may be spreading into new territory. ■

Chaguan | Foreigners inside the Great Wall

Globalisation was meant to change China, but China is changing the world

Early last year, as covid-19 brought China to a near-halt for several weeks, multinational corporations caught a glimpse of a different kind of globalisation: one without a dynamic Chinese economy at its heart. Panic ensued.

Foreign businesses confessed that they had grown too dependent on China as the easiest and best place to make and sell their wares, whether for export or in domestic markets. The new virus, coming on top of a trade war with America, was declared a salutary shock that would drive big changes. Foreign firms pledged to build more resilient supply chains by diversifying into other countries, while noting that they would keep production sites "in China, for China", to serve Chinese demand when it returned.

A year on, the mood is very different. Nearly 600 companies responded to an annual survey of business confidence conducted by the European Union Chamber of Commerce in China, which was published on June 8th. They described surging optimism about China, with economic growth having resumed far more quickly than expected. Three-quarters of European firms said that they were profitable in China in 2020, allowing them to send revenues back to headquarters suffering from dismal results elsewhere.

Optimism varies by industry. In particular, makers of cars and luxury goods enjoyed bumper sales as affluent Chinese, denied holidays abroad by pandemic controls, went shopping instead. Fully 91% of the firms said they would maintain their investments in China, rather than move them elsewhere. Over a quarter of manufacturers are bringing supply chains more completely into China, five times as many as are moving them offshore.

Strikingly, however, the same companies remain as sceptical as before that China will open markets or enforce regulations in the same way for local and foreign firms. The same share as ever, one-sixth, report being compelled to transfer technologies in order to maintain market access. Two-fifths say that the business environment in China is more politicised than before. That share would surely have been higher had the survey been conducted after recent Chinese sanctions on European politicians and the whipping up by state media of consumer boycotts against H&M and other clothing brands, in response to European criticism of abuses in the far-western region of Xinjiang.

European companies report losing business opportunities because of laws that demand that sensitive technologies used in China must be secure and controllable by Chinese authorities. Those laws are buttressed by rules banning many data transfers across China's borders. That is forcing multinationals to build duplicate databases, cloud services and software systems just for China, and to hire all-Chinese research and development teams. Increasingly, says the EU chamber's president, Joerg Wuttke, firms must build one operation for China and another for the rest of the world.

A cynical Chinese official might listen to these businessfolk grumbling about how tough it is in China, and wonder why, exactly, China needs to heed foreign calls to reform, when the same people turn round and make new investments. Such an official might even observe that some important European businesses are responding to American export controls on sensitive technologies by moving factories out of America so that they can continue to cater to Chinese customers.

In private, European bosses concede that they have less and less leverage when trying to persuade China that it is in the country's self-interest to open up. Some are growing keener to use sticks against Chinese business in Europe, such as investment-screening mechanisms or rules that would impose new costs on carbon-intensive projects or firms that are heavily subsidised by the Chinese state.

The China led by Xi Jinping is selective in its welcome to foreign firms. The most favoured sell things that China cannot make for itself, such as high-tech chemicals and industrial machinery, and whose presence attracts specialist suppliers. Such firms enjoy red-carpet treatment: they are allowed to create Chinese subsidiaries which they own fully, helping them to protect trade secrets, and are spared red tape that entangles lesser rivals. A lower tier of foreign firms makes products that Chinese consumers like, such as fancy European cars. The state tolerates their presence as long as they make those things in China, using Chinese workers and components, and pay local taxes. That can be profitable: some multinationals earn almost half their revenues in China. But that is because they are operating entirely within the Chinese wall. China is not especially important as a market for Western–made exports: the EU sells more to Britain than to China, for instance.

It is getting harder to bring foreign staff into China, particularly during the pandemic. Localising many jobs is a good idea: mediocre expatriates enjoyed unearned privileges for too long. But in a China steeped in angry nationalism, localisation also carries risks. Some Chinese executives take their government's side over stalled reforms, or over political issues like repression in Hong Kong and Xinjiang. Others have a tin ear for politics in the West.

Putting the nation into multinational

Boards in the West used to worry about things like market feasibility studies. Now they must wrestle with a new, philosophical question: do their firms really want to operate in China as Chinese businesses, employing fewer and fewer foreigners, to generate revenues shared with global shareholders? If such outfits ask their home governments in the West for help, will it be forthcoming? Experienced executives describe bleak choices. "It is about the weighing of risks," says one. "The risks of not being here, with the risks of being here." Meanwhile, public opinion in the West is turning more hostile to a China seen as grimly dictatorial. Diversification does not make economic sense, it turns out. But politically the world is decoupling. That shock will have lasting effects. ■

The globalisation of politics

What's the Japanese for QAnon?

BOSTON AND SÃO PAULO

Social media are turbocharging the export of America's political culture

ARTHUR DO VAL just wanted to be somebody. A sitting lawmaker in São Paulo's regional assembly—with, as he boasts in his Twitter bio, the second-largest number of votes of any candidate—Mr do Val rose to fame by heckling lefties at marches. He learned this tactic, he explains, from the documentaries of Michael Moore, an American political film-maker.

Mr do Val has since become a talented and prolific producer of web-friendly content. His team pumps out hundreds of images and video clips weekly through social media. People want to be entertained, he argues, so politics must be entertaining, too. Political arguments should be delivered in funny memes and silly videos which, in Mr do Val's case, tend to focus on promoting economically liberal ideas and bashing the left.

"I tried being a rock star; I failed. I tried to be a fighter, an athlete; I failed. I was simply a frustrated businessman. Then, I saw in YouTube an opportunity to exploit my indignation," he explains. "I just wanted to stand out, and by accident, it took me to a political career."

Mr do Val's rise from a nobody to a state deputy by the age of 32 was both unlikely and impressive. But he embodies a new transnational class of political entrepreneurs who communicate in memes, videos and slogans. They draw on a global flow of ideas, adapt them to local conditions and return them to the ether. Many are activists or ordinary people. Social media are their most important means of influence—both over their followers and each other. The result is not only a new class of unorthodox politicians, but also the globalisation of political ideas, many from America.

America's films, television and music are loved everywhere. Its consumer brands are world-beating. Its social-media stars have global influence. As the world's most powerful country, with huge cultural reach, it has always had a hefty impact on political trends and movements.

In 1990 Joseph Nye, a political scientist at Harvard, introduced the concept of "soft power", which he defined as "the ability to affect others and obtain preferred outcomes by attraction and persuasion rather than coercion or payment". Hollywood, pop music, McDonald's and Levi's jeans are all expressions of America's soft power.

For many people beyond its shores, consuming these goods was as close as they could get to sharing the American dream. When the first McDonald's opened in Mumbai in 1996, Indians queued in their thousands to taste its fabled burger (though made without beef), replicating a scene from Moscow six years earlier. (The opening of a Starbucks in Mumbai a decade ago drew a similar response.) Mumbai's film industry, the biggest in the world, is called "Bollywood" to mimic its counterpart in Los Angeles. Nigeria has "Nollywood", Pakistan "Lollywood".

Even if McDonald's and Hollywood contribute to growing obesity and unrealistic expectations of police forensics, for policymakers the important thing is that, as Mr Nye puts it, "exerting attraction on others often does allow you to get what you want". A fondness for American brands is positively correlated with favourable views of the American government. What has changed is that the culture the country exports has expanded to encompass its politics. And in the age of social media, it is memes, not McDonald's, that are the main vehicle for America's cultural influence.

Take Brazil. Its political scene is full of YouTubers and Facebook influencers. These include supporters of Jair Bolsonaro, the president; critics of the government such as Felipe Neto, who rose to fame making videos for young people; and a vast market of political content-makers in be-

tween. "There is a lot of influence, even unconscious, of the [American] discourse. What's happening there, comes here," says Mr do Val, citing debates on face masks or race. This is not as simple as copying and pasting American arguments, he cautions. Rather, America provides the templates that anyone anywhere can apply.

According to Whitney Phillips, a media researcher at Syracuse University in New York, America's role in shaping political debates comes not just from the norms it promotes. It also "flows from its cultural production—the actual stuff of media and memes", she writes in "You Are Here", a new book examining global information flows. One reason America's influence is greater now, she says, is that "social media is global. And there are way more people outside the United States who use Facebook than in the United States."

Black Lives Matter sweeps Nigeria

Consider the Black Lives Matter (BLM) protests which erupted in America in 2020. They inspired local versions everywhere from South Korea, where there are very few people of African descent, to Nigeria, where there are very few people who are not. In Britain, where the police typically do not carry firearms, one protester held aloft a sign that read, "demilitarise the police". In Hungary, where Africans make up less than 0.1% of the population, a local council tried to install a work of art in support of the BLM movement, only to earn a rebuke from the prime minister's office. Last year the Hungarian government released a video declaring, "All lives matter."

QAnon, a conspiracy theory that holds that paedophile cannibals run America, began circulating some time in 2017. It has since won many adherents outside America. In a small QAnon protest in London last year, people carried signs that read, "Stop protecting paedophiles". In France it is finding support among *gilets jaunes* (yellow jacket) protesters. According to one estimate, Germany has the world's second-largest number of QAnon followers. The conspiracy theory has even spread to Japan, despite the country's radically different political culture.

Cultural influence is not a one-way street. British political influencers enjoy big audiences, including in America. The odd Canadian gets a look in. Mr do Val proudly points to the "confused lady" meme as one that started in Brazil but is now in widespread circulation abroad. Yet few people are aware of its Brazilians origins. Nor do Brazilian—or any other—movements inspire similar memes across the world. The ability to influence the world, even if indirectly, is proportional to a country's cultural heft (see chart).

Much of this is the work of social media. It amplifies new voices, accelerates the rate at which ideas spread, and broadens the scale at which both people and ideas can win influence. But established newspapers and television channels also retain immense influence, even online. CNN is the second-most-visited English-language news website in the world, after the BBC. The *New York Times* is third. In November Emmanuel Macron, the French president, complained to the newspaper about its coverage of a terrorist attack near Paris. Mr Macron does not contact every media outlet about its coverage. But some 50m people outside America, spread across every country on Earth, read the *New York Times* online. Of its 5.2m digital subscribers, nearly a fifth are outside America.

Media outlets elsewhere take their cues from their American counterparts. According to analysis by Kings College London (KCL), mentions of "culture wars" in the British press used to be a quadrennial phenomenon, suggesting they cropped up in conjunction with American presidential elections. But in recent years the use of the term has shot up. "We have imported the language of culture wars into the UK wholesale," says Bobby Duffy, the director of KCL's Policy Institute.

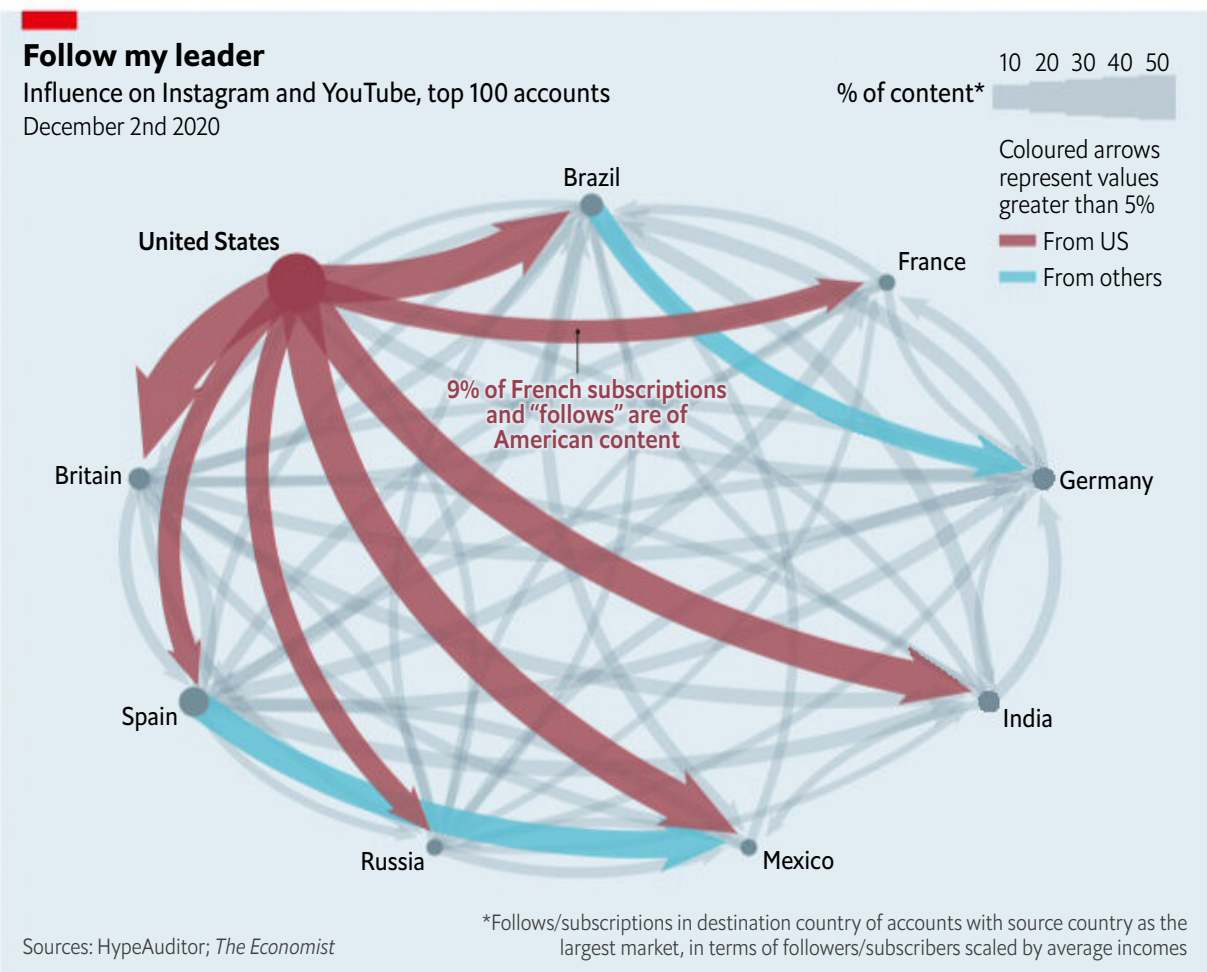
These factors together help explain why QAnon has gained global name-recognition, lockdown-scepticism has taken on American vocabulary and BLM protests have spread across the world. Just as people everywhere watch Hollywood movies, they also follow American newspapers, television programmes and social media.

The same cannot be said of any other country. Take China. Protests in Hong Kong elicited sympathy and solidarity, but did not inspire similar demonstrations. Few outside China get excited about buying Huawei phones or shopping on Alibaba. TikTok, its only globally successful internet product, is split into a Chinese version—Douyin—and the version used elsewhere. China's great firewall keeps the rest of the world from getting in, but it also stops Chinese ideas getting out.

Moreover, the openness of America's politics allows for a ready appropriation of its symbols and iconography, says Craig Hayden, a professor of strategic studies of the Marine Corps University in Virginia. Videos of riots on American streets should, on the surface, damage the country's standing in the world. Instead people in other countries see unrest in Washington or Minneapolis and think America is "engaged in this kind of struggle that's parallel to ours", he says. And America's aspirational cachet makes its movements all the more powerful. "I can think of a random country somewhere that's having internal racial strife; we're not all retweeting what's going on there," he adds.

Uncle Sam's digital megaphone

Just as political power in the age of social media has flowed to disrupters, so too has the power to influence affairs in far-off lands. Social-media users in Minneapolis or Seattle can have an impact on the Instagrammers of São Paulo. Arguments that start on university campuses in New England migrate to the living rooms of old England. The internet promised to help information flow around the world. But social media and their algorithms have just amplified America's voice. ■



Inflation in America Inc

Less for more

NEW YORK

Businesses contend with a long-forgotten problem

PROPERTY INSURERS price policies today but face payouts a year from now. That makes their profits hostage to inflation. As swathes of America's economy have begun rapidly reopening for business in recent weeks, thanks to falling rates of covid-19 infections and rising ones of vaccination, William Berkley has been paying close attention to prices of building materials and anything found inside homes, from lamps to laptops. The replacement value of a home in America may have leapt by 20%, year on year, Mr Berkley thinks. Since the founder of WR Berkley launched his insurance firm over half a century ago, he has never witnessed a time like the past year—not even in the inflationary 1970s.

Economists debate whether the rapid climb in consumer prices, which rose at an annual rate of 4.2% in April, the fastest since September 2008, will prove as enduring as 50 years ago. Input prices for producers shot up by 6.2% (see chart 1 on next page). On June 9th Chinese beancounters reported that producer prices in the world's manufacturing powerhouse rose by 9% in May, year on year, the biggest jump in 13 years (see Finance section).

The Federal Reserve insists that higher inflation will be "transitory". Partly for that reason, chief executives of many big American companies are wary of discussing inflation in public. When Darius Adamczyk, who heads Honeywell, a huge industrial conglomerate, mentioned during an earnings call in May that inflation "is here and it is probably a lot more pronounced that people think", his comment went viral among financial types on the internet.

Their coyness notwithstanding, many of Mr Adamczyk's and Mr Berkley's fellow bosses are bracing for a period of higher costs. Some inputs remain scarce while clogged supply chains are being reconfigured for a reopening economy. At the same time, demand is surging from American consumers, who are flush with unspent pandemic-year savings, augmented by stimulus cheques from the government. To deal with the resulting price pressures, firms are adapting their corporate tactics accordingly.

In the 1970s companies responded to rising input prices in a number of ways. First, they passed as much of the higher costs as possible on to customers. When that strategy was exhausted, they turned to automating operations or moving them to places with cheaper labour, either elsewhere in America or abroad.

Businesses are now dusting off that old formula, starting with price rises. In April Coca-Cola told analysts that its soft drinks are about to become more expensive, and Whirlpool warned that the same was going to happen to its washing machines and other appliances. Procter & Gamble plans to raise the prices of some of its consumer products by "mid to high single digits" in September. On June 8th Chipotle confirmed it had increased menu prices at its Mexican-grill restaurants by as much as 4%. Some companies, such as Royal Canin, which makes pet food, have kept prices steady but cut the size of their portions.

Michael Goldman, who runs Carolina ▸▸

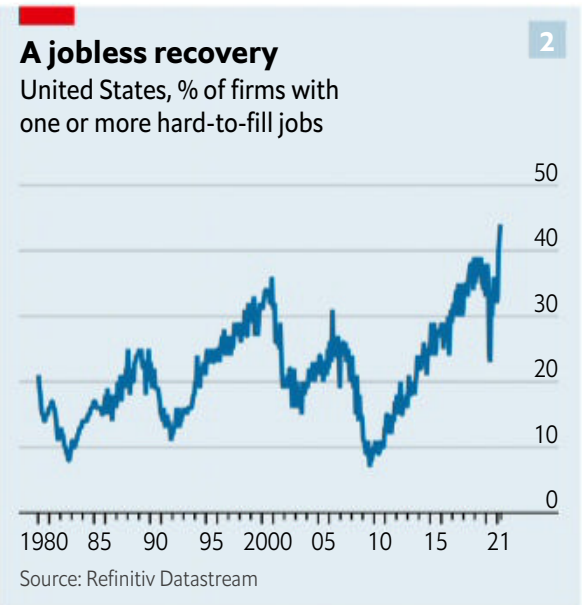
→ Also in this section

Casting, which makes furniture in North Carolina, has seen the cost of resin shoot up by 75%, of lumber three- to fourfold, and of a container to ship materials from Asia by $16,000, to $20,000. He has increased his rates for customers twice so far this year. WR Berkley began repricing its premiums upwards last year but has accelerated that in the past couple of months. Insurance brokers who sell the company's policies have not grumbled; they expected as much, says Mr Berkley.

Pent-up demand allows companies to get away with even large price rises. Consumer prices may have risen even faster in May than in April, according to forecasts. As a result, returns, which held up in the first quarter, are expected to do so again in the second, says Jonathan Golub of Credit Suisse, a bank. Big firms' net margins have actually been rising. This suggests that as yet, far from forcing companies to absorb the extra costs, inflation may have given them some extra pricing power.

Plenty of businesses are, however, preparing for a time when they can ratchet prices up no longer. Sridhar Tayur of the Tepper School of Business at Carnegie Mellon University, who consults with three large companies, says that each of them is redesigning products to eliminate waste and streamline manufacturing. Mr Adamczyk said in January that he had established an internal Honeywell task-force to respond to inflation (though he was vague about what exactly it might do). Lineage, a logistics firm with 200 cold-storage warehouses across America, says it has created several such teams. One focuses on avoiding supply bottlenecks in critical construction projects, another on recruiting workers in a tight market.

Rising labour costs are chief executives' biggest headache by a long way. Some companies are trying to keep a lid on future wage increases by using one-off inducements, such as signing bonuses, to attract new recruits. Most, though, have no choice but to raise pay. Andrew Obin of Bank of America reckons that American manufacturers are paying existing employees about 4% more than a year ago. But, he estimates, workers can expect a pay rise of 13% if they switch jobs. Wages for non-supervisory workers rose at an annualised rate of nearly 7% between April and May, according to the Bureau of Labour Statistics.



Despite a willingness to pay workers more, many firms are having trouble filling vacancies. Nearly half of American companies complain that they are finding it difficult to fill one or more jobs (see chart 2). "It is hard to tell how much it costs to hire someone because you can't find anyone," sighs Mr Goldman. His "help wanted" ads often go unanswered; many of those who respond fail to turn up for interviews. Given Americans' apparent reluctance to get back to work, whether because of continued fears of covid-19, generous unemployment insurance, or both, wages may have further to rise (see Free exchange).

If inflation does prove stickier, some companies will contemplate shifting production to places with more plentiful and cheaper labour. All three firms advised by Mr Tayur, for example, are pondering whether and where to move, within America and farther afield. Others may want to get rid of human workers altogether. America Inc has ramped up business investment by 15% this year. Part of this is going towards automation, and not just in manufacturing. Erik Gordon of the University of Michigan's Ross School of Business points to restaurant chains, some of which are installing automatic grills and developing apps that enable diners to place orders remotely rather than at the counter, which allows fewer staff to focus on making and serving food. As hotels reopen, robot floor-cleaners are becoming more common.

Many such productivity-boosting investments make good business sense even in a low-inflation world. That is the outcome which many chief executives will still be hoping for. It is certainly what policymakers are banking on. In the 1980s the Securities and Exchange Commission required companies to publish balance-sheets and income statements both in nominal terms and adjusted for inflation. This requirement has been watered down over the years. In November the markets regulator appears to have all but binned the last explicit vestige of it. It would be ironic if this now proved premature. ■

Supersonic passenger jets

Boom time?

A flock of startups wants to break the sound barrier

FOR 27 YEARS Concorde epitomised jet-setting glamour. Yet its elegant delta wings came with the ear-splitting noise of thirsty military-derived engines; champagne was served in a cramped cabin with small seats; and cruising at twice the speed of sound, which just about halved the time for an Atlantic crossing, cost twice the regular business-class fare. Devotees shed a tear after its farewell flight in 2003, following a fatal crash in 2000 and the terrorist attacks of September 11th 2001. Most business travellers shrugged.

"Picking up where Concorde left off" is how Blake Scholl, chief executive of Boom Supersonic, describes Overture 1, the jet which the American startup is developing. It will propel up to 88 passengers 1.7 times as fast as sound while avoiding Concorde's drawbacks. This appeals to United Airlines. On June 3rd it agreed to buy 15 planes, with an option for 35 more. JAL and Virgin Atlantic have options to acquire 30 between them. Mr Scholl promises that supersonic fares, once only for the very rich, will now be "for everyone"—or at least those who can afford to fly business on the same route. Better aerodynamics, materials and engines are intended to keep operating costs 75% below those of Concorde. Civilian engines will propel the aircraft in ▸▸

Ready to make Overtures

relative quiet and use sustainable fuel to head off criticism from environmentalists. Mockups of the cabin look suitably plush.

UBS, a bank, thinks supersonic travel has a future. It puts the cumulative size of the market at between $80bn and $280bn by 2040, depending on regulatory hurdles and whether the planes are delivered on time, on budget and operate as promised. Mr Scholl is eyeing the upper end of that range, a potential market for 1,200 Overture 1s at $200m each. Then he hopes to make progressively bigger craft offering lower fares and higher speeds. Spike, another American firm with supersonic ambitions, is developing an 18-seat business jet that doesn't make a loud boom.

Is this pie in the sky? A distant caveat-strewn commitment is good publicity for United and for Boom when it seeks more funding. It is unlikely that much cash has yet changed hands. Overture 1 is not set to enter service until 2029. Aerion, another firm that hoped to build an 8-10-seat business jet, unexpectedly folded in May despite orders worth more than $11bn and backing from Boeing, America's giant aeroplane-maker.

National regulations banning supersonic speeds over land rule out trips across North America, home to lots of business travellers and most of the world's business jets. Morgan Stanley, a bank, reckons that at $120m, double the price of a similar subsonic plane, even the ultra-rich wouldn't pay to cut four hours from a transatlantic trip. Tellingly, Boeing itself has no plans to go supersonic. Nor has Airbus, its European arch-rival (which was involved in the Concorde project). The passenger-jet duopoly reckons that cheaper and cleaner flying is more important than speed. Breaking the sound barrier is still some way off for the ordinary punter. ■

Medical technology

Booster shot

BUNDANG AND SEOUL

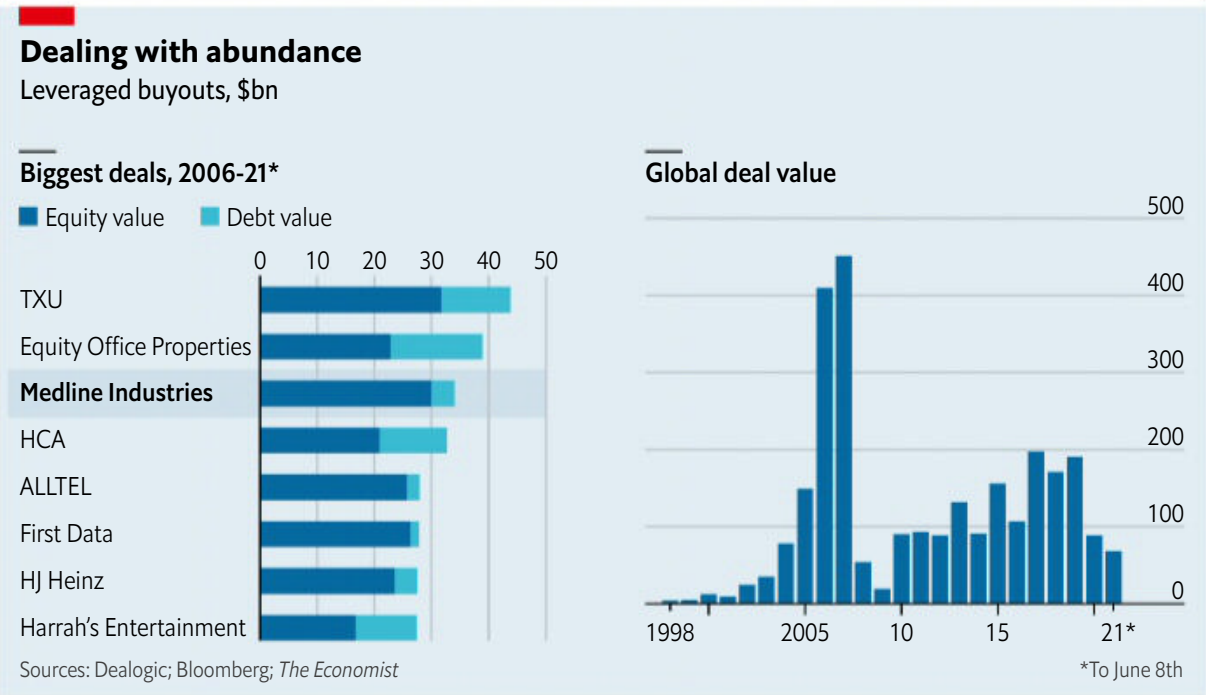
Can South Korea's biotech boom outlast the pandemic?

UNTIL EARLY 2020 Seegene was a medium-sized South Korean purveyor of medical diagnostics with around $110m in annual sales. On January 27th that year Chun Jong-yoon, Seegene's boss, and his counterparts at other biotechnology firms were summoned to an emergency meeting by the government. Officials asked if they could produce tests for a novel coronavirus which had been spreading rapidly in Wuhan, China. Seegene's test kit was given the go-ahead by regulators. When cases began spiking soon afterwards in Daegu, in South Korea's south-east, the company went into emergency mode. "We stopped all other activities and just threw everything we had at covid-19," says Mr Chun.

Seegene's employees worked around the clock, snatching a few hours of sleep in hotels near the office. Dozens more were hired overnight. Within weeks the firm was exporting millions of test kits to dozens of countries around the globe. It ended the year with $1bn in sales and $440m in net profit. Other South Korean biotech firms have had a similarly good pandemic. Five of the ten most valuable companies in the KOSDAQ index of medium-sized firms now come from the biotech sector, up from two at the end of 2019. So do two out of the ten biggest companies in the benchmark KOSPI index.

As well as tests, they have been producing treatments and vaccines for covid-19. SK Bioscience started making the AstraZeneca jab this year and in February signed a deal to make the Novavax one. The next month it raised $1.3bn in an initial public offering; its share price shot up by 30% on the first day of trading, which it ended with a market capitalisation of nearly $12bn. In May Samsung Biologics, a listed subsidiary of South Korea's biggest conglomerate, signed a deal to help distribute hundreds of millions of Moderna shots from next month. It is building a new factory in Incheon which, the company claims, will leave it with a third of the world's contract-manufacturing capacity for "biosimilars", generic versions of biotech drugs.

Even before enlisting biotech firms to fight covid-19, successive administrations have used tax incentives, partnerships and grants for research and development to foster the industry. Partly thanks to such largesse it had been growing at nearly 7% a year before the pandemic, twice as fast as South Korea's GDP. But that was from a low base, and concentrated at the less lucrative me-too end of the market. South Korean ▸▸



The return of the mega-LBO

Buyout shops are neck-deep in dry powder. Earlier this year the world's private-equity firms were sitting on $1.9trn in unspent capital. This month three of the biggest, Blackstone, Carlyle and Hellman & Friedman, reportedly agreed to pay $34bn for control of Medline, a supplier of medical equipment. It will be the biggest leveraged buyout since the global financial crisis of 2007-09 put paid to most such debt-fuelled acquisitions.

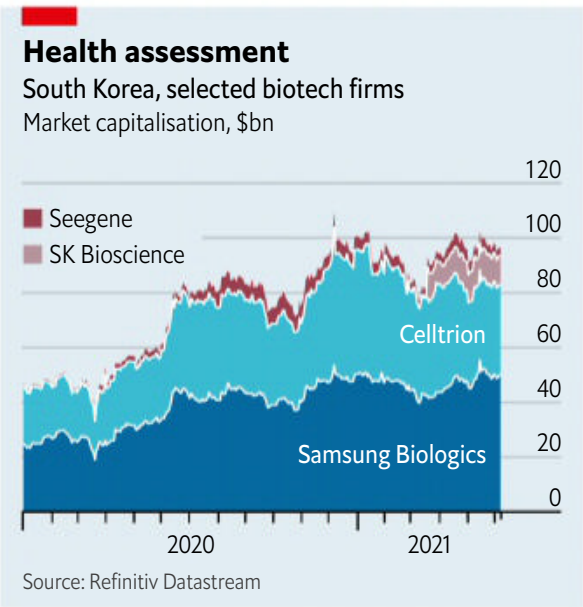
firms have yet to come up with a blockbuster treatment licensed around the world. As such, they account for less than 2% of the global biotech market, says Lee Seong-kyou of Korea Biotechnology Industry Organisation, a trade group.

The industry's boosters believe that, in the words of Kwon Oh-sung of the Korea Institute for Industrial Economics and Trade, a government think-tank, "the pandemic has been a turning point". Companies have probably "learned more and accumulated more technology over the past year than in the ten years before that", thinks Mr Lee.

Some lucky ones, such as Seegene, have also accumulated profits which they can put to use. Mr Chun had long hoped to perfect diagnostic kits that can test for more diseases with less complex equipment. This would allow him to widen his customer base from governments and big hospitals to smaller clinics and even individual practices. "We have always had the plan but we never had the cash to work on it," he says. "Now we do."

Can the cash keep flowing? Some investors may be getting cold feet. After soaring in 2020, South Korean biotech's share prices have faded somewhat (see chart). Earlier this year six of KOSDAQ's top ten firms were in biotech: one has joined them since but two have dropped out. Seegene's shares are worth half as much as at their peak last August. The market value of SK Bioscience has dipped below what it was after its sparkling debut. Shares of Samsung Biologics and Celltrion, the industry's two giants, are trading below their recent peaks.

Given the relatively simple technology involved in products such as test kits, companies like Seegene now find themselves exposed to intense competition, including from industry behemoths such as Roche of Switzerland. Startups gripe that financing is hard to come by. Everyone grumbles about a shortage of skilled workers. The pandemic has given the industry a shot in the arm. For a booster, the companies must look to themselves. ■



Digital markets

New rules of the road

SAN FRANCISCO

Trustbusters compete to look tough on technology giants

ANOTHER DAY, another antitrust case against big tech. In May alone the attorney-general of the District of Columbia filed a complaint against Amazon, Germany's competition authority went after Amazon and Google to determine whether they have "paramount significance for competition across markets", and its Italian counterpart hit Google with a €100m ($122m) fine for restricting access to Android Auto, a version of the firm's mobile operating system for cars.

And the pace may be picking up. On June 4th both Britain's Competition and Markets Authority (CMA) and the European Commission, the EU's executive arm, launched parallel probes to see if Facebook is using the data it collects to give itself an undue advantage in online advertising. The same day German trustbusters opened another case into whether Google favours its newish "News Showcase", a curated collection of newspaper articles, in its search results. And on June 7th the French competition watchdog announced it had reached a settlement with Google over claims that the firm abuses its dominant position in the market for dishing up online advertisements. Google will pay a fine of €220m and amend some business practices.

In part the regulators are reacting to political winds. "They can do no wrong going after big tech," quips Justus Haucap of the University of Düsseldorf. America had a similar flurry of tech-related cases last year, when the Department of Justice launched one against Alphabet (Google's parent company) and the Federal Trade Commission pursued Facebook in concert with state attorneys-general. But other dynamics at work suggest that such cases will become even more common.

For one thing, the competition authorities are increasingly competing among themselves. First in America and now in Europe, all want to leave a mark in tech regulation, observes Thomas Vinje of Clifford Chance, a law firm. The CMA's new Digital Markets Unit needs to make a name for itself. Andreas Mundt, who heads the CMA's German equivalent, wants to establish his agency as a pioneer in tech antitrust. The new domestic cases are also an attempt to see off a power grab by the European Commission, which the EU's draft Digital Markets Act would leave in charge of competition policy.

All this muscle-flexing also points to a "big pivot" in competition policy, says Cristina Caffarra of Charles River Associates, a consultancy—from "ex post" antitrust suits, filed after the fact, to "ex ante" rules that constrain digital firms upfront. Germany's new competition act, which came into effect in January, was the first to enshrine this approach in law; German ▸▸

Bartleby Working hard for the money

A new study questions the effectiveness of remote working

THE RETURN to the office is well under way, just as summer in the northern hemisphere begins. Pretty soon, people will be able to resume the habit of staring wistfully out of the window, hoping it will still be sunny at the weekend. As many workers embrace a hybrid pattern, perhaps commuting 2-3 days a week, the experiment in full-time home-working is ending. At the same time, assessments of its effectiveness are proliferating.

Early surveys of employees and employers found that remote work did not reduce productivity. But a new study* of more than 10,000 employees at an Asian technology company between April 2019 and August 2020 paints a different picture. The firm uses software installed on employees' computers that tracked which applications or websites were active, and whether the employee was using the keyboard or a mouse. (Shopping online didn't count.)

The research certainly concluded that the employees were working hard. Total hours worked were 30% higher than before the pandemic, including an 18% increase in working outside normal hours. But this extra effort did not translate into any rise in output. This may explain the earlier survey evidence; both employers and employees felt they were producing as much as before. But the correct way to measure productivity is output per working hour. With all that extra time on the job, this fell by 20%.

The interesting thing is why this happened. The academics were able to analyse how much time the employees spent in "collaboration hours", defined as various types of meetings, and how much time they had as "focus hours", uninterrupted by calls or emails, where they could concentrate on their tasks. Despite working longer hours, the employees had less focus time than before the pandemic. Instead, all their extra time was taken up by meetings. Long-time readers may recall Bartleby's law: 80% of the time of 80% of the people in meetings is wasted. This study certainly offers evidence for the proposition.

One possibility is that managers are less certain of their team's commitment and are holding more meetings to check on them. Another is that managers call so many meetings to validate their own existence when they are not in the office. However, the academics suggest the greater need for meetings is the result of the greater difficulty of co-ordinating employees when they are working remotely—another hint that the process is inefficient. When working remotely, employees also spend less time being evaluated, trained and coached.

This seems a raw deal for the employees. They received no more money for the overtime. Although they saved commuting time, this did not offset the extra hours spent in meetings. Not all workers behaved the same way. Those who had worked at the company the longest tended to be more productive, suggesting that they found it easier to navigate the hazards of home-working. Employees with children worked around 20 minutes a day more than those without, implying an even greater fall in their productivity, presumably because they were distracted by child-care duties.

So does this mean companies will abandon remote working altogether, even its hybrid version? The academics point out that the staff at the firm under study are nearly all college-educated and their roles "involve significant cognitive work, developing new software or hardware applications or solutions, collaborating with teams of professionals, working with clients, and engaging in innovation and continuous improvement". Such work may have posed a particular challenge in remote settings, compared with occupations like responding to customer calls, say, where employees may work to a scripted set of replies.

It is hardly surprising that there would be some teething and co-ordination problems involved with remote working. The practice was, after all, imposed suddenly. The study stopped last August and one wonders whether employees have learned to use their time more efficiently since then. And the research shows that employees were able to achieve as much output with slightly less "focus time" than they had at the office. The real source of inefficiency—surprise, surprise—was the time spent in meetings. And the answer is simple; don't call as many, and keep them short.

* "Work from home & productivity: evidence from personnel & analytics data on IT professionals", by Michael Gibbs, Friederike Mengel and Christoph Siemroth

cases against Amazon, Google and Facebook make use of it. The CMA's digital unit is expected to follow a similar path if Britain's Parliament approves the necessary legislation. If the EU's Digital Markets Act becomes law, big tech will have to comply with a long list of ex-ante rules.

All this may make trustbusters, particularly in Europe, rely less on a few big investigations and more on a slew of smaller ones—akin to regulation in hoarier industries, in other words. Regulators will move quickly if they think the tech giants have done (or are about to do) something untoward. The hope is that the firms may then think twice before extending their digital dominions by bundling an old product with a new one, say, or using data collected elsewhere to favour their own services.

Don't hold your breath. In the French case, Google agreed to make life easier for rivals, for example by improving access to data. But this is unlikely to diminish its dominance in ad technology. Investors in big-tech stocks have shrugged off the antitrust onslaught. The likely outcome—a constant back and forth between firms and regulators—is tolerable to everyone.

To see why, consider an older EU case against Google. Three years ago the European Commission fined the firm €4.3bn and forced it to unbundle its search service from its Android mobile operating system. Buyers of new smartphones were presented with a "choice screen" of alternative search services, which bid to be displayed prominently. The winners did not attract many users, most of whom still plumped for Google. On June 8th the commission said that the choice screen will instead rank search services by their market share—hardly an antitrust revolution. ■

Schumpeter | Gadflies in the boardroom

The greening—and greying—of activist investing

ACTIVIST INVESTORS have some menacing tools of the trade. First comes the phone call, letting a boss know they have a new arrival on the share register. Then there is the slide deck, enumerating all the failings for which the boss is supposedly responsible. Sometimes the body language when predator and prey meet for the first time can be the most unsettling. In 2015, when Trian Partners, one of the biggest activist funds, took a $2.5bn stake in GE, an American conglomerate, its founders, Nelson Peltz and Ed Garden, wore tailored suits—with sneakers—to their first meeting with Jeff Immelt, then GE's boss. "That note of informality amplified their power," two *Wall Street Journal* reporters wrote in a recent book, "Lights Out". "Amid the fine art displayed [at GE's headquarters], the sneakers were a reminder of their sovereignty."

It is easy to be cynical about such calculated displays of power. Some deride shareholder activism as a game of smoke and mirrors, in which hedge-fund bombasts loudly call for executives to do what they were going to do anyway, and executives use activists as cover for unpopular measures such as asset sales and job cuts.

That is too harsh. True, not all campaigns work (Trian's hasn't yet at GE). But often a bit of nastiness helps shake up lazy boards and make sure cashflows are better spent. Though the covid-19 pandemic has reduced the number of activist campaigns, two big global trends mean they are sure to rebound. One is the growth of funds that track stockmarket indices. Such passive investments can let managers off the hook for poor performance; corporate activists help rectify that. The second is climate change, which is forcing companies to rethink their long-term strategies with potentially huge consequences for returns. Both trends are reflected in the fast growth of environmental, social and governance (ESG) investing—and with it ESG activism.

Of this new breed, none has made more of a splash than Engine No.1, an activist fund from San Francisco. It was founded only last year but has just successfully installed three directors on the board of ExxonMobil, arguing that the American oil giant is failing to prepare for a clean-energy future. It was an awe-inspiring feat ("supercool", as one veteran gadfly put it). It also raised serious questions. Have shareholder crusaders morphed into climate campaigners? Will a hard-nosed focus on returns be replaced by mushy box-ticking? Will boardroom fuddy-duddies now sit amid woke eco-warriors? Hearteningly, even ESG activists themselves squabble over which of their tactics are friendlier to shareholders or the climate.

If anything, big activist hedge funds are getting nicer just as the newcomers are turning nasty. Former brutes like Elliott Investment Management, whose founder, Paul Singer, was once described by Bloomberg's reporters as "the world's most feared investor", appear to have mellowed. Elliott has recently made peace with two high-profile CEOs, Jack Dorsey at Twitter, a social-media firm, and John Stankey at AT&T, a telecoms giant, despite formerly seeking their removal. It has taken a big stake in Dropbox, a software company, but has so far refrained from launching a public campaign against it. The bigger it gets, and the bigger its targets, the more it tries to take a "statesmanlike" approach, including by toning down its language. Though it has begun deploying ESG criteria in its campaigns, as have other veterans such as The Children's Investment Fund, a $30bn hedge fund based in London, it is still mostly focused on boosting financial returns, and sometimes moves quickly in and out of positions.

The ESG-focused newbies argue that their horizons are longer, as is fitting for firms that have topics like climate change high on their agendas. But if you expect them to be cuddlier than their forebears, think again. Because they lack capital to buy large stakes, their attacks need to resonate broadly among investors big and small in order to have any impact. Engine No.1, which owned just 0.02% of ExxonMobil's stock, achieved this by honing in on the dearth of energy experience on the supermajor's board, which it blamed for the company's underperformance against its peers. The fund's appointed directors have all had important jobs in energy. That makes them better guides to capital deployment during the transition away from fossil fuels, it argued. It helped that Darren Woods, ExxonMobil's boss, had so little credibility in this area that investors ignored his calls to reject the rebels.

The new activists' feistiness extends to each other. Engine No.1 has criticised ExxonMobil's board for lacking "successful and transformative energy experience". Presumably that includes Jeff Ubben, a veteran activist who recently set up Inclusive Capital Partners, an ESG-focused fund, and won a place on ExxonMobil's board earlier this year. Mr Ubben, former boss of ValueAct, a 21-year-old fund, who believes in negotiation more than confrontation, welcomes the changes to the board. But he laments that Engine No.1 launched its proxy campaign before consulting the board and management. He notes that it has left it up to the board to come up with a plan to turn the company around.

Bluebells and black eyes

Gripes aside, both insist that their focus is on shareholder returns. An insider describes Engine No.1 as "a shareholder crusader for long-term value, not a climate crusader". Mr Ubben worries that the focus on returns is ebbing as index funds chase ESG investors, influencing proxy contests. A new firm of activists, Bluebell Capital Partners, has gone so far as to target Danone because its focus on sustainability was not matched by adequate financial returns. It helped oust the French dairy giant's former boss, Emmanuel Faber, earlier this year. "ESG cannot be an excuse for a company to underperform," says Giuseppe Bivona, one of Bluebell's co-founders. Milton Friedman, the late Nobel-prizewinning economist and defender of shareholder value, to whom activists have always bent the knee, would be smiling. ■

→ Also in this section

Asset management

Chasing a pot of gold

HONG KONG

Foreign financial firms are looking to tap into China's vast pool of savings. Do they stand a chance against home-grown managers?

ZHANG KUN is the rock star of Chinese fund management. His name often makes headlines; whole articles are dedicated to his investment calls. Investors vie to get into his funds, one of which has reportedly delivered a return of 700% since it was launched eight years ago. He is among a growing number of managers who generate more hype than the firms that employ them. With personalities like Mr Zhang on its payroll, E-Fund, a state-owned investment group, hardly needs to advertise.

Now a swathe of foreign firms hopes to take on Mr Zhang and his ilk by entering China's asset-management industry. Last month Goldman Sachs, a Wall Street bank, announced a wealth-management venture with ICBC, China's largest commercial lender by assets. BlackRock, a giant American asset manager, will join forces with China Construction Bank (CCB). Amundi, a French firm, has linked up with Bank of China and Schroders, a British investment group, with China's Bank of Communications. In March JPMorgan Asset Management said it would buy a 10% stake in China Merchant Bank's wealth business. Nearly 20 global investors are setting up fund-management firms; others are launching private securities funds.

The prize is access to a pot of money worth 120trn yuan ($18.8trn), which includes investments made by everyone from the average saver to the ultra-rich in mutual funds, trusts, wealth and other asset-management products. Though the pool of funds is smaller than in the West—asset managers in North America oversaw $59trn last year, according to PWC, an accounting firm—it is expected to expand rapidly. As more people grow comfortable giving their money to managers instead of picking stocks or buying property, China's pot could nearly treble, hitting 320trn yuan by 2030, reckons Oliver Wyman, a consultancy (see chart 1). But foreigners' attempts to crack other parts of China's financial market have yielded underwhelming results. Could this time be different?

For China's regulators, the new ventures are a high-stakes experiment meant to transform how savers think about investing. For years retail investors ploughed cash into deposit-like investment products sold and backed by state banks. The principal on such products was considered guaranteed, but the banks funnelled the cash towards high-risk borrowers such as small property developers or coal-mining outfits. By 2016 the banks' wealth-management arms oversaw around 13% of total banking assets (see chart 2 on next page). But regulators cracked down, no longer willing to see banks and ordinary savers exposed to the intensifying risks.

Guaranteed products have been banned. Meanwhile banks' wealth assets have been spun into new subsidiaries. These must wind down the old deposit-like products and design new ones based

on net asset value. In 2020 the new units had 26trn yuan in assets under management, reckons CICC, an investment bank. It is with them that foreign investors have been invited to establish joint ventures.

The call sounds familiar. Foreign financiers have been knocking at China's door for generations, with an eye to every corner of the industry, from retail banking to securities. In 1995 CCB and Morgan Stanley, another Wall Street bank, set up CICC; in 2004 Goldman was allowed to establish the first foreign securities joint venture. But when you look back over the past two decades, the developments seem underwhelming and the returns meagre.

That was largely because China opened up only when home-grown firms were big enough to withstand competition. Some foreign retail banks launched gung-ho expansion plans only to quit the market later, defeated by domestic giants' extensive branch networks. Securities joint ventures have taken more than a decade to pass majority control to foreign investors. Payments firms such as Visa and Mastercard were shut out until mobile payments became dominant and competition futile.

Wealth management could be different. For one, the foreigners do not face a mature market with insurmountable competition. Regulators' sweeping reforms mean that they are in fact entering what could become the world's largest market for retail wealth at an early stage.

This is evident in the financial products on offer today. China's mutual-fund industry has grown at a fantastic pace in recent years. Many firms now oversee 1trn yuan in assets. Money-market funds are ubiquitous. But product design is still in its infancy. Global firms are expected to bring a new level of sophistication. Tuan Lam of Goldman says his group will offer quantitative products such as algorithmic and factor-based strategies, and cross-border and alternative-asset investments. "These are not present in China right now," he notes.

Another benefit of the joint ventures is their links to China's largest financial firms. The banks and their tens of thousands of branches were key intermediaries during the first era of wealth management and, say experts, may also define the next. Their wealth-management subsidiaries have vast portfolios and huge numbers of clients. Take CCB. It has more than 14,700 branches; last year it managed 2.2trn yuan in wealth-management products and attracted more than 4.4m new investment and wealth-management clients. Access to customers is "one of the benefits of partnering with one of the largest banks in China", says Susan Chan of BlackRock.

Yet success will depend on foreigners' ability to establish and market themselves. Goldman and BlackRock have some name recognition in China by virtue of their size.

Amundi and Schroders, by contrast, are unknown outside financial circles. And teaming up with home-grown banks has some downsides. A potential customer at a bank branch will be offered a suite of products, which will include those designed and branded by the joint ventures, but also those designed solely by the bank. Online, joint-venture offerings will probably appear on smartphone apps on a list of commoditised products. The foreign groups will therefore have to make sure their offering is advertised sufficiently to clients—no easy task given that tens of thousands of banks' relationship managers will be responsible for sales. It can be done, but only with hefty investment in staff training, says Philip Leung of Bain, a consultancy.

Another problem is competing with superstars such as Mr Zhang, who often manage money for giant mutual funds. Financial news in China is abuzz with stories on the performance of star managers. Many retail investors make decisions based on such information. Few clients are interested in a fund's risk controls, notes Fabrice Maraval, an executive who has worked at two Sino-foreign financial ventures. Instead, they ask, "What's your ranking on the list of top fund managers?", he says.

Executives at several joint ventures bristle at the idea of hiring stars who market their funds. "It's just not our culture," says one. Instead they must slowly build trust with clients through solid performance and prudent risk controls. Zhong Xiaofeng of Amundi describes his group's strategy in China as a "long-haul effort". If foreigners are to give the stars a run for their money, it will have to be. ■

Inflation

Paid in China

SHANGHAI

Long a force for lower consumer prices, is China now exporting inflation?

ERIC ZHU, an international sales manager at a Chinese forklift-maker, has just sent his second letter of the year to customers, explaining that prices are going up once again. "We need to share some of the price increases with our partners. We cannot absorb them all ourselves," he says. "The world is crazy now." Although not standard economics terminology, crazy is a good description for the price movements now coursing through global markets. Inflation in America is running at its fastest since 2008. Energy and commodity prices have soared. And as Mr Zhu can attest, investors and company bosses are worried that China, the world's workshop, is itself starting to export inflation.

It is easy to see why people are concerned. On June 9th China reported that factory-gate prices rose at an annual rate of 9% in May, the highest in more than a decade. That, along with soaring shipping costs and a stronger yuan, will probably push up the prices of made-in-China goods, from phones to futons. America's imports from China already cost 2.1% more in April than they did a year ago, the fastest rise since 2012 (see chart on next page).

Yet the danger of China-exported inflation can be overplayed. Only part of the rise in China's producer prices reflects domestic causes. Its strong economic recovery was led by investment in homes and infrastructure, which pushed up the price of steel. In order to meet green targets, the government has reined in both coal and steel production. Officials have also vowed to crack down on "excessive speculation" in domestic commodity futures, suggesting that this helped the run-up in prices.

Most of the price pressures instead reflect the peculiarities of the covid-clouded world. The global demand for consumer goods—things you can buy online while confined at home—has soared. Chinese exports are about 20% higher than their pre-pandemic trend, and factories have struggled to keep up with orders. Disruptions to global commodity supplies, such as lockdowns that limited copper mining in Chile and Peru, have also pushed up prices.

Rather than transmit the shock, Chi-

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nese companies have absorbed much of it. Compared with the end of 2019, before covid-19 upended the world, factory-gate prices in China have risen by nearly 6%. But an index measuring the cost of manufactured consumer goods in China went up by just 0.6%. Companies have had to get by with thinner margins. No wonder Mr Zhu wants to share the pain with customers.

Moreover, the policy environments in China and America are very different. Whereas the Federal Reserve eased monetary policy dramatically, the People's Bank of China was much more conservative. It has cautiously begun tapering its support. This may help explain the divergence between the two countries' inflation trajectories. In America, the Fed's preferred measure of "core" consumer prices, excluding food and energy, rose by 3.1% year-on-year in April, the most since 1992. In China, the core index rose by just 0.9% year-on-year in May. (China's farmers have also helped quell inflation. A recovery in pig stocks after an outbreak of African swine fever has brought pork prices down by nearly a quarter compared with last year.)

Taking a longer view, some analysts think that China's ageing population will transform it into an inflationary force. In the early 2000s, China's low wages helped make consumer goods cheap around the world. That suggests that shrinking labour supply and rising wages should have the opposite effect. Yet this is not so clear-cut. Low-end manufacturing is already moving to cheaper places like Vietnam and Bangladesh, while a rapid increase in automation in China has also helped restrain prices.

Now, though, the pressing question is whether China's input-price inflation will be transitory or more enduring. The answer lies outside China. As the vaccine roll-out gains traction and something closer to normal life resumes in America and Europe, people are likely to spend more on services such as tourism and eating out, not just on goods bought online. That would ease the pressure on commodities and, by extension, on China's factories. ■

Commercial property

Vacancies in the Village

NEW YORK

Will empty shopfronts revive as New York comes back to life?

SIT BY BAR Pisellino, a chic watering hole in the West Village, a swanky neighbourhood in Manhattan, and the world seems to have righted itself. Patrons munch on fat green olives and sip fizzy aperitifs as they watch well-heeled shoppers, newly returned to the streets, go by.

Just across the street, however, an empty shopfront crumbles from neglect. Despite ample government support during the pandemic many business owners cut their losses, terminated their leases and closed down, pushing retail vacancies in New York to new highs. Fully 13% of shopfronts in the West Village are vacant, compared with 1.9% in 2007 and 8.2% in 2017, according to data compiled by Scott Stringer, the city's comptroller and now a candidate for mayor. The story is the same across most of Manhattan. Though activity is now resuming, it may be some time before the shopfronts return to life.

Retail rents have fallen sharply: in some neighbourhoods, like SoHo, they have dropped by more than 20% since 2019. That should make spaces more affordable—and attractive—to prospective tenants. But there is still a mismatch between what landlords and tenants want. Though it is costly for residential tenants to move, they rarely have to incur the expense of building a kitchen or a bathroom when they arrive. Retail tenants and their landlords, by contrast, can spend a fortune turning a space into a restaurant or a boutique. To make this worthwhile, leases often span a decade or longer. In a downturn, landlords want to sign shorter leases in the hope that rents will soon recover. Tenants, however, are unwilling, fearing that landlords may jack up the rent once they have gone to the trouble of fitting out the space.

An added complication comes from structural shifts in shoppers' habits. Many observers, including Mr Stringer, reckon that the rise of online shopping explains why vacancy rates were rising even before the pandemic. The continued trend may lead landlords to accept that rents could stay low for a while. But faced with the uncertainty of whether a retailer will survive or not, they may prefer to wait for the right sort of tenant. "If you find the market-clearing rent for a shop, do the tenant improvements with them, sign a ten-year lease and then 24 months later they go bankrupt, are you really any better off?", says Don Mullen, the founder of Pretium, a property- and mortgage-investment firm. Many commercial landlords want "Amazon-proof" tenants, like nail salons and salad bars, rather than retailers.

Even if landlords are willing to sign a lease with a lower rent, those with a commercial mortgage can find their hands tied. "Lenders often include covenants in their loan agreements," says Dan Rosenbloom of Cadre, another investment firm. These might stipulate that the rent must at least cover the interest owed. If landlords want to sign a lease with a lower rent the lender might let them sign it, says Mr Rosenbloom, but they might require the borrower to stump up the cash to reduce the loan balance. That can make rents sticky, even if there is lots of vacant space.

The queues snaking around the corner of Magnolia Bakery and the throngs browsing in the pricey shops along Bleecker Street suggest that there is no shortage of demand for cute bakeries and boutiques in the West Village. But that does not mean the empty properties next door will be snapped up soon. ■

Situations vacant

Cryptocurrencies

Beating bitcoin

Cryptocoins are proliferating wildly. What do they all do?

MIAMI IS THE mecca of anti-establishment finance. Or so it seemed on June 4th and 5th, when 12,000 people clad in everything from flannel suits to festival gear and whale-shaped hats descended on the world's biggest bitcoin conference. On stage crypto gurus such as Jack Dorsey, Twitter's boss, praised those striving for fortune and freedom. The crowd erupted when Nayib Bukele, El Salvador's president, announced plans to make bitcoin legal tender. (On June 9th lawmakers approved his proposal.) "This is not a moment," beamed the mayor of Miami. "This is a movement."

The movement is far from its destination. Now in its 13th year, bitcoin has become an investment sensation. But, Mr Bukele's enthusiasm aside, it remains a poor and hardly used medium of exchange. A host of smaller cryptocurrencies, meanwhile, are rushing in. Fully 10,000 are listed on CoinMarketCap, a website, nearly twice as many as a year ago. Bitcoin accounts for 40% of the total value of all cryptocurrencies today, compared with 70% in January. Elon Musk, an electric-car tycoon whose tweets seem to make the weather in crypto markets, says he now favours younger rivals. Could one of them steal bitcoin's crown?

Most do not want to. Many listed on exchanges are "tokens", which can become tools of speculation but, in contrast to "coins", do not aspire to the full functions of money. The purpose of "security" tokens, like that of stocks and bonds, is investment: they represent ownership in firms or other assets, recorded on a distributed ledger. "Utility" tokens, meanwhile, are tradable credits that can be bought and used in exchange for a service. Crypto exchanges, for example, sell tokens that punters use to pay transaction fees.

That still leaves 779 coins. Many are tiny: just 110 have a market capitalisation exceeding $100m. Some are fads and will prove fleeting. The more serious contenders fall into two categories: the "bitcoin clones" seek to fix the cryptocurrency's flaws as a means of payment; and the "ether clones" aim to perform new functions.

Consider the bitcoin clones first. One problem with bitcoin is its volatility: in the space of a few hours on May 19th, for instance, prices fell by 30%. To avoid such swings, so-called "stablecoins" track government-issued (or "fiat", in the crypto-lingo) currencies instead.

Other clones try to fix bitcoin's privacy problems. Since all bitcoin transactions are recorded on its blockchain, which is public, they leave a trail. On June 7th American officials said they had recovered $2.3m-worth of a ransom paid in bitcoin to the hackers who shut down the Colonial Pipeline in May, after identifying the virtual wallet they had used. Some coins try to provide greater anonymity by using masking tech. Monero, for instance, tries to make it hard to link flows to a fixed identity, trace funds or observe transaction size.

Still other clones try to make payments cheaper and quicker to process. To ensure that transactions are legitimate without relying on a central authority, bitcoin relies on a system called "proof of work", where "miners" compete to validate blocks of transactions by solving time-consuming numerical problems. Yet bitcoin's design is such that it can handle only around seven transactions per second. The creator of Litecoin therefore tweaked the algorithm so that new blocks are processed more often. Dogecoin, a coin that was developed as a joke and which often features in Mr Musk's tweets, has no cap on its supply.

More radical alternatives, such as Cardano and Tron, have switched to "proof of stake", under which validators are rewarded in proportion to the number of coins they lock into an escrow wallet while transactions are verified. The process involves less hardware and fewer energy costs.

But for every flaw that the clones try to fix, a desirable attribute of bitcoin seems to be lost. Stablecoins, for instance, require users to trust both the issuer (which must hold hard cash in reserve) and a government, defeating crypto's original anarchic aims. Some may not be trustworthy. In February the issuer of Tether, the biggest, was fined $18.5m by authorities in New York for lying about its dollar stash.

Minting money

Selected cryptocurrencies, June 8th 2021

	Market capitalisation $bn	Volume traded per day $bn	Price, $ Jan 1st 2020-Jun 8th 2021			Cap on supply
Bitcoin	616.6	17.6	7,213.4		32,926	21m
Ether	288.0	21.5	129.5		2,492	*None*
Binance Coin	53.5	3.1	13.7		348.7	170m
Cardano	48.5	3.2	0.03		1.5	45bn
Dogecoin	42.6	3.5	0.002		0.3	*None*
Bitcoin Cash	10.9	1.2	204.9		581.4	21m
Litecoin	10.7	1.9	41.4		158.3	84m
Tron	6.0	1.3	0.01		0.1	101bn
Monero	4.4	0.3	44.7		246.5	*None*

Sources: Brave New Coin; CoinMarketCap; *The Economist*

Big exchanges have delisted the ultra-private Monero, fearing its potential for money-laundering. Dogecoin is even more volatile than bitcoin. The proof-of-stake system, meanwhile, encourages hoarding, limiting liquidity. It also favours concentration, which goes against decentralisation, says Eswar Prasad of Cornell University. These trade-offs may be why none of the clones has come close to overtaking bitcoin (see table on previous page). According to analysts at Brave New Coin, a research firm, alternative measures, such as activity on GitHub, a platform used by programmers to collaborate on projects, show that bitcoin remains uniquely popular.

The threat comes instead from currencies with nimbler blockchains that can do more than record payments. Ethereum, which hosts ether, the second-most-valuable cryptocurrency, can execute automated programmes that, for example, move money between wallets only after a specific event. Ether and its clones have become central to the budding field of decentralised finance (DeFi), where "smart contracts" replicate sophisticated financial transactions, such as making loans or offering insurance, without a trusted intermediary. That is boosting adoption. Over the past 12 months DeFi drove 40% of ether transactions, up from 7% in the previous period, reckons Chainalysis, a data firm.

With around $59bn in capital deposited in its applications, DeFi remains small. But it is growing fast, and bitcoin, with a blockchain that cannot accommodate smart contracts, is ill-equipped to ride the wave. Its first-mover advantage and scarcity make bitcoin likely to remain attractive as a speculative asset. Yet that could prove poor consolation. ■

Buttonwood Going Dutch

The inexorable logic behind the $85bn market for secondhand private-equity stakes

At midnight on August 31st 1602, the public offering of shares in a new kind of enterprise closed. The charter for the venture, the Dutch East India Company, granted it a monopoly on trade with Asia until 1623, at which time, it was assumed, the firm would be liquidated. Twenty-one years is a long wait for capital to be returned. Smaller maritime ventures were generally wound up and the spoils divided after three or four years, when (and if) the ships returned. So shareholders were given an option to cash out after ten years. It hardly mattered. A faster exit route soon opened up.

The merchants who gathered daily around Amsterdam's New Bridge to trade spices and grain proved as willing to buy and sell shares. These developments are recounted in "The World's First Stock Exchange", by Lodewijk Petram, a historian. One of the book's many lessons is that wherever there is a primary market for a new kind of asset, there will soon be a secondary market.

There is a modern-day analogue in the treatment of stakes in private-equity funds. The limited partners in such ventures—the pension schemes and sovereign-wealth funds that provide capital—are in principle committed for the life of the fund, which is usually ten years or longer. The reality is different. A thriving market in "secondaries", negotiated sales of limited-partner stakes, has emerged as private equity has matured. Today's private-equity investors are no more locked-in to their commitments than were the Amsterdam burghers of four centuries ago.

Secondary markets are first prompted by asset-holders who really need the cash. The earliest sales in Amsterdam's stockmarket were usually by merchants who could not pay the promised subscription. In private equity the early secondary transactions were typically distressed sales. They were often struck at biggish discounts—25% or more—to the appraised value of the assets in the fund.

Over time the stigma to selling out has disappeared: in 2019 around $85bn worth of stakes changed hands. These days the reason for the sale of a stake is often strategic. It might be to rebalance portfolios by geography, industry or vintage for reasons of risk management, say, or to reduce the number of relationships with the general partners of private-equity firms. A lot of limited partners simply wish to manage their private assets as actively as their listed ones. Often funds will sell for more than the appraised value of the companies in the portfolio.

Over the past decade there has been a trend towards secondary transactions led by general partners, says Andrew Sealey of Campbell Lutyens, an advisory firm. It might be that a ten-year fund is about to expire whose general partners do not want to sell the portfolio of companies, because the time is not propitious for a good exit price. Some of the limited partners will need their money back, though.

The solution is a continuation fund. An example was Nordic Capital VII, a fund set up in 2008, which transferred its nine portfolio companies into a €2.5bn ($3bn) continuation fund in 2018. A price was set by auction. Investors had a choice of selling their stakes at a premium to appraised value or staying in for five more years. Most opted to stay in.

The burgeoning trade in secondaries has been underpinned by the rapid growth of specialist funds. Twenty years ago there were just a handful; now there are dozens. Five of the ten largest private pools of capital raised last year were for specialist secondary funds.

The secondary market attracts big fund managers who want to offer their clients the full range of assets, including private ones. For a start, it looks a lot less crowded than the primary business. "Anyone can set up a buyout fund," says one fund manager. Funds often compete to buy the same companies. In a secondary fund, by contrast, there is a better chance of profiting from expertise. It requires knowledgeable analysts and good information-gathering to appraise a stake in a portfolio of companies when it comes up for sale. The general partners have the right of approval over buyers of secondhand stakes. These are high barriers for would-be rivals to clear.

Paradoxically, the flourishing of the shorter-term secondary market has allowed the formal time horizon of private-equity funds to extend almost to infinity. In this, as in other ways, private equity is following 17th-century Amsterdam. At its outset the Dutch East India Company was supposed to have a limited lifespan. It was still going almost two centuries later.

Free exchange | Finding the perfect match

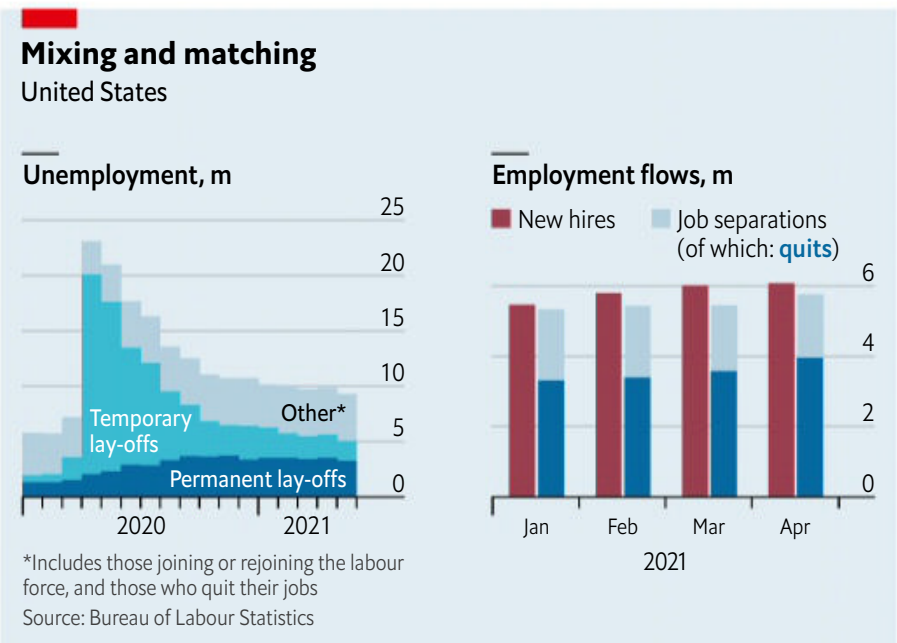
Why slower-than-expected jobs growth may not be a bad sign for America's recovery

America's latest jobs reports landed with resounding thuds. Upbeat Wall Street forecasters had expected firms to add 1m new jobs in April. Employers made them look foolish, taking on just under 300,000 new workers instead. Punters lowered their expectations for May but still wound up disappointed, when on June 4th the Bureau of Labour Statistics reported net employment growth of just 559,000: a decent showing in normal times, but unsatisfying when millions remain out of work. Underwhelming job gains look increasingly mysterious given firms' desperation to hire. With roughly one job vacancy available for every person out of work, you would think that America's labour-market problems could be solved soon enough. But a leisurely pace of jobs growth does not necessarily indicate that the economic recovery has gone wrong. A deeper dive into the figures suggests that it could simply reflect the difficulties of matching millions of workers with jobs at a time of unprecedented economic flux.

On the surface, the American jobs market does appear to be behaving oddly. The economy is unquestionably booming. Real output rose at an annualised pace of 6.4% in the first quarter of 2021 and is projected to have grown at an annualised clip of nearly 10% in the second. Firms are keen to hire. The 9.3m job openings posted in April were easily the most on record. Employers—some, at least—are attempting to lure workers with generous pay. Though overall wage growth remains subdued, rates of pay for newly hired workers are soaring in the service-sector occupations that are suffering most from labour shortages. In the first quarter of this year, the real wage for new hires in such positions (say, in restaurants or hair salons) stood about 8% above the level you might have expected them to earn before the pandemic, according to a recent analysis by Julie Hotchkiss of the Federal Reserve Bank of Atlanta. And faster job gains are certainly within the realms of possibility: employment rose by nearly 5m in June 2020, and by nearly 11m over a four-month stretch in the middle of last year.

Look closely, though, and the picture becomes both less mysterious and more complicated. Last year's rapid rebound reflected the unique nature of the pandemic recession. Employers shed a staggering 22m jobs in March and April 2020, but about 80% of the unemployed at that time were temporarily laid off, with a job to which they expected to be recalled once lockdowns eased. (During the Great Recession, by contrast, temporary lay-offs never accounted for more than 15% of all unemployment.) When firms began to reopen, the temporarily unemployed could immediately resume work; their ranks have plunged by 16m since April last year, or by about 90%, contributing to a staggering decline in the jobless rate of about nine percentage points. But there are ever fewer temporarily laid-off workers waiting to be brought back (see chart, left panel). Meanwhile, workers who have permanently lost their jobs, who made up just 9% of the unemployed early in the pandemic, now represent about a third of all those out of work.

This shift in the composition of unemployment probably means that joblessness cannot fall as quickly as it did last year. The rise in unemployment in a recession is often much more rapid than the speed with which it goes on to fall during the recovery. This asymmetry stems in part from the fact that the creation of a new job (as opposed to the resumption of an old one) involves time-consuming matchmaking, as worker and firm try to find each other. Congestion among the unemployed can slow this process. Recent work by Niklas Engbom of New York University documents that an unemployed person applies for more than ten times as many jobs each month as an employed worker, but is nonetheless less than half as likely, per application, to start a new job. So though there may be a vacancy open for each jobless worker today, employers bombarded with applications must take time to find a candidate they like, delaying the moment at which the opening is filled (or lengthening the time taken to fill the job, if the chosen applicant in the meantime accepts another offer).



*Includes those joining or rejoining the labour force, and those who quit their jobs
Source: Bureau of Labour Statistics

Churn, churn, churn

In addition, note Robert Hall of Stanford University and Marianna Kudlyak of the Federal Reserve Bank of San Francisco, the road from unemployment to a permanent job match may include more than one round of searching. Workers seeking employment often cycle through short-term jobs before finding a long-term match, which helps explain why the pace at which individual unemployed jobseekers find work is faster than that at which aggregate unemployment returns to normal.

Though tepid headline jobs figures seem a cause for worry, there is plenty of healthy churn taking place behind the scenes, as another survey indicates. Over the first five months of 2021 an average of 2.4m workers have moved from unemployment to employment each month. Joblessness has not fallen by more over this period only because some workers have moved in the other direction, while others are newly classified as unemployed after rejoining the labour force. Though net employment growth might not show it, hiring is robust. In April employers took on more than 6m workers—the most on record, barring the period of reopening last summer. In the same month 5.8m workers left jobs, including 4m who chose to depart voluntarily (see chart, right panel). The increasing number of people quitting their jobs suggests that workers are using a moment of high labour demand and generous wage offers to find better opportunities. This adds to the strain on human-resources departments in the short run, further preventing jobless Americans from rushing back to work. But it is also a sign of confidence in the economic recovery.

A prolonged period of elevated involuntary unemployment undoubtedly carries risks. But sub-million monthly payroll reports are not for the moment cause for much worry. America remains on track to eliminate remaining pandemic unemployment within two years. And in the meantime, the churning of workers into new, different jobs could leave the economy more productive than before, and better equipped for a post-pandemic world. ■

Alzheimer's disease

Faint hopes

America's wary approval of an Alzheimer's drug offers hope to millions. But its makers still have work to do to prove it can slow the advance of dementia

NEWS OUT on June 7th, that America's Food and Drug Administration (FDA) had granted conditional approval to a new drug, aducanumab (to be marketed as Aduhelm), for the treatment of Alzheimer's disease, has understandably been greeted as a big breakthrough. For millions with Alzheimer's, a remorseless degenerative illness leading eventually to utter helplessness—and for those caring for them—it is a ray of hope. But aducanumab's benefits remain uncertain, and the FDA's decision is controversial.

It was 115 years ago that Alois Alzheimer, a German psychiatrist, conducted the autopsy that helped him identify the disease which now bears his name. It is much the most common of the dozens of causes of dementia. It accounts for 60-80% of cases of that condition, which affects 50m people around the world, and—because the risk of dementia increases with age, and the world is getting older—is spreading fast. The costs in human misery are incalculable. In terms of expenditure in caring for people with the condition, they are estimated at more than $1trn a year, and forecast to reach $2trn by 2030.

So even if few have hoped for an imminent cure there is huge pent-up demand for a treatment that at least slows the advance of Alzheimer's. The FDA says in its press release on the approval, which was sought by Biogen, a biotechnology firm in Cambridge, Massachusetts, "Aduhelm is the first treatment directed at the underlying pathophysiology of Alzheimer's disease." Some may argue with that. In November 2019 China granted conditional approval to Oligomannate, a drug produced by Green Valley, a company from Shanghai. But Western scientists grumbled that data from the Chinese study were scanty and its conclusions hard to credit.

The jubilation in some quarters at Biogen's coup is therefore understandable. But it is not universal, in part because of the tortuous history of the drug's progress to approval. Aducanumab is a monoclonal antibody—a specialised sort of protein molecule, based on part of the immune system, that is tailored to bind to another protein. In this case that other protein is beta-amyloid, which forms plaques in the brains of people with Alzheimer's disease (see picture on next page). Many researchers have long believed beta-amyloid is not just a symptom of Alzheimer's but at least part of the cause—an idea known as "the amyloid hypothesis". Aducanumab does, indeed, seem to reduce the amount of beta-amyloid in the brain. That is why the FDA has approved it. The theory is that this should, in turn, slow the progress of cognitive degeneration. On that point, the evidence is less clear-cut. The FDA approval allows the drug to be used but requires Biogen to carry out a large-scale clinical trial to prove that it brings cognitive benefit too, and warns that if it does not, it could be "pulled from the market".

Previous efforts to demonstrate aducanumab's efficacy appeared to have foundered in March 2019, when Biogen and Eisai of Japan announced that they were ending two clinical trials involving people with signs of mild cognitive impairment or early-onset Alzheimer's. Aducanumab had failed a "futility test"—ie, the evidence suggested it had no effect. But then, in October of that year, Biogen said a fresh look at the data showed that "patients...experienced significant benefits on measures of cognition and function such as memory, orientation and language." One of the two trials, it said, showed that higher doses of the drug did have a small but noticeable effect in slowing cognitive decline in people with Alzheimer's. Biogen said it would seek FDA approval after all.

Beta testing

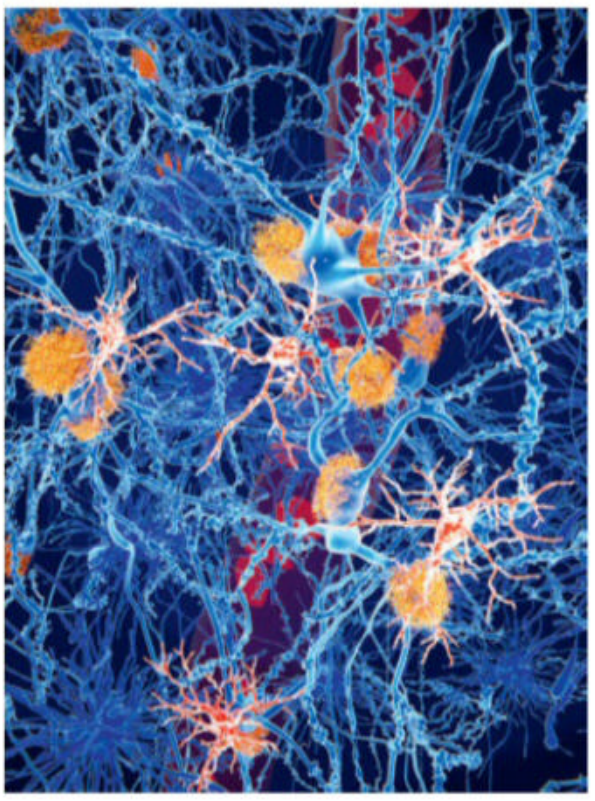
A drug prescribed to even a substantial minority of people with dementia would be among the biggest sellers of all time. Administered once a month, intravenously, at a clinic, aducanumab is likely at first to cost $56,000 a year. The price of Biogen's shares, which had fallen by almost 30% on the day of its announcement that trials had failed, bounced back almost as much when it changed its mind, and surged again a year later when the FDA made positive comments, as well as after its announcement this week.

A lot of specialists, though, remain deeply sceptical about aducanumab in particular, and the amyloid hypothesis more broadly. Last November ten out of the 11 members of an expert advisory panel appointed by the FDA voted against approving the drug on the basis of the research presented (the 11th was undecided). Patients receiving it will require constant monitoring, because many develop brain oedemas. And a statistical study of various drug trials in *Alzheimer's & Dementia*, the journal of the Alzheimer's Association, a charity, shows what one of its authors, Edo Richard, a Dutch neurologist, calls "overwhelming evidence of absence of an effect of anti-amyloid therapy in general". Dr Richard finds it "amazing" that the FDA has overruled its own advisory panel to reach the "scientifically questionable" ruling on the drug.

His paper argues that the time has come to divert therapeutic efforts away from drugs that try to clear beta-amyloid to other lines of investigation. And, for all the scepticism about this drug, some researchers in the field are optimistic that great progress is being made in combating dementia. Jonathan Schott, a professor of neurology at the Dementia Research Centre at University College, London, says that 30-40% of the causes of dementia are modifiable. Already there is evidence that the age-specific incidence of dementia is going down in the West as people live healthier lives—for obesity, smoking, high blood pressure and excessive drinking in middle age are all associated with a higher incidence of dementia. A study published last year in *Neurology* followed nearly 50,000 people in America and Europe from 1988 to 2015. It found that 8.6% developed dementia. But the risk of being among them had, remarkably, fallen by an average of about 13% a decade, from about a one-in-four chance for a 75-year-old in 1995 to less than one in five.

Meanwhile, great advances have been made in diagnosing dementia. Once, this required cognitive tests followed by an expensive brain scan or intrusive lumbar puncture. Now, a simple blood test can predict, decades in advance, how likely it is that someone will develop Alzheimer's later in life. Early identification of those at risk means existing therapies, including aducanumab, which are largely ineffective once symptoms are advanced, might be deployed soon enough to make a difference.

And other treatments should, slowly, become available. James Rowe, a professor of cognitive neurology at Cambridge University, thinks dementia research is at a "tipping-point". He expects the first successes with rare conditions such as Huntington's disease and frontotemporal dementia. Alzheimer's, which may turn out to encompass a variety of contributory pathologies, susceptible to different medicines, would follow later. Those living with Alzheimer's have had few reasons for optimism. And Dr Schott argues that the main benefit of the FDA ruling may be that Alzheimer's will no longer be seen as a lost cause. Big pharma and publicly funded researchers will take encouragement. Aducanumab might offer a small step forward. But bigger and better ones will come. ■



Plaques (orange) among brain cells

Nuclear power

Atoms for greenery

Bill Gates's latest venture is a new-style nuclear reactor

SINCE HANDING over the reins as Microsoft's chief executive in 2000, Bill Gates has been best-known for his philanthropy. The Bill and Melinda Gates Foundation, one of the world's largest charities, has given billions of dollars to vaccination drives, family-planning clinics, research into drug treatments for malaria and more.

But Mr Gates has not abandoned the business world entirely. On June 2nd TerraPower, a company he founded in 2008, announced that it would build a demonstration of an exotic, high-tech nuclear power station in Wyoming. The firm's Natrium reactor is one of a gaggle of new designs that have emerged in recent years, as engineers try to come up with cheaper, simpler nuclear power plants that can provide low-carbon electricity with fewer of the cost and safety worries that have plagued the industry in the past.

The Natrium reactor makes two big changes to the standard nuclear-power-plant design. It replaces the liquid water that normally courses through the core with hot, liquid sodium (*natrium,* in Latin). And instead of using the heat generated by the reactor to make electricity directly, it first employs it to heat a tank of molten salt that acts as a giant battery. The upshot, the firm hopes, will be a cheaper reactor that is better suited to power grids that will increasingly be dominated by intermittent sources of energy such as wind turbines and solar panels.

Start with the reactor itself. Most nuclear power plants are light-water reactors (LWRs), a technology developed in America in the 1950s. They use ordinary water both to cool the reactor core and to increase the intensity of the chain-reaction by moderating the speed of the neutrons that are emitted when uranium atoms split. Thus slowed, these neutrons are more likely to go on to split more atoms in turn.

Natrium employs hot, liquid sodium as a coolant, and dispenses with the moderator entirely. This is another idea that dates back to the 1950s, but one which has never been widely deployed. Yet sodium offers several advantages as a coolant, says Chris Levesque, TerraPower's boss. The liquid sodium's high temperature—around 500°C—makes the reactor more efficient. At the same time, liquid sodium is much less corrosive to pipes than hot water. And though the water in LWRs is pumped through at high pressure, Natrium is designed to op-

erate at close to atmospheric pressure. That means pipes, containment buildings and the like can be less beefy without affecting safety. TerraPower reckons its reactor needs only 20% of the concrete required by an LWR of equivalent power, which helps keep down costs.

The firm's second big idea is its molten-salt energy-storage system. Inspiration for this came from the solar-power industry, says Mr Levesque. Solar-thermal systems (in contradistinction to the more familiar photovoltaic ones that generate electricity directly) have, for several years, used similar tanks to store excess solar energy harvested during the day. In Natrium's case, the sodium coolant transfers heat from the reactor into the molten-salt tanks. A separate set of pipes then removes heat from the tanks and uses it to produce electricity.

TerraPower hopes this arrangement will let the new reactor ramp its power output up and down, depending on the price of electricity. This is something that LWRs struggle to do. The firm's demonstration plant will usually produce 345 megawatts (MW) of electrical power. But by releasing the energy stored in the molten-salt tanks, it will be able to boost that to 500MW for over five-and-a-half hours. This should be a useful trick as power grids fill up with wind and solar farms that are likely to cause power prices to fluctuate more than they do at present. Combined with lower construction costs, TerraPower hopes such agility will make its plant more economically attractive than older designs.

It all looks good on paper. But then, nuclear power always does. The industry has been plagued by delays and cost overruns for decades. Existing sodium-cooled reactors, most of which are experimental, have a spotty record. A plant in Japan suffered a serious fire in 1995 and was shut down for over a decade. The Superphénix reactor in France, built in 1974, proved extremely unreliable, and was offline for years at a time. It closed for good in 1998. (Other reactors, such as the Fast Flux Test Facility in Washington state, have better records.)

The Union of Concerned Scientists, an American not-for-profit organisation, argues in a report published in March that sodium's advantages as a coolant are counterbalanced by drawbacks. One is that a reactor which ran too hot might see its power output rise as a consequence. Unlike water, the loss of which shuts a reactor down for lack of moderation, sodium slightly damps the chain-reaction. If bubbles of sodium vapour formed in the coolant, that damping effect would diminish, risking a dangerous feedback loop of rising temperatures and growing power output.

The physics of such judgments are tricky. Few countries have as much nuclear experience as France, which generates around 70% of its electricity that way. Yet in 2015 French regulators said they could not determine whether sodium-cooled reactors are significantly safer than modern LWRs. TerraPower, moreover, insists that its Natrium plant is designed in a way that makes runaway reactions impossible.

America's government, for its part, thinks the technology has merit. It is chipping in $80m to help TerraPower build the demonstration plant, which the firm says should be ready by 2028. In the meantime, says Mr Levesque, TerraPower has been fielding inquiries from electricity firms interested in its technology. Whether Mr Gates's bet on a nuclear-power revival will pay off remains to be seen. ■

Wildlife conservation

Don't put all your eggs in one basket

Laysan albatross have only two big nesting sites. More are needed

ON THE FACE of things, the Laysan albatross is doing fairly well. Its population is estimated at around 1.6m, and may be growing. The International Union for Conservation of Nature (IUCN) classifies it as "near-threatened", putting it on the second rung from the bottom of the organisation's seven-rung ladder to extinction. A cause for moderate concern. But not, you may think, something that should be top of conservationists' lists of priorities. However, like another reasonably abundant migratory species, the monarch butterfly, the Laysan albatross has an Achilles heel.

Though monarchs range across much of North America, many are, or are the descendants of, insects that have roosted over winter in the same few groves of trees in central Mexico. Destroy those trees and you would imperil the species. The Laysan albatross has a similar vulnerability. Adult birds traverse much of the Pacific Ocean. But more than 90% of them started life on one of two specks of land, Midway and the eponymous Laysan, which are among the most north-westerly members of the Hawaiian archipelago. Wipe out those breeding colonies and the Laysan albatross would shoot right up the IUCN ladder.

And that is just what some ornithologists fear, for both Midway and Laysan, which are among the oldest parts of the Hawaiian chain, have been eroded over time from their original splendour as mountainous volcanic islands to their current state as coral atolls protruding a few metres above sea level. A storm surge in 2011 destroyed hundreds of thousands of nests, and even in normal years thousands are thus lost. Rising sea levels may make this worse. Time, then, to spread the species' risk by establishing Laysan-albatross colonies elsewhere.

A project to do so began in 2015 when America's navy, its Fish and Wildlife Service (a government agency) and several private conservation organisations led by a group called Pacific Rim Conservation began collaborating to move albatross eggs from another member of the archipelago, Kauai, which supports a small colony of the birds, to Oahu, home of Hawaii's capital, Honolulu. Here, after incubation and hatching, they are transferred to a wildlife refuge ten metres above sea level, and hand-fed squid and fish for five months until they fledge and leave the island.

While there, they are exposed to fibreglass decoys and solar-powered megaphones that broadcast albatross calls. The hope is that these tricks will encourage the chicks to imprint on the area and come there to breed as adults. Since young Laysans spend three to five years at sea before returning to their birthplace for the first time, it has taken a while to discover whether that works. But the auspices seem reasonably good. Of the 46 Laysans successfully raised and fledged from the 2015, 2016 and 2017 breeding seasons, seven have so far returned. And, as a bonus, the decoy birds and calls have also attracted hundreds of adult Laysan albatross visitors, including four pairs that have begun to nest.

There are caveats. The transfer of eggs from Kauai was a proof of principle rather than a true conservation effort. Kauai is not an atoll, and the nests in question were chosen because they were too close for comfort to a navy airfield there. More seriously, there is the question of protecting the albatrosses if they do establish themselves on Oahu. The probable reason why so many of the birds now nest on Midway and Laysan rather than on larger islands is lack of predators. Small rodents, introduced by human visitors, were a problem

Mass extinctions

Vanishing act

Some 19m years ago the world's sharks almost disappeared

SHARKS MAY not be the best-loved creatures on Earth, but they are an important part of marine ecology and many of the larger species are in serious decline. That threat, though, may be nothing compared with what happened 19m years ago, during the Miocene epoch—for then, it seems, the whole group came perilously close to extinction.

The fossil record is a patchy reflection of the past, and rocks from the deep ocean, in particular, only rarely end up on dry land, and thus accessible to the palaeontologist's hammer. Recent decades have, however, seen a number of drilling expeditions which have collected samples from the ooze that accumulates on the ocean floor. And a few years ago Elizabeth Sibert, a palaeoecologist now at Yale University, came up with a clever way to use these to gain information about life in the seas of the past. This was to look at microscopic, mineral-rich objects shed by sharks (mainly bits of protective skin-covering, known as denticles, pictured) and bony fish (mainly teeth). Counting and classifying these so-called ichthyoliths gives a sense of both the abundance and the diversity of the animals in question.

Her latest investigation of the matter has yielded a shock. She and Leah Rubin, of the State University of New York, have been perusing two sediment cores collected thousands of kilometres apart in the north and the south of the Pacific Ocean. As they write in *Science*, they discovered that, in a span of at most 100,000 years, the ratio of shark denticles to bony-fish teeth changed radically. Before this geological eyeblink, both cores yielded about one denticle for every five teeth—a ratio that had been stable for 40m years. After it, that ratio dropped to one to 100.

The mixture of denticles changed, too. Modern shark species often have only one or two types of denticle, and these can be characteristic of the species or family in question, so it is reasonable to assume that something similar pertained during the Miocene. Dr Sibert and Ms Rubin saw a 70% reduction in the number of types of denticle after the ratio changed, indicating a loss of many entire species as well as a reduction in shark numbers.

What happened is obscure. For sharks as a group, this was a mass extinction twice as bad as the one at the end of the Cretaceous period, when Earth was hit by an asteroid and the dinosaurs and many other types of animals vanished. In this case, though, as far as it is possible to tell from the rocks, only sharks were affected. And that really is a mystery.

I met a shark who wasn't there

on both places (though they have been eliminated from Laysan). Oahu, though, is rife not only with these, but also with larger imported predators. The albatross sanctuary is therefore surrounded by a fence two metres high that keeps out cats, dogs and pigs, and which is also dug into the ground to stop rodents burrowing under it. The 6.5 hectares of land thus fortified could accommodate several tens of thousands of pairs of nesting birds. As Jared Underwood of the Fish and Wildlife Service puts it, "We're just allowing them to come back." But that permission depends on the fortifications being maintained.

Nothing daunted, though, the project's partners are now expanding. They have taken to accommodating black-footed albatross, a related species with similar habits, on Oahu as well. These have been translocated from both Midway and another atoll, Tern Island. And the partners are also trying to establish colonies far away from the Hawaiian Islands, on the Channel Islands off the coast of California and on Guadalupe, off the coast of Mexico. If things go well, then, the Laysan-albatross conservation project may prove a rare example of shutting the stable door before the horse has bolted. ■

Space cadets

Jeff Bezos's flight of fancy

Blue Origin's first crewed mission will have the boss on board

THE BATTLE of the space cadets is hotting up. Elon Musk and Jeff Bezos, a pair of billionaires who made their fortunes bending terrestrial technologies to their will, have long been trying to do something similar in outer space, and have founded companies, SpaceX and Blue Origin respectively, to this end. Their motives, however, are not purely commercial. There is a new-frontier zeal involved, too. Both have plans for their firms to build crewed Moon landers. Mr Musk, indeed, has been contracted by NASA to do so. He also hopes to spearhead the human colonisation of Mars.

Mr Musk won an important round of the unspoken competition last year, by being the first to launch people into outer space, courtesy of SpaceX's Crew Dragon capsule, lifted atop a Falcon 9 rocket. But he has not yet gone there himself. Mr Bezos looks likely to trump him here, albeit that the definition of "outer space" involved is quite a technical one—being above the so-called von Kármán line, beyond which the air is so thin that the speed required to provide aerodynamic lift exceeds that required to achieve orbit. Conventionally, this is defined as 100km, though 80km might be a more accurate value.

To this end, Mr Bezos announced on June 7th that he and his brother Mark will be two of the three first passengers taken above the von Kármán line in a capsule carried by New Shepard, a launcher made by Blue Origin and named after Alan Shepard, the first American to make such a rocket-propelled trip. A third seat in the capsule will be auctioned on June 12th and the flight will happen on July 20th.

New Shepard is not, however, powerful enough to reach orbit—which is, to be honest, most people's idea of what it means to fly into space. Blue Origin's orbital launcher, New Glenn, named after John Glenn, the first American to orbit Earth, is still in development, whereas Mr Musk has such a launcher at his beck and call.

New Glenn's first, uncrewed, flight is pencilled in for late next year. That gives Mr Musk plenty of time to over-trump his rival by taking a trip into orbit. Both billionaires, though, may be beaten by another. As *The Economist* went to press, rumours were circulating that Sir Richard Branson, boss of Virgin Galactic, may try to take a trip above the von Kármán line on July 4th, in his firm's air-launched rocket plane. Watch, as it were, this space. ■

Quantum engineering

Cool thinking

The fact that atoms are also waves has a new practical use

"BUILD A BETTER accelerometer and the world will make a beaten path to your door." Not, perhaps, as snappy as Ralph Waldo Emerson's original aphorism about a mousetrap. But it is the hope of Graeme Malcolm, a physicist at the University of Strathclyde, in Glasgow. Dr Malcolm's speciality is high-purity lasers. These can be used to make instruments of great precision. And those, in turn, can be employed to build devices which can detect the tiniest of forces—as tiny, for example, as the gravitational pull of a passing lorry.

Laser light is famously pure. The way lasers work means that the beams which emerge from them are monochromatic. But there is purity, and then there is purity. In a truly monochromatic beam, all light would be of exactly the same frequency. In practice, this never happens. Wobbles caused by small temperature changes and vibrations, and by imperfections in the mirrored cavity in which the beam is generated and amplified, mean no laser beam is perfectly pure. The light from a cheap laser pointer might have a frequency range—known as its line width—of 500 megahertz (MHz), while the line width of a specialised scientific laser would be nearer 1MHz. Dr Malcolm's latest offering, by contrast, has a line width of a mere 20Hz.

This device, dubbed SolsTiS, has a cavity containing titanium-doped sapphire. This is a common material for lasers, but SolsTiS's cavity is shaped, by precise engineering and the locking of the components into place after calibration, in a way that both encourages single-frequency emission and ensures that waste heat is dissipated rapidly.

The purity of the resulting beam permits it to do something that seems extraordinary to those (ie, most human beings) who are used to dealing with the world of classical, rather than quantum, mechanics. This is, in effect, to divide atoms temporarily in two using a trick which takes advantage of the fact that all particles, however apparently substantial, are actually also waves.

To pull off this trick the output from the SolsTiS is divided into multiple beams. The atoms in question are a diffuse gas of rubidium in a cell refrigerated to within ten millionths of a degree of absolute zero. This extreme coldness is achieved by using six of these beams to slow the atoms down, in a process called Doppler cooling.

Location, location, location

In conditions of such quietude atoms hit by a pulse of light of the correct frequency (to which the SolsTiS laser is tuned), will split into two quantum waves which move apart (see diagram). A second pulse reverses this, bringing the two waves back together, and a third allows them to interfere with each other, creating a characteristic interference pattern that depends on any acceleration the waves underwent when they were separated. A further laser pulse can detect the different interference patterns in the different atoms in the cell, and that information will reveal the amount of acceleration the atoms underwent. To exploit this phenomenon, Dr Malcolm has started a company called M Squared. The plan is to use this atomic interference to create an accelerometer with at least 100 times the precision of existing versions.

Miniature accelerometers are already common (most mobile phones, for example, contain one), but these are mechanical rather than laser-based devices. Their job is inertial navigation, which divides acceleration by time to work out speed and direction travelled, and hence location. Drive into a tunnel, and inertial navigation tracks your position after you lose the GPS satellite signal.

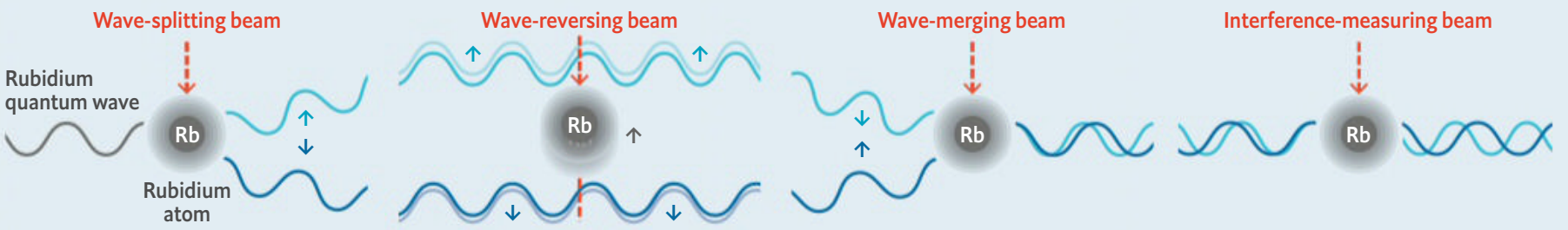
Such devices drift rapidly, however. The slightest error is quickly amplified into a big miscalculation of position. Your phone will not stay on track for more than a few minutes, and even the best military-grade inertial-navigation systems, which employ lasers, but not atomic interference, drift by kilometres a day. Atomic-interference accelerometers would, by contrast, drift only 2km a month.

To start with, this reliability will be expensive and require fairly large pieces of kit. It will therefore be of interest mainly for military use, and for one or two other specialist applications, such as mining, where satellite-based navigation is impossible. But the equipment needed should ultimately shrink to chip-size, with a corresponding fall in cost. That would permit its inclusion in vehicles, phones and other mobile electronics, which could be useful in a world of driverless cars, deliveries by drone and autonomous air taxis.

Atomic-interference accelerometers would have other uses, too. Point one vertically and it would become a gravimeter—a device to measure gravity, the strength of which varies subtly from place to place depending on the local geology. Prospectors for oil and minerals have employed gravimeters since the 1930s. Atomic-interference gravimeters promise to be a thousand times more sensitive than current devices. Dr Malcolm says the firm is testing a prototype that, when placed on a barge going over an aqueduct, can detect lorries passing beneath by their gravitational attraction. Such sensitive instruments will provide a finer-grained understanding of an area's geology before expensive drilling begins.

The first lasers were laboratory curiosities with little practical use, but that has changed enormously over the years. Now, lasers are the basis of multiple better mousetraps, from broadband fibre networks to barcode scanners. Using them to manipulate the quantum properties of atoms in this way promises more such mousetraps in the future. ■

How an atomic-interference accelerometer works



A beam hits an ultracold atom of rubidium and splits its associated quantum wave in two (shown in light blue and dark blue here)

The two daughter waves are affected differently by acceleration. A second beam brings the daughters back together

A third beam recombines the daughters. But since they have changed in different ways, they no longer align perfectly, creating interference

A final beam measures the resulting interference pattern. By measuring these patterns across many atoms, the device can calculate the acceleration the atoms experienced

Source: M Squared

The future of theatre

The turning world

BATH

As the curtain rises again on theatre, the stage is set to look different from before the pandemic

"FOR LAST year's words belong to last year's language", T.S. Eliot wrote in "Four Quartets". "And next year's words await another voice." Ralph Fiennes speaks these lines on a stage furnished with only a table and two chairs; lighting effects, from sunsets to the fiery red of a bombing raid, gleam behind him. At the Theatre Royal in Bath, a 200-year-old playhouse that Jane Austen knew, Mr Fiennes was marking theatre's emergence from pandemic hibernation with a 75-minute solo performance of Eliot's long poem, a four-part meditation on time, change, fate and faith.

It is an apt starting-point for theatre's post-covid journey. "Four Quartets" wrestles not only with Eliot's personal crises of faith and identity but the public emergency of the second world war; he composed three of the four pieces between 1939 and 1942. Mr Fiennes has known the poem since childhood but revisited it in lockdown, finding that it chimed with the disrupted times, in which "all the normal infrastructure and expectancies are taken away". Colleagues who helped put the show on the road "volunteered how contemporary it felt—the sense of reckoning with oneself and with life and soul".

A restless, barefoot presence on stage, Mr Fiennes chats, argues, muses or banters, voicing Eliot's gorgeous images and intricate ideas not as a sermon but a dialogue with audiences who have shared a passage through loss and perplexity. The first quartet, "Burnt Norton", invites them to "Descend lower...Into the world of perpetual solitude...Internal darkness, deprivation", an experience that the pandemic made commonplace. Tinged with Buddhist and Hindu as well as Christian mysticism, "Four Quartets" suggests that there is no going back, no recovery of the status quo. As Eliot put it in "The Dry Salvages", the third quartet, "time is no healer: the patient is no longer here."

Mr Fiennes's one-man show, which opened last month, recalls the monologues and pared-down productions that were broadcast online or on television to keep drama's flame flickering when theatres emptied, and social distancing prevailed on stage as well as in the stalls. But its progress across the country—it is touring to several other English cities over the summer—marks a turning-point from private communion to public spectacle. Operating with limited audiences since mid-May, British theatres hope to return to full capacity soon. As they and venues in America inch out of shutdowns, many professionals share Eliot's insistence in "Little Gidding", the final quartet, that: "We cannot revive old factions/We cannot restore old policies/Or follow an antique drum."

In my beginning is my end

The pandemic has been devastating for theatres. In Britain, research for UK Theatre and the Society of London Theatre, twin industry bodies, indicates that the sector had suffered around £200m ($282m) in covid-related losses by March 2021. A quarter of freelance theatre workers ceased trading. As Julian Bird, the chief executive of both bodies, observes, covid-19 shone a spotlight on the fragility of drama's human infrastructure. Buildings on their own are worthless, he says. "We've realised absolutely starkly that theatre is nothing without its workforce." Recovering the designers and technicians forced into ▸▸

other jobs will be essential.

Playhouses in New York have been permitted to open without limits on capacity since May 19th. So far only small off-Broadway venues have sprung back to life. Broadway stages will mostly remain dark at least until mid-September, though "Hadestown"—a musical update of the myth of Orpheus and Eurydice, and so another voyage through purgatory—is scheduled to resurface sooner. And the Public Theatre will return to its open-air home in Central Park, the Delacorte Theatre, on July 6th with a version of Shakespeare's "The Merry Wives of Windsor" set among the West African community in Harlem.

That production reflects a new social consciousness in theatres on both sides of the Atlantic. In a recent symposium on drama's future, the Public Theatre's artistic director, Oskar Eustis, exhorted his peers: "Don't just come back, but come back more democratic, come back more inclusive." Nataki Garrett, artistic director of the Oregon Shakespeare Festival, concurred: "Normal ended in March 2020. We're not going back to anything." Sharpened by the protests during theatre's enforced lay-off, issues of race will feature more prominently, on stage and off it. Among other recommendations, We See You, White American Theatre, a pressure group, wants at least half of plays performed on main stages to be by non-white writers.

Alongside the politics, though, plenty of theatregoers will long for all-singing, all-dancing escapism. As Eliot wrote in one of the best-known passages in "Four Quartets", "human kind/Cannot bear very much reality." As well as "Hadestown", the old-style, big-cast shows set to make a comeback include Cole Porter's musical "Anything Goes", scheduled to open at the Barbican Centre in London.

Richard Rodgers and Oscar Hammerstein responded to a similar yearning for spectacle and flamboyance after the second world war. Today's circumstances are different, not least in the impact of social distancing on box offices. That may put big-budget extravaganzas beyond the reach of many venues struggling out of lockdown. So some pandemic-induced innovations are set to endure and evolve.

Small-cast and solo works, such as Mr Fiennes's own performance of David Hare's monologue about his brush with covid, "Beat the Devil", are one of them. New outdoor venues—a response to ventilation needs—are another. The Arcola Theatre in London, for instance, has built an open but canopied auditorium that recalls the semi-covered playhouses of Shakespeare's time. Then there are immersive high-tech projects such as the adaptation of José Samarago's novel "Blindness" put on by both the Donmar Warehouse in London and the Daryl Roth Theatre in New York. Instead of watching actors, audiences wear headphones and encounter the story through lighting and audio recordings.

"Last season's fruit is eaten", Eliot wrote in "Four Quartets". "And the fullfed beast shall kick the empty pail." As Mr Fiennes notes, the poem is a call to break free of both past and future, to escape the cycle of "sequential time" and "live in the present moment". At its best, that is one of theatre's gifts—as, with luck, audiences will rediscover when curtains rise again. ■

Art and activism

A place in the country

VIENNA

Daniel Rycharski uses his art to build bridges between communities

When two teenagers committed suicide in a quiet corner of north-west Poland in 2015, in part because of opposition to their gay relationship, Daniel Rycharski travelled to the village, took branches from the tree where the pair had killed themselves and made a simple crucifix. He carried his work, "The Cross", to Warsaw and set it up in front of the presidential palace. Another cross once stood in the same spot to commemorate the traumatic plane crash in Smolensk in 2010 that killed Poland's president and many other senior officials.

A legion of Polish artists are trying to shine a light on the country's swing towards intolerance under the ruling Law and Justice party. But Mr Rycharski's corner of the art scene is a lonely one. He has set up his studio in the village of Kurowko, some 110km from Warsaw. He considers himself a devout Catholic, but as a gay man he is rejected by the Polish church. "For me, to live in Poland is to live in a cage," Mr Rycharski says.

Crosses to bear

Through his work, the 35-year-old artist-activist is rattling the bars. Mr Rycharski has moulded rosary beads from resin mixed with the blood of a gay friend. He has crafted scarecrows from wooden crosses and clothes donated by persecuted lesbian, gay, bisexual and transgender people. He stitched an ecclesiastical robe from the garments of Polish clergy, called it "Ku-Klux-Klan" and topped it with a distinctive pointed hood.

Yet Mr Rycharski is devout. Mateusz Pacewicz, an award-winning Polish screenwriter, points out that though "The Cross" could be considered "creepy", Mr Rycharski's pilgrimage with the crucifix turned the work into "a religious act, a ritual". His faith has helped calm his critics. Government officials wrote to the Museum of Modern Art in Warsaw complaining about an exhibition of his work in 2019, but stopped short of shutting it down. Ordinary folk have tried to destroy pieces of his that were displayed in public spaces—but some apologised after the artist explained his meaning. "He doesn't want to lose his connection to the church, he wants to try to create a dialogue," says Kasia Matt-Uszynska, the curator of Mr Rycharski's latest show, at the Kahan Art Space in Vienna.

In fact, Mr Rycharski began to consider his own sexuality in his work only recently. Four years ago he left cosmopolitan Krakow, having decided the city wasn't for him. His goal was to tell the story of Poland's rural communities, often disparaged as backward and philistine. Mr Rycharski won over local villagers with street art, decorating homes, barns and public spaces with images of hybrid animals, part wild and part domesticated. In 2014 he celebrated the 150th anniversary of the abolition of Poland's feudal system by erecting a rainbow-coloured triumphal arch outside a neighbour's home.

It may wind up in galleries across Europe, but his art is almost always displayed on Polish farmland first. His favourite project merged his two worlds. After a string of Polish villages declared themselves LGBTQ-free zones, last year Mr Rycharski persuaded five families in rural areas to invite LGBTQ visitors to stay for a few days. The most striking exhibit in Vienna is a tapestry depicting one of these hosts, dressed in shorts and a T-shirt, with mechanical farm equipment splayed behind him like the wings of an angel.

Finding willing hosts was hard, Mr Rycharski says. Persuading gay Poles to take part was even tougher. "People trust me, people understand me and people can do things with me they would never do", he says, "with someone from the outside." ■

Guns and race

Double standard

The Second. By Carol Anderson. *Bloomsbury; 272 pages; $28 and £18.99*

A BLACK MAN with a gun has been white America's nightmare since before the republic was founded. Slave uprisings, black soldiers fighting in the country's wars, even African-American motorists—all have spurred fear and violence backed by white-supremacist authority. In "The Second", a compact yet sweeping history of guns and race in America, Carol Anderson argues that the right "to keep and bear arms" has never been about an abstract liberty to carry guns. Its primary role has been "black exclusion and debasement".

The Second Amendment, Ms Anderson writes, was born in sin. The word "slavery" never appears in the constitution. Racism is not explicitly inscribed in the Second Amendment. But, she claims, it was at the heart of the guarantee. When the 55 delegates to the Constitutional Convention (of whom 25 were slave-owners) drafted a replacement for the Articles of Confederation in 1787, they knew they needed the assent of southern states. The amendment, Ms Anderson says, was a "bribe to the South using the control of black people as the payoff". Slave-owners, terrified that their suffering property would rise up, could be sure of arming themselves.

Other scholars offer more nuanced accounts of the amendment's origins, but there is little question that its "well-regulated militia" carried a glint of racial dominance. It was buttressed by the Uniform Militia Act of 1792, which required white males aged 18 to 45 to join state militias and buy guns. By contrast, a free black Virginian caught carrying a firearm in 1832 earned 39 lashes. The same punishment applied in Florida and could be enforced by white citizen patrols on the spot. In 1846 Georgia's Supreme Court found that the Second Amendment protected the "right of the whole people, old and young, men, women and boys...to keep and bear arms of every description". But it declined to strike down a law barring "any free persons of colour" from owning them. Several other states had similar prohibitions.

This double-barrelled interpretation contributed to centuries of brutality against defenceless black Americans. Ms Anderson recounts a South Carolina militia's grisly response to a slave uprising in 1739 in which the enslaved were "tortured, shot, hanged and gibbeted alive". White

Shall not be infringed

militias "made Swiss cheese of [black] men's backs, especially those who had surrendered" during a massacre in Colfax, Louisiana, in 1873. President Theodore Roosevelt ordered the dishonourable discharge of 167 black soldiers in 1906, on the baseless suspicion that some in their ranks had shot whites in Brownsville, Texas.

The emptiness, for black Americans, of the right to bear arms is amply documented in Ms Anderson's vivid retelling. No landmarks of racial progress—neither Reconstruction in the 19th century, nor the civil-rights movement of the 20th—made a difference. Nor has the National Rifle Association (NRA), the zealous defender of gun rights that came to the fore in the 1960s, targeted this prejudice. In 1967 the NRA helped draft a bill in California to disarm the Black Panthers, a black self-defence organisation that "had broken no firearms laws". Ms Anderson notes that the association has been slow to respond to police violence against black men in recent years, including in 2016 when an officer shot and killed Philando Castile in St Paul, Minnesota, after Castile disclosed that he was (legally) carrying a gun.

Yet as a contribution to the contemporary debate over gun rights, "The Second" comes up short. The book makes no mention of Justice Clarence Thomas's long concurrence in *McDonald v Chicago* (2010), which covers much of the same historical ground. Like Ms Anderson, Justice Thomas, himself African-American, lamented as tragic the white supremacy that has persistently denied gun rights to black citizens. But the right to bear arms, in his eyes, remains key to their salvation. Ms Anderson could have grappled with that reading to hone her contrary view: that the amendment is "so inherently, structurally flawed" that it can "never be a pathway to civil and human rights" for black Americans. ■

Tech fiction

Paradise lost

The Startup Wife. By Tahmima Anam. *Scribner; 304 pages; $26. Canongate; £16.99*

ASHA AND Cyrus get married after they sleep together for the first time. Asha is a talented coding expert with a background in brain modelling. Cyrus, though, is "consistently, encyclopaedically brilliant". When Asha starts a technology firm that designs personalised rituals—to help secular netizens imbue their lives with meaning—she models the tech on her husband's brain, its rapacious ability to acquire knowledge and build connections. Then she persuades him to join the company. He names it WAI: We Are Infinite.

So runs the swift opening of "The Startup Wife", Tahmima Anam's riff on the political and personal dynamics of the tech scene. Soon, Cyrus, Asha and WAI are ensconced in the gleaming halls of a tech incubator, a haven of cuddle puddles, corporate yoga and innovators designing apps to fix the universe—even if the futures they envisage are aridly technocratic. The first fly in the kombucha lands when an investor insists that Cyrus be chosen as the outfit's figurehead. Asha may be the founder, but she remains a woman of Bangladeshi descent in a white tech bro's world.

The success that follows leaves Cyrus increasingly convinced of his own messianic gifts. Asha, meanwhile, feels herself being edged to the fringes of the company, even to the margins of her own life. Why, she begins to wonder, do her sex and the colour of her skin still set her apart? Why does the engine room of the Utopian future look so much like the narrow elite of the past—stale, pale and male?

In real life Ms Anam's husband founded a startup, and many of the details of her novel's self-ironising world, in which hyper-modern ideas and throwback attitudes collide, feel drawn from personal observation. The snappy dialogue is the greatest strength of her brisk narrative—especially when it spears the paradoxes of the immigrant experience. '"You're too young to get married. Full stop," Asha's ambitious mother warns her. Asha shoots back: "Why don't you act like all the other aunties?"

In the end, though, the pacey story seems to linger on the surface of things. The denouement does not quite reach the emotional depths that readers might expect, leaving them wondering how much substance there really was beneath the book's iMac sheen. ■

The trouble with history

Missing pieces

A biography of Cleopatra exemplifies a trend in the writing of history

IT IS LIKE reading Suetonius crossed with Danielle Steel. In a new biography of Cleopatra, the queen remembers the feeling of "Caesar's chest pressing against her body". As she steps into a bath, "first, her calves disappear, then her harmonious thighs".

A remarkable woman who smuggled herself into an audience with Caesar in a sack, Cleopatra may well have recalled his embraces fondly. Her thighs may even have been harmonious. No one can know for sure—yet Alberto Angela is unrepentant about the "fictionalised parts" of his book, a smash-hit in Italy and now released in English. This, he argues, is the "only possible approach" if writers are to supply the vivid details readers want. "If reality has gone," he argues, "we can make plausible reconstructions based on what we know."

Mr Angela's Egyptian ruler embodies, if in exaggerated form, a wider trend in the writing of history. Modern readers are keen to discover the intimate aspects of bygone lives, especially those of women and minorities (last year books about feminism and race topped non-fiction charts in both Britain and America). Often, though, the patchy documentary record is, in today's lurid parlance, not putting out. So, increasingly, authors are putting in what is missing, using their imaginations to add flesh to the skeletons of the dead. Sometimes, as in the case of Cleopatra, quite literally.

History "is not the past", Hilary Mantel once said. "It's what's left in the sieve when the centuries have run through it." In the case of the classical world, what is left is sparse. Even very basic things are unknown. "Almost anything with a number on, we don't know," says Mary Beard of the University of Cambridge. "We don't know the date of the eruption of Pompeii...We don't know the population of the Roman Empire." Evidence regarding women and minorities is especially thin. There are almost no first-person testimonies from Greek or Roman women. Tantalisingly, Nero's mother is known to have written a memoir, but it was lost (like almost all classical literature). The poetry of Sappho survives only in scraps.

A foreign country, just like this one

Such silences speak volumes. They do not, alas, fill them. That makes the job of scrupulous modern historians painstakingly hard. It took around 12,000 tiny tiles to make a square metre of fine Roman mosaic; to produce a scholarly yet arresting paragraph on classical history, the writer must, like a mosaicist, combine a little colour from a geographer, a sample from a poet and a snippet from an ancient chronicler. Even then, the picture may lack the details and insights modern readers crave.

In part, novels are filling the gap. Authors such as Pat Barker and Madeline Miller have reimagined the classical world and myths from a female perspective. Increasingly, though, books like Mr Angela's that purport to be non-fiction are blurring the boundaries between history and imagination—leaving readers at a loss to distinguish between documented fact, supposition and fantasy. In "The Kingdom", Emmanuel Carrère used a bricolage of autobiography, fiction and history to add texture to the story of the earliest Christians; it was a bestseller in France. More commonly, narrative histories that suffuse the past with sights and smells, by authors such as Tom Holland and Helen Castor, have won big readerships.

Academic historians tend to be sniffy about all this. But though their own work may be unsullied by ingratiating ornament, it is also, often, untouched by readers. In one exemplary if extreme comparison, Diarmaid MacCulloch's exhaustive biography of Thomas Cromwell sold a respectable 32,000 copies in Britain. Ms Mantel's "Wolf Hall" trilogy, which also recounts Cromwell's life, has sold 1.9m and counting. As Dan Jones, a popular writer of medieval history, says diplomatically, academic histories tend "not to have crisp readability at the top of their list of priorities". More bluntly, he reckons that "most academic history is unreadable".

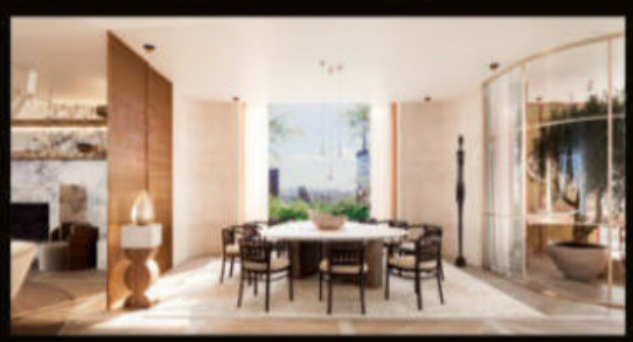
"People like stories," Mr Jones explains. What he calls "painful academic textbooks" may be "very useful" to specialists; but they are mostly not intended for a general readership. Academics themselves are beginning to see the problem. Two years ago, Hal Brands and Francis Gavin of Johns Hopkins University wrote an article titled "The Historical Profession is Committing Slow-Motion Suicide". They lamented the lack of interest in "clear, intelligible prose", decrying the moment when "academic historians began writing largely for themselves" while "populariser" became "a term of derision".

The collision of these trends—rising interest in questions not answered in bona fide sources, and the abstruseness of academic texts—represents an opportunity for writers like Mr Angela. He seizes it with aplomb. In "Cleopatra" he evokes the city of Rome so well that you can see its red roofs, and Alexandria so carefully that you can smell the spices in its market (even if the word "ensnare" makes far too many appearances in his rendering of the queen).

To those who think a proper understanding of the past is an important intellectual, even civic, asset, all this is a worry. On the other hand, in the great sweep of history—and of historians—none of it is terribly new. "Everybody has fictionalised history from the very beginning," says Ms Beard. "That is what Tacitus did. That is what Herodotus did." Until fairly recently, invention was part of the job description; early historians such as Thucydides openly acknowledged that many speeches in their works were partly made up.

Admittedly, some of the women produced to requite the feminist tastes of modern readers will "be partly fictional", says Ms Beard. "But then Roman men are partly fictional." History, she summarises, "is about filling the gaps." ■

Age cannot wither her



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Economic data

	Gross domestic product % change on year ago latest		quarter*	2021†	Consumer prices % change on year ago latest		2021†	Unemployment rate %		Current-account balance % of GDP, 2021†	Budget balance % of GDP, 2021†	Interest rates 10-yr gov't bonds latest,%		change on year ago, bp	Currency units per $ Jun 9th	% change on year ago
United States	0.4	Q1	6.4	6.0	4.2	Apr	2.7	5.8	May	-2.9	-13.5	1.5		66.0	-	
China	18.3	Q1	2.4	8.5	1.3	May	1.6	5.1	Apr‡§	2.7	-4.7	3.0	§§	48.0	6.39	10.9
Japan	-1.6	Q1	-3.9	2.2	-0.5	Apr	0.1	2.8	Apr	3.0	-9.4	nil		-8.0	110	-1.7
Britain	-6.1	Q1	-5.9	5.3	1.5	Apr	1.5	4.8	Feb††	-4.2	-12.1	0.9		51.0	0.71	11.3
Canada	0.3	Q1	5.6	5.4	3.4	Apr	2.2	8.2	May	-2.0	-8.9	1.4		78.0	1.21	10.7
Euro area	-1.3	Q1	-1.3	4.2	2.0	May	1.5	8.0	Apr	3.1	-6.8	-0.2		6.0	0.82	7.3
Austria	-5.5	Q1	-12.6	3.0	2.8	May	2.2	5.6	Apr	3.2	-7.4	nil		2.0	0.82	7.3
Belgium	-0.6	Q1	4.2	3.9	1.5	May	1.5	5.3	Apr	-0.8	-7.5	nil		1.0	0.82	7.3
France	1.2	Q1	-0.4	5.4	1.4	May	1.3	7.3	Apr	-1.8	-9.0	0.2		15.0	0.82	7.3
Germany	-3.1	Q1	-7.0	3.5	2.5	May	1.9	4.4	Apr	6.8	-3.6	-0.2		6.0	0.82	7.3
Greece	-1.4	Q1	18.9	2.5	-0.3	Apr	nil	15.8	Dec	-5.8	-5.9	0.8		-63.0	0.82	7.3
Italy	-0.8	Q1	0.6	4.1	1.3	May	1.0	10.7	Apr	3.0	-11.9	0.8		-66.0	0.82	7.3
Netherlands	-2.8	Q1	-1.8	2.9	2.1	May	2.0	3.4	Apr	10.8	-3.4	-0.2		-6.0	0.82	7.3
Spain	-4.3	Q1	-2.1	5.6	2.6	May	1.3	15.4	Apr	1.3	-8.9	0.5		-9.0	0.82	7.3
Czech Republic	-2.4	Q1	-1.0	3.7	3.1	Apr	2.2	3.4	Apr‡	2.1	-5.5	1.7		76.0	20.9	11.9
Denmark	-1.3	Q1	-5.1	3.0	1.5	Apr	0.7	4.6	Apr	7.4	-1.3	0.1		24.0	6.10	7.7
Norway	-1.4	Q1	-2.5	2.6	3.0	Apr	2.9	4.6	Feb‡‡	2.5	-1.0	1.5		77.0	8.28	12.0
Poland	-1.3	Q1	4.5	4.1	4.8	May	3.2	6.3	Apr§	2.0	-6.9	1.8		42.0	3.66	7.1
Russia	-1.0	Q1	na	3.2	6.0	May	5.3	5.2	Apr§	3.6	-1.7	7.4		156	72.2	-5.0
Sweden	-0.1	Q1	3.4	3.3	2.2	Apr	1.4	9.4	Apr§	4.1	-2.6	0.4		30.0	8.26	11.0
Switzerland	-0.5	Q1	-2.0	3.0	0.6	May	0.3	3.0	May	7.4	-4.0	-0.2		15.0	0.90	5.6
Turkey	7.0	Q1	na	3.9	16.6	May	14.5	13.1	Mar§	-2.2	-2.8	17.8		600	8.59	-20.8
Australia	1.1	Q1	7.3	3.4	1.1	Q1	2.1	5.5	Apr	1.9	-7.3	1.5		43.0	1.29	10.8
Hong Kong	7.9	Q1	23.5	4.9	0.7	Apr	1.6	6.4	Apr‡‡	3.6	-4.1	1.2		60.0	7.76	-0.1
India	1.6	Q1	6.0	10.4	4.3	Apr	5.2	11.9	May	-1.0	-7.0	6.0		24.0	73.0	3.6
Indonesia	-0.7	Q1	na	3.9	1.7	May	2.5	6.3	Q1§	-0.3	-6.4	6.4		-87.0	14,255	-2.6
Malaysia	-0.5	Q1	na	4.4	4.7	Apr	2.4	4.6	Apr§	4.7	-5.9	3.6		50.0	4.12	3.9
Pakistan	4.7	2021**	na	1.7	10.9	May	9.0	5.8	2018	-1.7	-6.9	9.7	†††	117	155	5.5
Philippines	-4.2	Q1	1.2	5.1	4.5	May	4.2	8.7	Q2§	-1.1	-7.6	3.8		56.0	47.7	4.7
Singapore	1.3	Q1	13.1	4.5	2.1	Apr	1.8	2.9	Q1	17.5	-4.3	1.5		47.0	1.32	5.3
South Korea	1.9	Q1	7.1	3.6	2.6	May	1.9	4.0	May§	4.6	-4.7	2.1		72.0	1,116	7.4
Taiwan	8.9	Q1	12.8	6.2	2.5	May	1.6	3.7	Apr	15.5	-0.5	0.5		-6.0	27.8	7.2
Thailand	-2.6	Q1	0.7	2.9	2.4	May	2.2	1.5	Dec§	4.5	-6.6	1.6		40.0	31.2	0.6
Argentina	-4.3	Q4	19.4	6.2	46.3	Apr‡	46.8	11.0	Q4§	1.7	-6.0	na		na	95.1	-27.2
Brazil	1.0	Q1	4.9	4.8	8.1	May	6.8	14.7	Mar§‡‡	-0.2	-7.3	9.0		228	5.06	-3.4
Chile	0.3	Q1	13.4	6.2	3.6	May	3.6	10.2	Apr§‡‡	-0.2	-7.2	4.4		163	719	7.2
Colombia	2.0	Q1	11.9	6.0	3.3	May	3.0	15.1	Apr§	-3.4	-8.9	6.8		125	3,586	1.0
Mexico	-3.6	Q1	3.1	5.7	5.9	May	4.5	4.7	Apr	2.0	-2.8	6.5		32.0	19.6	10.2
Peru	3.8	Q1	8.3	10.5	2.5	May	2.6	12.6	Apr§	-0.3	-5.6	4.8		94.0	3.90	-11.5
Egypt	2.0	Q4	na	2.9	4.1	Apr	5.7	7.4	Q1§	-3.3	-8.1	na		na	15.7	3.2
Israel	-1.2	Q1	-6.5	3.8	0.8	Apr	1.3	5.4	Apr	3.7	-7.9	1.2		44.0	3.24	6.5
Saudi Arabia	-4.1	2020	na	2.9	5.3	Apr	2.4	7.4	Q4	2.8	-2.6	na		na	3.75	nil
South Africa	-3.2	Q1	4.6	2.4	4.5	Apr	3.7	32.6	Q1§	1.5	-9.2	8.7		-43.0	13.6	22.1

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 Jun 9th	% change on: one week	Dec 31st 2020
United States S&P 500	4,219.6	0.3	12.3
United States NAScomp	13,911.8	1.1	7.9
China Shanghai Comp	3,591.4	-0.2	3.4
China Shenzhen Comp	2,396.5	-0.2	2.9
Japan Nikkei 225	28,860.8	-0.3	5.2
Japan Topix	1,957.1	0.8	8.4
Britain FTSE 100	7,081.0	-0.4	9.6
Canada S&P TSX	20,002.3	0.2	14.7
Euro area EURO STOXX 50	4,096.8	0.2	15.3
France CAC 40	6,563.5	0.6	18.2
Germany DAX*	15,581.1	-0.1	13.6
Italy FTSE/MIB	25,741.8	1.4	15.8
Netherlands AEX	722.7	0.5	15.7
Spain IBEX 35	9,156.1	-0.3	13.4
Poland WIG	66,114.6	-1.0	15.9
Russia RTS, $ terms	1,674.8	1.9	20.7
Switzerland SMI	11,788.1	2.8	10.1
Turkey BIST	1,449.2	1.3	-1.9
Australia All Ord.	7,522.0	0.7	9.8
Hong Kong Hang Seng	28,742.6	-1.9	5.6
India BSE	51,941.6	0.2	8.8
Indonesia IDX	6,047.5	0.3	1.1
Malaysia KLSE	1,581.5	-1.0	-2.8

	index Jun 9th	% change on: one week	Dec 31st 2020
Pakistan KSE	47,777.6	-0.7	9.2
Singapore STI	3,153.5	-0.2	10.9
South Korea KOSPI	3,216.2	-0.2	11.9
Taiwan TWI	16,966.2	-1.2	15.2
Thailand SET	1,626.3	0.5	12.2
Argentina MERV	68,105.0	8.7	32.9
Brazil BVSP	129,906.8	0.2	9.1
Mexico IPC	50,708.9	-0.1	15.1
Egypt EGX 30	10,042.2	-0.8	-7.4
Israel TA-125	1,754.6	-0.5	11.9
Saudi Arabia Tadawul	10,790.2	1.3	24.2
South Africa JSE AS	67,681.5	-2.0	13.9
World, dev'd MSCI	2,996.6	0.4	11.4
Emerging markets MSCI	1,372.8	-1.1	6.3

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2020
Investment grade	117	136
High-yield	352	429

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

Commodities

***The Economist* commodity-price index**

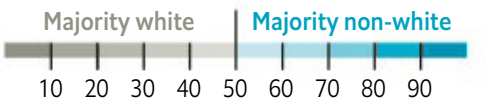
2015=100	Jun 1st	Jun 8th*	% change on month	year
Dollar Index				
All Items	188.8	188.2	-6.3	70.0
Food	138.3	138.6	-4.8	50.1
Industrials				
All	236.1	234.5	-7.2	83.5
Non-food agriculturals	165.8	164.0	-8.4	83.3
Metals	256.9	255.5	-6.9	83.6
Sterling Index				
All items	203.4	203.0	-6.4	52.9
Euro Index				
All items	171.0	171.3	-6.5	58.4
Gold				
$ per oz	1,898.7	1,893.2	3.5	10.1
Brent				
$ per barrel	70.4	72.4	5.4	75.4

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.

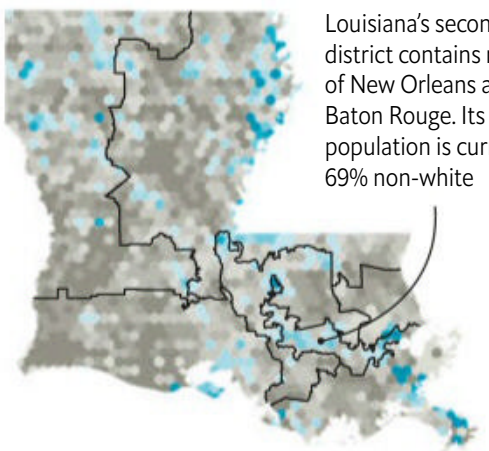
For more countries and additional data, visit **Economist.com/indicators**

→ **The Voting Rights Act required the creation of districts in which most voters are racial minorities**

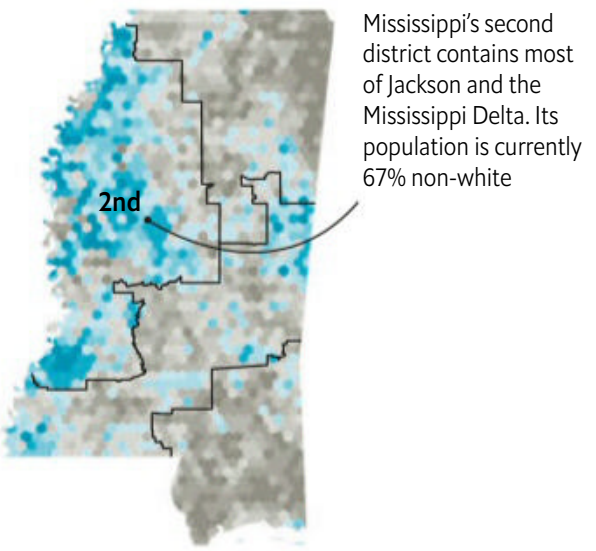
United States, current congressional-district boundaries, share of non-white voters, %



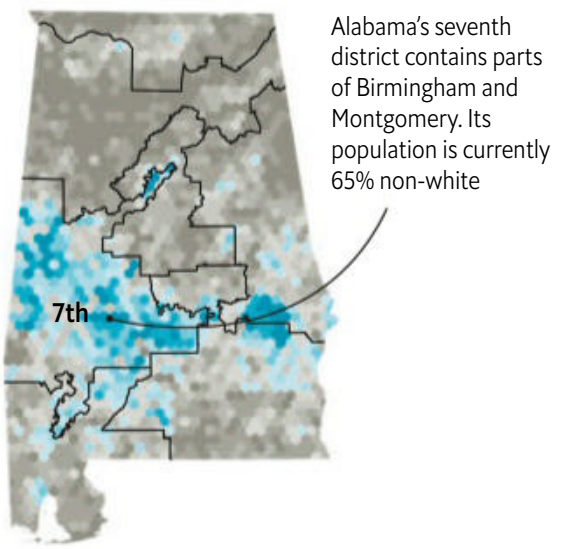
Louisiana



Mississippi

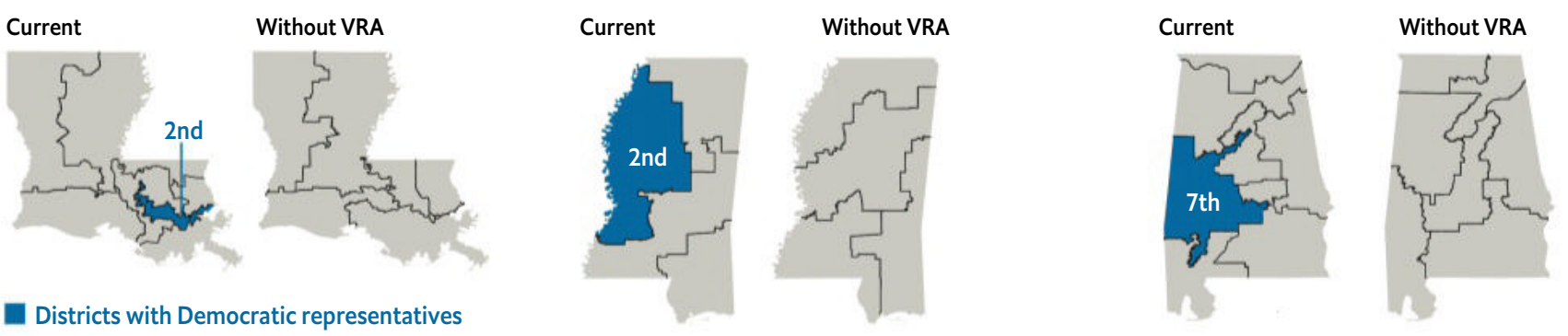


Alabama



→ **If Republicans could get rid of "majority-minority" districts, some Democrats would lose seats**

Current boundaries v hypothetical gerrymandered boundaries without Voting Rights Act (VRA) "majority-minority" requirements*



*In House elections in 2020, Democrats might not have won any seats in these states using these boundaries
Sources: Stephen Wolf, Daily Kos; IPUMS NHGIS, University of Minnesota; *The Economist*

House of unrepresentatives

How the Voting Rights Act limits gerrymanders

In most democracies, nonpartisan technocrats write voting rules. In America, however, they are politically controversial. For decades, Southern states used shameful "Jim Crow" laws, such as literacy tests, to stop black people from voting. Such abuses continued until Congress banned them in the Voting Rights Act (VRA) of 1965.

In recent months a new battle over voting rules has begun. Republican legislators in 47 states have proposed reforms changing when and how people vote, citing electoral security. Democrats fear these bills will make voting harder for non-whites.

Such warnings may be justified in some cases. However, studies of voting requirements such as a photo ID have not found that they provide big partisan advantages. Instead, the redrawing of Congressional districts is likely to have a bigger impact.

Both parties gerrymander (drawing legislative borders to maximise their seats). However, Republicans run more state governments, and a greater share of Democratic states entrust redistricting to nonpartisan panels. This means Republicans could gerrymander up to 187 House seats for 2022 compared with 75 for Democrats.

Beyond the constitutional rule that laws protect everyone equally, federal law places just two limits on gerrymandering. First, districts must have similar numbers of people. Next, in 1986 the Supreme Court applied the VRA to ban states from diluting non-whites' impact in places where they vote as a bloc. If mapmakers split up areas with lots of minorities—who tend to support Democrats, and often elect candidates of their own race—into too many districts, they risk having such lines redrawn.

The judiciary has chipped away at the VRA. In 2013 the Supreme Court threw out a rule requiring federal approval of changes to state voting laws. This month the court will decide if new voting policies in Arizona violate Section 2, which bans electoral laws with discriminatory effects and is the basis for the VRA's limits on redistricting. If the court narrows its interpretation of this clause, it would further weaken the law.

Any estimate of how parties' strength in Congress would change without the VRA will be inexact. But on current trends, it is an increasingly relevant exercise. At our request, Stephen Wolf, a districting expert, went through every state where Republicans control redistricting and drew the most Republican-friendly, VRA-compliant gerrymander he thought was plausible. He then repeated this process without regard for the VRA, and tested whether that let him flip even more Democratic seats.

Outside of the South, the VRA had little effect. Most of the Republican gains came from redistricting suburbs that contain lots of college-educated whites, not from "cracking" minority areas. However, without the VRA, Alabama, Louisiana and Mississippi went from one Democrat each to all-Republican slates. In total, the VRA lowered the number of seats that Republicans added from 15 to nine.

This analysis shows that the Supreme Court could help Republicans win a few seats by curtailing the VRA. It also shows that far bigger changes could result from new limits on gerrymandering, like those in one bill currently before the Senate. ■

Tales of love and death

Ingrid "Ganga" Stone, feeder of New York's sick and housebound, died on June 2nd, aged 79

SOMETIME IN 1985, when she was working as a volunteer at a hospice on the Lower East Side, Ganga Stone took a bag of groceries to an actor who was dying of AIDS. She parked her bicycle and walked up to his apartment, not without trepidation. AIDS was then ravaging the gay community in New York, and almost nothing was known about it. Its victims were stigmatised and isolated. When the man, Richard Sale, opened the door to her, he was stick-thin and covered with lesions. She had never seen anyone look that bad. And when she handed over the groceries, he deliberately dropped them on the floor. He was far too weak to cope with cooking them. One packet of bread-mix so frustrated him that he tossed it across the room.

What he needed, she realised, was a hot meal delivered directly to him. That day she bought one at the corner deli and took it up. This was better, but still not perfect. Richard needed food that was tailored to his illness and could tempt the jaded appetite of someone dying, so she did research and, the next time, cooked something for him herself. This worked, and also seized her with a sudden idea. She would give up her current job, selling coffee from a cart on Wall Street, and set up a system to feed AIDS sufferers in their homes: every day, free, all over the city. And she would call it "God's Love We Deliver". At last, here was purpose in her life.

It started in the tiny kitchen of her apartment with her roommate Jane Best, both of them taking phone orders and buying ingredients with their own money, but soon outgrew anything their stove could manage. She turned to take-out, recruited friends, urged restaurants to give spare food and put collecting tins beside cash registers in stores, talking up the cause with her blue eyes blazing. Besides that she was still chief courier, racing round Manhattan on her bike, because it was sheer joy to place that bag of good fresh food in someone's hands, and see them smile.

She could not do that job for long, however. God's Love swelled like a proving loaf. By 1993 it was providing two meals a day to 550 clients in all five boroughs, with 1,700 volunteers helping. That year it moved from a church basement to a 16,000-square-foot building in SoHo, and still that was too small. The service expanded to include almost anyone who was homebound and struggling to find food. Celebrities, including New York's mayors, gave donor-parties and brand-new delivery vans. Money poured in, two-thirds of it in private donations. By this year, when God's Love had proved its worth all over again during the covid lockdowns, 17,000 volunteers were feeding 2.5m New Yorkers on a budget of $23m.

Why "God's Love"? people asked her. It sounded too pious, but she thought it was funny, like a lit-up restaurant sign. God was not someone or something she hid, and it could be any God: Jesus, Shiva, Allah, Supreme Truth, consciousness. Perfectly non-sectarian. Food was part of that love, unconditional as a mother's, given constantly and with pleasure by people who expected nothing back. No questions were asked when an order came in, but the meals, as irresistibly delicious as she insisted they had to be, were sent out at once. Never a day missed. Since she herself hated to stand in line in a restaurant, why should her clients wait? This was love that went beyond the personal.

At the personal kind she was not so good. Her marriage, to an Australian busboy with flowing blond hair she had met while waitressing at Max's Kansas City, was a disaster from day one. After 13 months she walked out, with a son now, but somehow she could not connect with the little boy, who went to live unhappily with his father. In 1987 a one-night fling with a Wall Street customer resulted in a daughter, Hedley, whom she kept close, though the father bolted. Single life was no joke, but New York, she concluded, was a hard place to find a man. Sometimes she seemed picked on from the start, with a violent father and the sense that neither of her parents thought she was good for much.

Only one person thought she was: Swami Muktananda, "Baba", as she called him, whose ashram in India was her home in the late 1970s. Baba, to her, was part of that greater and universal love she longed to enter into. It was he who called her Ganga after the Ganges, the ever-surging energy of Shiva. After his death she wore a red *bindi* for a year and bought a wedding ring, as though she had been his wife. But this spiritual marriage was tough, too. At the ashram she scrubbed stone floors and did not speak for almost a year. And when she bowed before Baba, he sometimes hit her. She took it as a gift, a training in self-control.

His more lasting training was in how she should see death. She had gone to the ashram still mourning her mother, who had died 12 years earlier of motor neurone disease. Baba taught her that death was merely the dropping of the body by the soul, which then moved on. It was the most important moment in a human life, and nothing to grieve about.

For her this teaching was as vital as hot meals. Food had to come first; then, as equal comfort, news of the immortal self. She began to lead "death classes" for patients and their partners, and in 1995 stepped down from God's Love to focus on that work. Sadness had no place in it; instead, she told death-jokes. She wrote a book called "Start the Conversation". ("The One who sails through death and out the other side is *who you are*. Have you got that?") And, once again, this put some people off. How did she know? Where did that piercing certainty come from?

She would say, from experience. She had proof of her mother's continued existence, as well as Baba's, whose life still sparked in her like electricity. God's Love, too, had been set up originally for those near death. In its first year, 400 clients died. She had treasured those last weeks, when even young men welled up with the wisdom of the old, and yet the world avoided listening.

One of those clients had been Richard. After their first difficult encounter, they had become brief friends. And in retrospect, even his throwing of the bread-mix was wisdom. It started something she and all New York turned out to be grateful for. ■

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