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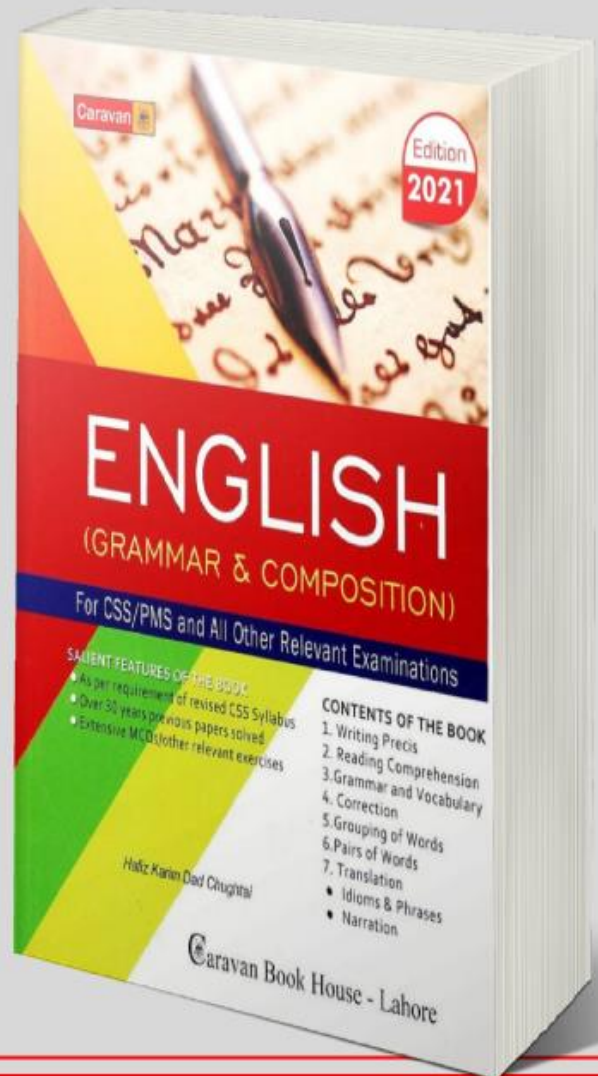
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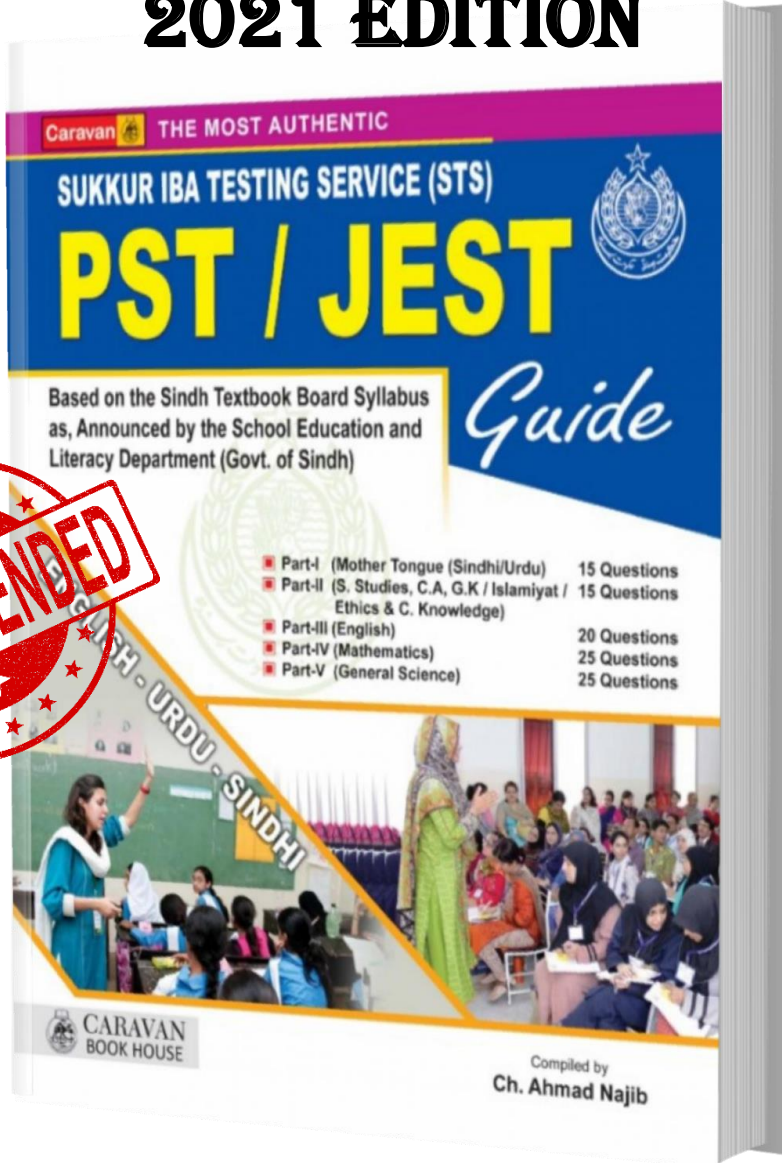
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The
Economist

Volume 440 Number 9254

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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Thousands of demonstrators took to the streets all over **Cuba**. They have a long list of complaints, from the communist dictatorship's inept handling of covid-19 to empty supermarket shelves and power cuts. Miguel Díaz-Canel, the president, decried the protests, the largest sign of popular revolt in six decades, and deployed riot police. Nearly 150 people have gone missing. Many of these are thought to have been arrested.

It remained unclear who was behind the murder last week of Jovenel Moïse, the president of **Haiti**. The national chief of police declared that a Haitian doctor who lives in Florida plotted the attack. More than a dozen former Colombian soldiers said to have been involved in the plot were paraded on Haitian television. Conspiracy theories abound, involving senior Haitian politicians. A power vacuum has been created; three men are vying for the top job.

In **South Africa** scores of people were killed and hundreds of shops, factories and warehouses burnt in riots instigated by allies of Jacob Zuma, a former president who was jailed for refusing to appear before a commission investigating corruption during his term in office. The government has sent in the army to stop the worst violence since the end of apartheid in 1994.

With the country mired in an economic crisis, two of **Lebanon's** main power plants shut down, taking the entire national grid offline and leaving most Lebanese without electricity. The power plants

unexpectedly found that their fuel supply had been cut off.

At least 92 people died when a covid-19 ward caught fire at a hospital in **Iraq**. It is the second such incident in three months.

France will end its 5,000-strong counter-terrorism operation in **the Sahel** in the first three months of 2022, President Emmanuel Macron said. The mission started in 2013 when jihadists were advancing on Bamako, the capital of Mali. Jihadists remain active throughout the region.

American prosecutors charged four **Iranian intelligence agents** with trying to kidnap a journalist based in New York who is critical of the regime in Tehran. The plotters, who are based in Iran, allegedly tried to lure Masih Alinejad to another country where they hoped to abduct her.

Chuck Schumer, the Democratic leader in the United States Senate, said his party had agreed on a \$3.5trn **budget** that proposes huge increases in spending on infrastructure, tackling climate change, health care and other issues.

Democratic members of the state legislature in **Texas** left the state to deny the Republicans a quorum for passing a bill on voting procedures that would, among other things, restrict access to postal ballots. The legislature's Republicans passed a motion ordering officials to track and arrest the absent Democrats, who decamped to Washington.

Charlottesville quietly removed a statue of **Robert E. Lee** that had been the focus of a deadly protest in 2017. Four years ago, a first attempt by the college town in Virginia to take down the monument to the Confederate commander caused white supremacists to rally in its defence.

The number of people who died from **drug overdoses** in America soared by 30% last

year, to 93,331, a record high. Experts blamed stresses related to the pandemic, as well as the closure of addiction-treatment centres during lockdown.

Boris Johnson, Britain's prime minister, announced that no further prosecutions associated with the Troubles in **North-eastern Ireland**, a wave of sectarian conflict that swept the province from the 1960s to 1998, would be allowed to proceed. That would allow a line to be drawn under the era, he said. Some of the outstanding cases related to actions taken by the army and police. Those who support the amnesty argue that attempts to prosecute members of the security forces had become politicised.

Vladimir Putin, Russia's president, published a 5,000-word essay on the "historical unity" of **Russians** and **Ukrainians**. Russia-watchers worried that he might be planning to grab more Ukrainian territory.

A cameraman died after being beaten up by anti-gay protesters while covering an anti-gay march in Tbilisi, the capital of **Georgia**. More than 50 journalists were attacked. Threats were made to the city's Pride event; it was cancelled.

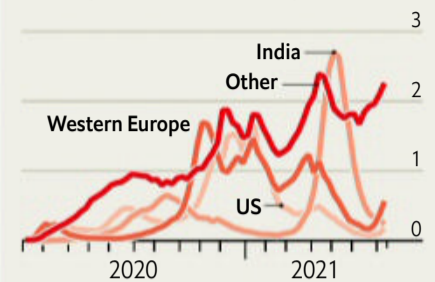
Two weeks after he became the first prime minister in **Sweden** to lose a vote of confidence in parliament, Stefan Löfven was asked by the Speaker to form a new government because no one else could do so. Mr Löfven's position is still uncertain; he is finding it hard to muster support for a budget that must pass later this year.

A state of emergency came into effect in **Tokyo**. Pandemic restrictions were reintroduced and will remain in place throughout the forthcoming Olympic games. Restaurants and bars must shut early and may not serve alcohol. No commercial events may be held near the stadiums. All spectators have now been banned from Olympic stadiums in and close to Tokyo.

Coronavirus briefs

To 6am GMT Jul 15th 2021

Weekly confirmed cases by area, m



Vaccination doses

	Total '000	% of over-11s with	
		1st dose	2nd
Malta	709	96	90
Iceland	452	92	83
Mongolia	3,900	87	74
Israel	10,938	86	78
Uruguay	4,369	83	67
Chile	24,097	82	70
Canada	43,430	80	52
Britain	80,976	79	60
Bhutan	486	78	0
Netherlands	17,773	77	46

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

Indonesia recorded more than 50,000 new covid-19 infections on July 14th, the second-highest number (after Brazil) of any country. Cases have been rising rapidly and spreading throughout the archipelago. The government has ordered restaurants and places of worship to close in the worst-afflicted regions.

Record numbers of people in **France** signed up to get vaccinated after Emmanuel Macron announced that people who have not been jabbed will be barred from entering restaurants, cafés and shops and not allowed to travel on trains from August.

The **British** government confirmed that all remaining pandemic restrictions would be lifted in England on July 19th. Thanks to a successful vaccine roll-out, deaths from covid-19 are low, but rising as infections soar. London's mayor said passengers will still have to wear masks on the city's transport network.

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

The European Union unveiled ambitious goals to reduce **greenhouse-gas emissions** by 55% by 2030 (compared with 1990 levels) and to reach net zero by 2050. The plan sets out a range of policies to help meet the targets, but the main thrust is an expansion of the EU's Emissions Trading Scheme, in which companies pay to pollute. It would also introduce a Carbon Border-Adjustment Mechanism, in effect a tariff on goods from outside the EU that are not green-friendly. The announcement came days before China was expected to announce an emissions-trading scheme that will create the world's largest carbon market.

Doing nicely

China's economy expanded by 1.3% in the second quarter, compared with the previous three months, helped by growth in manufacturing, retail sales and investment. China's **exports**, meanwhile, rose by 32% in June (in dollar terms) over June 2020. Although the rebound in trade reflects an easy comparison with the depths of the pandemic, it is much stronger than analysts had forecast.

America's annual rate of **inflation** hit 5.4% in June, another 13-year high. Consumer prices have been driven up by higher energy costs, including for petrol, and also by demand for used cars. Prices for second-hand vehicles have accelerated as the production of new cars stalls amid a global shortage of chips.

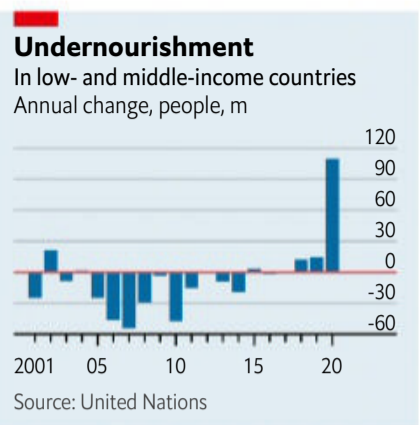
The **Bank of England** scrapped the restrictions on banks' dividend payouts and share buybacks that it imposed during the pandemic. The Federal Reserve has already removed similar curbs on most banks in America; the European Central Bank is expected to follow suit.

Meanwhile, the ECB gave the go-ahead for a pilot project for a digital version of the euro as an alternative to **cryptocurrencies**, such as bitcoin. In

London police seized £180m-worth (\$249m) of cryptocurrency linked to money-laundering and other nefarious activities. It was one of the biggest such seizures globally and came a few weeks after the city's police confiscated £114m in cryptocurrency from other illicit gains.

The European Commission said it had put plans for a **digital tax** on hold. America has been lobbying hard for the proposal to be scrapped. Janet Yellen, America's treasury secretary, suggested this week that the G20 agreement on a global minimum corporate tax of 15% depended on getting rid of "discriminatory" levies on digital companies.

America's biggest banks reported earnings for the second quarter. Revenues dropped at Bank of America and Citigroup year on year; income from loans was down at both. Revenue also fell at JPMorgan Chase, but net profit doubled, to \$11.9bn, as it released money set aside for loan losses that didn't materialise. At Goldman Sachs revenue from asset management compensated for a drop in income from trading, by comparison with its gains from the market turmoil of a year ago.



The United Nations reported that efforts to end world hunger and malnutrition by 2030 were dealt a serious blow by covid-19. The prevalence of **food insecurity** has been rising slowly in recent years, but in 2020 an additional 320m people did not have regular access to food, as many as the increases for the previous five years combined. Last year also saw the biggest rise in undernourishment (food intake that is below the minimum needed) in two decades. The economic turmoil in 2020 that caused sharp rises in food prices has left 2.4bn people without adequate food.

Flipkart, India's biggest e-commerce retailer, raised \$3.6bn in its latest fundraising round, valuing it at \$37.6bn as it reportedly prepares for a stockmarket listing. India's army of middle-class online shoppers is growing fast.

REvil, a ransomware group operating in Russia, suddenly went offline. REvil has been behind a spate of recent cyberattacks on companies in America and elsewhere, demanding tens of millions of dollars in bitcoin payments to debug the computer networks it had infected. Its disappearance from the dark web came after Joe Biden warned Vladimir Putin that if Russia didn't take any action, America would.

An industry ready to launch

Sir Richard Branson became the first among his cohort of **space-tourism** entrepreneurs to take a flight to the edge of space. Sir Richard flew in the vss *Unity*, a Virgin Galactic rocket plane, 85km above New Mexico before gliding down to land. Jeff Bezos is next, flying in one of his Blue Origin craft on July 20th.

Tech billionaires are not the only ones investing in futuristic transport. United Airlines struck a deal this week to buy **electric planes** being developed by Heart Aerospace, a Swedish startup, which will come into service in 2026 if they pass regulatory muster. The ES-19 aircraft will have a range of 250 miles (400km) and can carry 19 passengers.





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Biden's new China doctrine

Its protectionism and its us-or-them rhetoric will hurt America and put off allies

OPTIMISTS LONG hoped that welcoming China into the global economy would make it a “responsible stakeholder”, and bring about political reform. As president, Donald Trump blasted that as weak. Now Joe Biden is converting Trumpian bombast into a doctrine that pits America against China, a struggle between rival political systems which, he says, can have only one winner. Between them, Mr Trump and Mr Biden have engineered the most dramatic break in American foreign policy in the five decades since Richard Nixon went to China.

Mr Biden and his team base their doctrine on the belief that China is “less interested in coexistence and more interested in dominance”. The task of American policy is to blunt Chinese ambitions. America will work with China in areas of common interest, like climate change, but counter its ambitions elsewhere (see Briefing). That means building up the strength at home and working abroad with allies that can supplement its economic, technological, diplomatic, military and moral heft.

Much about Mr Biden's new doctrine makes sense. The optimistic case for engagement has crumbled under the realities of Chinese power. Led by President Xi Jinping, China has garrisoned the South China Sea, imposed party rule on Hong Kong, threatened Taiwan, skirmished with India and has tried to subvert Western values in international bodies. Many countries are alarmed by China's “wolf warrior” diplomacy.

But the details of the Biden doctrine contain much to worry about—not least that it is unlikely to work. One problem is how Mr Biden defines the threat. Because politics in Washington is broken, he seems to feel that he needs the spirit of Pearl Harbour to help rekindle a sense of national purpose. That is a miscalculation.

It is true that Republicans jump on anything they can portray as soft on China (even though every time they say that the presidential election was stolen, they do the work of Chinese propagandists). However, Republicans are unlikely to start backing Mr Biden's domestic agenda just because it has the word “China” stamped on the cover.

Worse, the more Mr Biden uses strident rhetoric to galvanise Americans, the harder he makes his task of galvanising allies and big emerging powers like India and Indonesia. By framing the relationship as a zero-sum contest, he is presenting them with a Manichean struggle between democracy and autocracy, rather than the search for co-existence. Alas, in this he is overestimating America's influence and underestimating how much potential allies have to lose by turning their back on China.

By many economic measures China will become a dominant force, whatever America does. It will have the world's biggest economy and it is already the largest trading goods partner of almost twice as many countries as America (see Business section). Germany, Europe's export powerhouse, aims to sustain commercial links with China even as political links buckle (see Europe section). In South-East Asia many countries look to America for their security and China for their prosperity. If forced to choose between the superpowers, some may pick China.

Rather than imposing a decision on other countries today, Mr

Biden needs to win them around. And his best chance of that is for America to demonstrate that it can thrive at home and be the leader of a successful and open world economy.

Here, too, the details of Mr Biden's scheme are troubling. Rather than build on America's strengths as the champion of global rules, the administration is using the threat of China to further its domestic agenda. Its doctrine is full of industrial policy, government intervention, planning and controls. It is uncomfortably like the decoupling being pursued by China itself.

For a glimpse of what this could entail, look at the administration's report on four crucial supply chains—for semiconductors, batteries, rare earths and vital pharmaceutical ingredients—published last month. The report does not just make the national-security case for government intervention in these industries. It also embraces union representation, social justice and pretty much everything else. More such reports will come later. If this one is a guide, Mr Biden will propose to use subsidies and regulation to ensure that jobs and production remain within America's borders.

Inevitably, Mr Biden's plans have trade-offs. Central to his attack on China is its abuse of human rights, especially of the Uyghurs, subject to internment and forced labour in Xinjiang. Central to his policy on climate change is to shift to renewables.

Yet the two are entangled, at least in the short term, because Xinjiang is the origin of 45% of the silicon used in generating solar power.

A more fundamental problem is the China doctrine's soft protectionism. This favours incumbents over competitors and is likely to weigh down the economy rather than supercharge it. The country's new Moon programme is popular largely as a way to show that America

has an edge over China. Yet it is vibrant precisely to the degree that it allows the sort of competition in which private firms such as SpaceX and Blue Origin can shine (see International section).

A third problem is that Mr Biden's doctrine will make America's allies even more wary. If the purpose of cutting ties with China is to create good union jobs in America, allies will ask themselves what is in it for them.

Mr Biden's plan is a missed opportunity. If America wants to stop China from rebuilding the global order in its image, it should defend the sort of globalisation that always served it well. At the centre of such an approach would be trade and the multilateral system, embodying the faith that openness and the free flow of ideas will create an edge in innovation.

If America really wanted to counter China in Asia, it would join the pan-Asian trade deal it walked away from in 2016. That is highly unlikely now, but it could seek fresh agreements on the environment and digital trade. It should also put money and clout behind new ideas that reinforce the Western order, such as a vaccine programme for future pandemics, digital payment systems, cyber-security and an infrastructure scheme to compete with China's Belt and Road Initiative. Rather than copying China's techno-nationalism, a more confident America should affirm what made the West strong. ■



South Africa

Rule of lawlessness

The worst unrest since apartheid underlines South Africa's fragility

SOUTH AFRICA offers dry kindling for political conflagration. Unemployment and inequality are preposterously high. Many people lack food, power and running water, while members of the ruling African National Congress (ANC) gorge on graft. In the two years before covid-19 there were more protests than probably at any time in the democratic era. The pandemic, Africa's worst if official statistics are to be trusted, has killed at least 65,000 people and plunged many more into destitution.

Yet the violence that has engulfed the country in the past week is not a spontaneous protest against such ills (see Middle East & Africa section). It was incited, and in some cases perhaps instigated, by people close to the former president, Jacob Zuma. Their narrow aim is to have him released after his imprisonment on July 7th for contempt of court for refusing to appear before a judge-led inquiry into his corrupt reign of 2009-18. Their broader goal is to make the country ungovernable so as to undermine his successor, Cyril Ramaphosa. For South Africa's sake, they must not succeed.

Mr Zuma represents the ugly side of the ANC. His supporters either tolerate corruption, or avidly indulge in it. Mr Ramaphosa was elected to clean up the mess his predecessor left behind: a system of "state capture" that cost South Africa more than 500bn rand (\$34.5bn), or about 10% of a year's GDP. Mr Zuma's cronies had looted budgets and subverted the bodies designed to check such abuses, including the police and prosecutors. Mr Ramaphosa has put clean, capable people back in charge of the tax and prosecution services. And judges are mostly honest and independent. For optimists, Mr Zuma's sentencing symbolised South Africa's renewed commitment to the rule of law.

That is why the bigwigs who profit from lawlessness are so desperate to thwart it. Many within the ANC still see Mr Zuma as their leader and his faction as their best chance for enrichment. Some police and spooks preferred the old, corrupt, ways, too.



The weakness of the state is most acute in Mr Zuma's stronghold of KwaZulu-Natal (KZN), a province with a history of violence by Zulu nationalists, scores of recent political assassinations, and local mafias. Many Zulus believe Mr Zuma when he claims, speciously, to be the victim of a political witch hunt.

In the past week at least 72 people have been killed and 1,234 arrested. In Gauteng, the economic heartland containing Johannesburg, shops have been ransacked. In KZN there have also been attacks on vital infrastructure: telecommunications towers, industrial warehouses and lorries along a crucial highway to the port of Durban. Hundreds of businesses have been destroyed. The country's biggest refinery has shut. Petrol, food and medicines are in short supply in KZN. Local citizens, some nervously clutching guns, others holding no more than their neighbours' hands, are protecting their houses and shops.

Mr Ramaphosa's response has been too slow. He must get a grip. The priorities are to restore order in Gauteng and KZN, and to stop violence from spreading to the other seven provinces. On July 14th the defence minister said 25,000 troops would be deployed, the largest mobilisation since the end of apartheid. Authorities must be given everything they need to go after ringleaders. The finance ministry needs a plan to rebuild the economy and ease the pain of the pandemic. The police minister and commissioner should be fired. Calls to release Mr Zuma to stop the violence must be rejected with the disdain such ransom notes deserve.

Some South Africans wonder if their state is up to the task. But the security forces have enforced covid-related restrictions, so they should be able to restore peace. The inspiring response by non-state institutions—business groups, grassroots charities, local reporters—is a reminder of the best of South Africa. The rioters and their sponsors want to destroy the rule of law. Mr Ramaphosa, and all patriotic South Africans, must uphold it. ■

Cuba

The mask slips

The best way to help Cuba's protesters is to lift the American embargo

THOUSANDS OF PROTESTERS thronged the streets on July 11th. Some stoned the police and looted posh shops. Such outbursts are unprecedented in Cuba since the communists secured their hold on power in the 1960s. "Freedom!" and "Down with the dictatorship!" they chanted, and "Patria y Vida!" (Fatherland and Life), quoting an underground reggaeton song that mocks Fidel Castro's tired slogan of "Fatherland or Death".

All this poses an extraordinary challenge to the dull bureaucrats who rule Cuba, after the death of Fidel and the retirement of his younger brother, Raúl, earlier this year. The regime has responded with repression (see America's section). "Revolutionar-

ies, to the streets," urged Miguel Díaz-Canel, the president who this year took the helm of the Communist Party, unleashing troops, police and loyalist mobs wielding baseball bats. At least one person was killed. Scores have been detained and the government has sporadically cut access to the internet.

Repression may work in Cuba, as it has elsewhere. But something there has snapped. The tacit contract that kept social peace for six decades is broken. Many Cubans used to put up with a police state because it guaranteed their basic needs, and those with initiative found a way to leave. Now Cubans are fed up. When Mr Díaz-Canel blames the protests on "American imperialism", all ▶▶

▶ he shows is how out of touch he is. The protesters are young, mainly black and dismiss the Castros' revolution of 1959 against an American-backed tyrant as ancient history.

They have plenty to complain about. The pandemic has shut off foreign tourism, aggravating the economy's lack of hard currency. Raúl Castro launched economic reforms, but they were timid and slow, permitting only minuscule private businesses. It was left to Mr Díaz-Canel to take the most momentous step, by ordering a big devaluation in January. Without measures to allow more private investment and growth, that has merely triggered inflation. As its sanctions-hit oil industry collapses, Venezuela, Cuba's chief foreign patron over the past 15 years, has curbed its cut-price oil shipments, prompting power cuts during the heat of summer. Chronic shortages of food and medicine have become acute. Despite Cuba's prowess at public health and its development of its own vaccine, the government has failed to contain the pandemic. The sick are dying, abandoned at home or on hospital floors.

Two other factors explain the outburst. One is the change of leadership. The Castros commanded respect even among the many Cubans who abhorred them. Mr Díaz-Canel, without a shred of charisma, does not. And the internet and social media, allowed only in the past few years, have broken the regime's monopoly of information, connecting younger Cubans to each other and the world. They have empowered a cultural protest movement of artists and musicians. Its message, in the unan-

swerable lyrics of "Patria y Vida", is "Your time's up, the silence is broken...we're not scared, the deception is over."

Mr Díaz-Canel faces a choice: to turn Cuba into Belarus with sunshine, or to assuage discontent by allowing more private enterprise and greater cultural freedom. That could weaken the army and the Communist Party, but it would eventually salvage some of the revolution's original social gains.

Curiously, many Republicans in the United States echo Mr Díaz-Canel's description of America's role in the protests. President Donald Trump tightened the economic embargo against Cuba, barring American tourists, curbing remittances and slapping sanctions on state firms, largely reversing Barack Obama's opening to the island. Like Cuba's president, Republicans argue that the unrest proves the embargo is working at last.

Not so. True, the embargo has made life harder for the Cuban government. But its restrictions mainly hurt Americans. The regime can still buy American food and medicine and trade with the world. The causes of Cuba's social explosion lie at home.

Open the windows

Joe Biden should draw the obvious conclusion. So far he has left Mr Trump's Cuba policy intact, so as not to annoy hawkish Cuban-Americans. Instead he should return to Mr Obama's approach. The big threat to a closed regime is engagement with the world, especially the United States. Mr Biden should lift the embargo and deprive the regime of an excuse for its own failures. ■

Climate change

Carbon and capture

In principle carbon border taxes are a good idea. In practice they could be a gift to protectionists

CARBON PRICES are the most cost-effective way to fight climate change—but for them to work properly, emissions must be priced everywhere. On July 14th the European Commission unveiled its plan to levy what would, in effect, be a tariff on some carbon-intensive imports which, by virtue of having been produced outside the EU, are not subject to its cap-and-trade carbon-pricing scheme. The idea is to stop European firms from responding to the carbon price by moving production to parts of the world where they can pollute without penalty, to shield them from being undercut by rivals from such places and to encourage foreign firms who want to sell to Europe to go green.

There are sound reasons for applying carbon prices to imports. But working out how to go about it without causing a cycle of damaging protectionism is a conundrum.

Were carbon prices global, the costs of fulfilling the Paris agreement on climate change could fall by 79%, according to the Environmental Defence Fund, a think-tank. Market forces would find the cheapest ways to cut emissions. Yet a worldwide carbon market is a pipe dream. (China is due to launch the world's largest emissions-trading system on July 16th, after we go to press, but permits will be far too cheap.) Carbon tariffs are a fallback measure.

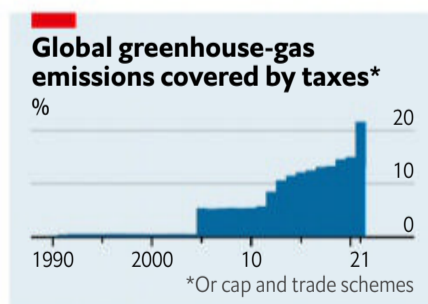
Free traders like *The Economist* typically reject tariffs on principle. Cheap imports bring lower prices, more choice, higher productivity and incentives to innovate. Firms and workers con-

stantly plead for protection from foreign competitors, alleging that jobs and profits must be shielded from unfair foreign competition. Liberals respond that the harm done to incumbents by the free operation of markets—what economists call "pecuniary externalities"—do not, unlike other types of harm, justify government intervention. "Society admits no right, legal or moral, in the disappointed competitors, to immunity from this kind of suffering," wrote John Stuart Mill in 1859, 16 years after *The Economist* was founded to oppose the Corn Laws, which kept cheap food out of Britain to the benefit of its incumbent landowners.

Carbon tariffs, however, would not be inherently protectionist. They are an attempt to expand the reach of market forces rather than to limit them. The opportunity to pollute the atmosphere without penalty is itself a kind of distorting subsidy; more so if it exists unevenly across borders. Preventing climate change is a

global public good, meaning every country's citizens have a direct interest in reducing emissions wherever they happen. Pricing carbon at the border should therefore be viewed as a special case, and not as a precedent for using tariffs as a bludgeon with which to impose local regulations or standards abroad.

The problems with carbon tariffs are thus not moral or economic but practical and political. Implementing the policy fairly would mean ascertaining how much carbon has been emitted in the production of a given import, and to what extent foreign ▶▶



▶ governments had already taxed those emissions. In 2018 the European Commission said that would be “clearly unmanageable”. Not much has changed since.

The EU’s new plan applies only to select industries which at present are protected using subsidies. The products involved, such as cement and fertiliser, are commonplace. Even so, the plan relies on arbitrary rules. Where the carbon intensity of a foreign producer’s processes cannot be estimated they will be assumed to be as dirty as the worst 10% of European companies.

Incumbents are rubbing their hands at the prospect of outsiders drowning in paperwork. Some members of the European Parliament are trying to amend the plan to favour local firms (see Free exchange). John Kerry, America’s climate envoy, has said that the United States is also looking at carbon border taxes.

That is indefensible unless America implements a proper carbon price at home.

The IMF has an alternative idea to tariffs: a globally negotiated minimum carbon tax which varies according to GDP. But it is not clear that it is achievable. William Nordhaus, a Nobel-prizewinning environmental economist, thinks willing countries should form a climate club within which carbon is priced and then simply levy flat punitive tariffs on those countries which refuse to join.

It is just about possible to imagine a successful path to a global carbon price that involves tariffs. But any such plan is fraught with the risk of capture and protectionism. Governments must tread with care—while also recognising that failing to price carbon adequately may be the greatest danger of all. ■

Doping in sport

A cloud of suspicion

As athletes arrive in Tokyo for the Olympics, doping is still common. The system needs reform

EIGHT YEARS ago Lance Armstrong, the winner of an unprecedented seven Tours de France, admitted to using performance-enhancing drugs. His confession bookended the “heroic age” of doping in cycling. Between the 1990s and the mid-2000s drug use was widespread and blatant. Doping is harder to get away with now than in Mr Armstrong’s day. But cycling’s reputation has never fully recovered. Fans watching this year’s Tour, due to finish in Paris on July 18th, discuss drugs as much as they discuss tactics or which riders are on form. Fairly or not, suspicion dogs every race.

It is not just cycling. Doping is common in many sports (see Science & technology section). The Tokyo Olympics start on July 23rd. They will take place without Russia, banned last year for falsifying data in the aftermath of the exposure, in 2015, of an enormous state-sponsored doping programme. The pandemic will force athletes to compete in empty stadiums. Lockdowns, for their part, have disrupted the regimen of regular drug tests to which they are subject. Reduced scrutiny will have benefited cheats from all countries. If estimates from former officials are to be believed, more than a thousand of the 11,000 athletes at the games might be chemically enhanced.

The earliest Olympic doping tests were in 1968. The apparent intractability of the problem leads some liberals to throw up their hands and suggest removing the restrictions entirely. Humans are a technological species, after all. Physics is already allowed to boost performance—think of lighter bikes, or springy shoes—so why not let chemistry rip, too?

However, many doping drugs have grave side-effects. Athletes dosed with steroids by the East German authorities during the cold war suffered problems including severe liver damage and stunted growth. Women—for whom the drugs were most effective—underwent the irreversible development of male characteristics such as deep voices and body hair. A free-for-all would hand victory to those most prepared to take reckless quantities of dope. Adult athletes would not be the only ones to suffer. Sports careers begin in childhood, under the dominant eye of ambitious coaches with much to gain and nothing to lose.

Better, then, to try to improve policing. Stamping out drugs completely is no more plausible than stamping out burglary. But anti-doping efforts have made a difference. Drug-takers in all sports have to be subtler and more careful than they once were. Three things would improve the system further.

The first is a change of emphasis. The science of anti-doping has become sophisticated. Tests can detect drugs at levels of just one part per trillion. But intelligence work can be just as useful. Whistleblowers, suspicious behaviour and tip-offs from pharmaceutical companies have all helped uncover doping scandals in the past. Such efforts should be enhanced.

That will require more money, the second change. The World Anti-Doping Agency (WADA) is funded by governments and sports bodies. Its annual budget is \$40m, less than some top athletes earn. The national agencies that implement WADA’s rules have even less to get by with. Sponsors and sports federations are rich enough to bump that up considerably.

The third and biggest task is to bring in new faces. Sports governance can be a chumocracy at best; outright corrupt at worst. Catching too many dopers risks tarnishing the product that sports federations and commercial sponsors sell. That creates strong incentives not to “spit

in the soup”. Control of anti-doping agencies should be handed to outsiders, such as lawyers or former policemen. The agencies themselves should be as independent as possible, as with the new Athletics Integrity Unit, which polices anti-doping independently of World Athletics, the sport’s governing body.

Change is coming in any case. A new extra-territorial anti-doping law tries to assert American criminal jurisdiction over any event at which American athletes or companies are present. How well it will work is unclear. Anti-doping relies on international co-operation, and other countries are unlikely to appreciate America throwing its weight around like a Greco-Roman wrestler—especially when its domestic sports (no strangers to doping) are exempt. But the idea might at least encourage reform. The alternative, for all sports, is the corrosive doubt under which cyclists in today’s Tour are obliged to pedal. ■





COLOMBO PORT CITY ECONOMIC COMMISSION

DIRECTOR GENERAL/ CHIEF EXECUTIVE OFFICER

The Colombo Port City Economic Commission (CPCEC) requires an experienced and capable individual with a proven track record of leadership to be their inaugural Director General and Chief Executive Officer. He/she will oversee the formation of a new Special Economic Zone, the Colombo Port City (CPC), a 269 Ha land area reclaimed from the sea adjacent to the historic Central Business District of Colombo. The CPC is a comprehensive master-planned smart township development, aimed at catering to the residential, commercial, hospitality and lifestyle needs of Asia's rapidly growing affluent population. The dedicated CPCEC Act enables the development to become an attractive alternative to existing regional SEZs in financial services, IT, trade and commerce, knowledge services, maritime and logistics, hospitality, MICE, and tourism sectors, leveraging Sri Lanka's strategic location on the global trade route combined with other factors that rank Colombo high on the global Quality of Life index.

The primary objective of the Commission is to ensure that the CPC attracts large-scale Foreign Direct Investment into Sri Lanka by providing a competitive advantage to both investors and residents while contributing to the economic growth and social uplift of Sri Lanka. Designing and administering the organisational structure, rules, regulations, and guidelines required for an efficient, transparent, and secure business environment requires a mature and balanced perspective, and the prospective DG/CEO is therefore expected to have already held positions at the highest level of corporate decision-making and accountability. He/she should be highly results-oriented, adaptable, and culturally diverse, and will manage the Secretariat and build the rest of the team.

Due to the multi-faceted nature of the role, the prospective DG/CEO will have the following strengths;

- a demonstrable track record of driving investment into greenfield economic zones, shaping policy accordingly, while managing stakeholders, regulatory affairs, marketing, and business development activities, and/or
- experience in leading major expansion or reform strategies of diverse organisations, preferably in the services sector, along with
- a comprehensive knowledge of public and private investment models and familiarity with consulting services available to strengthen project evaluation and due diligence
- a leadership position in Government, a multilateral organisation, international standard-setting body, sovereign wealth fund or organization of international repute with experience in economic transformation, investment promotion and structural reforms,
- be a responsible decision maker and excellent communicator, with an existing network of global contacts across a variety of sectors.

The position is based in Colombo, Sri Lanka, and requires flexibility in work hours with a willingness to travel. The selected candidate will be entitled to market-based remuneration and other benefits, and the initial tenure is three (03) years as required by law, and renewable.

Interested candidates may forward a Curriculum Vitae (CV) along with a cover letter addressed to the Acting Director-General, Colombo Port City Economic Commission, Unit 901, One Galle Face Tower, 1A Centre Road, Colombo 2, by 31 August 2021 [or by email to: dg@portcity.gov.lk].

Sri Lankans working overseas who meet the required criteria are encouraged to apply. (Applicants may visit www.portcitycolombo.lk for more details of the project).

The Commission reserves the right to consider the applications it receives for alternative positions at an Executive Director level should the qualifications of the applicant be more suited for such position.





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Appointment of Director General

Science Foundation Ireland (SFI) is the national foundation for investment in research in the areas of science, technology, engineering, and mathematics (STEM), which assist in the development and competitiveness of industry, enterprise, and employment in Ireland. It also promotes and supports STEM education, engagement, and career development, and the value of STEM to Ireland's economic and societal development. With a vision to further enhance Ireland's reputation as a Global Innovation Leader in scientific and engineering research, SFI's new Strategy 2025 – Shaping Our Future – is designed to meet current challenges and to position Ireland to take advantage of future opportunities.

The Board of SFI is now seeking to appoint an outstanding individual to the role of Director General (Chief Executive Officer) of the Agency. Reporting to the Board, the Director General will be an inspiring leader with a proven track record of achievement in academia, industry, or government/public sector. They will bring a deep understanding of the international research environment, and the strategic vision, leadership and management experience to deliver effectively on the mission and vision of the Agency.

SFI will be supported in this appointment process by the executive search firm Perrett Laver. For further details, including job description, person specification and information on how to apply, please visit <https://www.perrettlaver.com/campaigns/sfi-director-general>. For informal enquiries please contact SFI@perrettlaver.com. The deadline for applications is noon IST on Wednesday 1st September 2021.

Perrett Laver
AMERICAN ASIA PACIFIC OHIO



The Economist Corporate Network

As the research and analysis division of The Economist Group, The Economist Intelligence Unit (EIU) helps leaders prepare for opportunity, empowering them to act with confidence when making strategic decisions. The EIU is the global leader in providing high-quality, actionable intelligence to the public and private sector, assessing issues that affect the marketplace in over two hundred countries.

The Economist Corporate Network (ECN) is the briefing and networking service of the EIU. Through our members-only C-suite forums we help international firms understand the political, economic and business environments of the high-growth markets where they operate.

The ECN service is delivered in several ways:

- Through a programme of meetings that create the opportunity to hear from outside experts and peers
- Through private briefings (presentations) delivered to clients at their management and strategy meetings
- Through summary reports and data (covering key economies and business issues)

The Director of The Economist Corporate Network in North Asia will be responsible for leading and building the networks in Tokyo and Seoul, and will deliver a full suite of editorial services to members including advisory briefings, webinars, meetings, analysis and data.

The right candidate will have the confidence and capability to engage senior executives; possess excellent analytical capabilities and the ability to convey compelling analysis persuasively; and the skills to moderate highly interactive discussions and meetings.

How you will contribute:

- Lead and be a thought leader for ECN in North Asia, sustain and develop strong client relationships
- Deliver services that meet the editorial standards of The Economist brand
- Create and deliver the ECN programme and services in Tokyo and Seoul to a high quality, working closely with peers and colleagues
- Deliver to members insightful regular briefings which help them make better decisions for their businesses, and otherwise engage members when needs arise
- At ECN meetings, in addition to sourcing outstanding speakers, facilitate discussions that are highly stimulating, challenging and participative
- Work closely with the business development team to retain existing members and attract new members, and develop value-added customised services for members
- As part of the senior content team in Asia, deliver meetings and presentations in other locations
- Ensure that costs are managed in line with budget

The ideal skills for this role are:

- Degree in business, economics, international studies or languages (post-graduate desirable)
- Experience leading and advising senior executives
- Thorough and wide-ranging knowledge of Asian (especially Japanese and Korean) business, politics and economies
- Familiarity with, and an ability to uphold, the values of The Economist Group
- An understanding of The Economist Corporate Network offering and EIU products
- A keen grasp of commercial perspectives and outstanding editorial and analytical judgment
- Exceptional communications and writing skills and an ability to facilitate stimulating discussions
- An authoritative and lively public speaking skill, with excellent people management skills
- Enjoys and is effective at networking with very senior executives

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Politics in Sweden

I noticed an important misconception in your article about the political situation in Sweden (“The nine lives of Lofven”, June 26th). You stated that the January accord that allowed the formation of the Social Democratic-Green government was negotiated not only with my own liberal Centre Party but also with the former communist Left Party. It emphatically was not. The point of the accord was to exclude both right- and left-wing extreme parties, while initiating major structural reforms, notably of the labour market. I was one of the politicians who negotiated this agreement with the prime minister, including the clause explicitly excluding influence for the Left Party.

What we did not anticipate was that the extremes would later unite, the Left Party voting for the populist and xenophobic Sweden Democrats’ motion of no confidence in Stefan Lofven, hurling Sweden into a political crisis. The Centre Party is now the sole remaining political force on the liberal centre-right opposing the direct influence of the Sweden Democrats over our government.

MARTIN ADAHL
Centre Party MP and negotiator of the January accord
Stockholm

Church and state

Given the manner in which Joe Biden’s Catholic faith has been worn in public, why is it so surprising that many bishops feel compelled to show their disapproval of his support for abortion, a practice that the church regards to be especially heinous (“Biden and the bishops”, June 26th)?

Catholicism allows certain space for a well-formed conscience. But your conscience can’t tell you, let alone suggest publicly to the whole world, that something the church’s authority explicitly forbids is in fact okay. If some prominent Democrat trumpeted something flagrantly out of

line with a core Democratic plank, would we be shocked were Mr Biden and other party leaders publicly to correct the record, potentially sanctioning that individual?

DANIEL BRENDEL
Alexandria, Virginia

Guns and the constitution

Your review of Carol Anderson’s book on the Second Amendment was too kind in discussing her strange theory that it was designed to help the South enforce slavery (“Double standard”, June 12th). Such a view blatantly overlooks the important role that our militia played in the French and Indian war and the American revolution, both of which predated the drafting of the constitution.

It also ignores the views of African-American leaders like Frederick Douglass, who wrote the following words to encourage black men to enlist in the Union army:

In your hands that musket means liberty, and should your constitutional rights at the close of this war be denied... your brethren are safe while you have a constitution which proclaims your right to keep and bear arms.

Not much doubt about where Douglass stood on the issue.

JOHN DIRLAM
Wellesley, Massachusetts

Customised state pensions

It is true that state pensions in Britain might rise by an unusually large percentage next year, thanks to statistical quirks (“Triple trouble”, June 26th). Some might say that needs to happen, especially given Britain’s low level of public pension compared with other countries, but affordability is an issue. As you pointed out, the programme to push back the state-pension age, which could reach 69 by 2050, does reduce the cost. But this approach also has a disproportionate impact on those with lower life expectancies, who are more affected by missing

out on earlier payments.

Instead of a one-size-fits-all delay, we should introduce a state-pension window, a new system that would retain the option for people to access some level of state pension from 65, with incentives for others to take it later.

RAJ MODY
Head of pensions
PwC
London

There’ll always be a Belgium

Forty years ago *The Economist* predicted that Belgium would not last long (Survey of Belgium, “A most unnatural country”, January 19th 1980). Now it claims that Belgium is a failed state and “in some ways, secession has already happened” (Charlemagne, June 26th). You could have noted that most of the decisions and legislation are taken at the federal level and not in the regions, and that the judicial system is unified nationally (more so than the British one). A glance over the Belgian constitution would have been instructive.

According to recent polls, a clear majority of citizens in the three main parts of the country reject the idea of secession. Granted, the structure of government is expensive and complicated, but a shrewd citizen, as most Belgians are, is able to understand the working of the institutions. Moreover, the checks and balances in government have been very attractive to refugees. They did not come for the 199 rainy days a year (Ireland has 225 by the way), the beer, the chocolate or the fries, or even for the undeniable prosperity of the country, but to find a safe haven in a tolerant and trusted democratic state. So many have found a home in Belgium during their exile.

IVAN VEROUGSTRAETE
Former judge on the Belgian supreme court
Brussels

True “Belgian zen” is not about grey indifference, it’s about actively choosing not to have an opinion. Those are two different things. Imagine a

country where you ought to have an opinion about everything if you don’t want to look odd. Abracadabra: Brexit.

VINCENT BATS
Antwerp

Charlemagne presented Belgium as a grey, absurd and highly bureaucratic country. As a Belgian citizen living in Britain I can confirm that a “Belgitude” also helps to cope with the grey weather, absurd politics and bureaucracy on this side of the channel.

DAMIEN VAN PUYVELDE
Glasgow

As an anti-nationalist Syrian refugee in Belgium Charlemagne has made me realise that I am wholeheartedly enthusiastic about becoming a citizen of such a successful failed state. It is telling that the harshest critics of Belgian culture are the Belgians themselves. It is bizarre to witness the excitement of Belgians to work with French or Dutch people rather than their own.

However, the Flemish and the Walloons were never so united as when France lost to Switzerland in the recent Euro football tournament (not even when Belgium beat Portugal). They taunted the French in both Dutch and French.

ALEXANDRE AL JAEGER
Ghent

Belgium is also the only country where a politician can erroneously sing the wrong national anthem in front of the television cameras and become prime minister regardless shortly after. This happened to Yves Leterme, on-and-off prime minister from 2008 to 2011, who was prompted by a reporter on Belgium’s national day in 2007 to prove he knew the anthem. He sang the French *La Marseillaise*.

MARKUS HAEFLIGER
Bern, Switzerland

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Pushing back

WASHINGTON, DC

Joe Biden is determined that China should not displace America

AMERICA MUST focus on “blunting Chinese power and order and building the foundations for US power and order”. That, at least, is the message of a recent book by Rush Doshi, until recently a scholar at the Brookings Institution, a think-tank in Washington, DC. “The Long Game: China’s Grand Strategy to Displace American Order” argues that China has worked for years to undermine America’s geopolitical dominance and shape a more illiberal world order that better protects and serves China’s interests. It concludes that these efforts need to be repaid in kind.

This is a striking rebuke to decades of American foreign-policy thinking focused on “engagement” with China. The rebuke gains extra weight from the fact that Mr Doshi is now a China director on President Joe Biden’s National Security Council, where he works under Kurt Campbell, his mentor and a leading architect of the administration’s China strategy.

Engagement was already on its uppers. Donald Trump had replaced it with some-

thing more belligerent and capricious. Many hoped that Mr Biden would bring some order to the chaos and lay down rules for a return to some sort of engagement, albeit on less friendly terms than those practised by the Obama administration in which he served. But although Mr Biden’s administration is indeed forgoing the caprice and wilfulness of his predecessor, in other respects it is toughening policy, assiduously building a strategic framework for countering and checking China’s rise.

Unlike Mr Trump, Mr Biden seems sincerely worried about a world in which China’s authoritarian model wins. That makes him more serious about the policies implemented, often haphazardly, by the hawks who served in the previous administration. In its first six months Mr Biden’s administration has, to the surprise of many, officially affirmed the label of “genocide” applied by the last administration to atrocities in Xinjiang, and also worked with allies to impose further sanctions on the perpetrators. It has kept in place and re-

defined Mr Trump’s prohibitions on doing business with Huawei and a long list of technology companies and military-affiliated businesses. It has made countering China a priority in talks with allies around the world, and shown no urgency to hold a summit with Xi Jinping, China’s president.

Mr Biden is positioning America as the West’s leader in a “contest with autocrats”, as he put it at the G7 summit in June. In an interview with *The Economist* a senior administration official said China sees the next 10 to 15 years as a window of opportunity in which to “assert its authority globally”: continuing its attempts to dominate critical technologies and rewrite the rules of the global order, and cowing its critics so as to make the world safe for autocracy. This is not a secret. Mr Xi has outlined China’s ambitions to exert influence on the global order, seizing a moment when the Communist Party views the West to be in decline. Even so, people in the West, the official said, are only beginning to recognise “that we’re dealing with a country that is perhaps less interested in coexistence, and more interested in dominance”. The time to take a stand, therefore, is now.

Build then blunt

Defining the relationship as one of two antagonists with antithetical values makes it sound like the cold war. But there are crucial differences, none more notable than China’s inextricable integration into the ▶▶

▶ global economy. America cannot try to contain it as it did the Soviet Union; instead Mr Biden wants to counter China's influence by increasing America's own.

The emerging strategy, while still pro-Asian, sounds of a kind with Mr Doshi's prescription for "blunting and building". The building comes first. Mr Biden's aides invariably start any discussion of China strategy with the need to restore American greatness after decades of decline. "Rarely has a great power like the United States gone on such a detour," says the senior official. "It's tragic." America must recover from all that, and invest in itself, Mr Biden's aides say, so that it can deal with China from a position of strength.

Hence the United States Innovation and Competition Act, which passed the Senate in early June packed with spending intended to improve America's competitiveness. It would authorise \$52bn to boost semiconductor research and manufacturing in America and \$29bn for a new applied-sciences fund that would support projects in advanced materials, robotics, artificial intelligence and other technologies. It also contains extra money for going to the Moon (see International section).

Spending does not have to be aimed so precisely to be part of the policy. Mr Biden's \$1.9trn pandemic recovery package, which passed in March; his multi-trillion dollar proposals for "hard" and "soft" infrastructure; his provisos on buying American: all can be read as part of a rebuilding policy aimed at China while also looking to fulfil lavish campaign promises.

But ambitious as they look in Washington, these numbers cannot compare with Chinese spending on infrastructure and industrial policy. And they are shrinking. The core infrastructure plan has been whittled down to \$600bn in negotiations with Republicans whose distaste for handing victories to Mr Biden exceeds their animosity to China (though Democrats want to add back \$3.5trn in another package—see United States section). Republicans such as Ted Cruz, Marco Rubio and Josh Hawley, all self-professed China hawks, are unlikely to abandon their party's opposition to Mr Biden's domestic agenda when they have their eyes on his job.

Even if America were united in its efforts, though, building back at a rate that would seriously diminish China's current prospects is not possible. Barring a serious setback, China's economy will become the world's largest within its 10-15 year "window of opportunity". The country's gigantic market will exert, as Communist Party lingo puts it, a "powerful gravitational field" far beyond its borders. It will be able to spend even more on its armed forces. The country's investments in research and development will make its technological prowess increasingly formidable.

That is why an antagonistic policy requires what Mr Doshi calls "asymmetric blunting": ways of undermining China's attempts to rebuild the world order that do not cost too much. Militarily, that means adopting an approach of "deterrence by denial" in areas just beyond internationally recognised Chinese waters, investing in state-of-the-art weapons to stop China seizing control of waters or islands (like Taiwan) to which it considers itself entitled. Economic blunting tactics include enforcing export controls so that American companies do not fuel China's rapid development of critical technologies—a tool that the Trump administration used to cripple Huawei and to impede China's biggest chipmaker, Semiconductor Manufacturing International Corporation. Political blunting includes countering China's influence in the United Nations and other multilateral institutions.

Sharpen up

Because such strategies require partners, their cultivation is a core tenet of Mr Biden's strategy. He has been courting other governments and sorting out old grievances. He has agreed a suspension of tariffs in a 17-year-old dispute with the EU over subsidies to Airbus, an aerospace company. He has also waived sanctions on the company building the Russian-led Nord Stream 2 pipeline as a favour to Germany, which will be the recipient of most of its gas. In so doing he signalled that his administration views potential co-operation with allies on China as more important than confronting Russia. In March America agreed a new deal on funding for the main American military base in Seoul.

This cultivation has borne some fruit. In March Britain, Canada and the EU joined with America in imposing sanctions on Chinese officials and entities over Xinjiang—the first time any other governments had done so. In May South Korean President Moon Jae-in, on a visit to the White House, agreed to a mention of preserving the status of Taiwan in the subse-

quent joint statement. In June the G7 and, a couple of days later, a NATO summit both produced statements recognising the threat posed by China.

Serious blunting, though, requires more than co-ordinated statements and (largely symbolic) sanctions. Here there is less to report. Build Back Better World, or B3W, a response to China's Belt and Road Initiative announced at the G7 summit, has no new institutional framework or funding. Mr Biden has worked with the G7 and the Quad, a military grouping with Australia, Japan and India, to counter China's coercive, strings-attached vaccine diplomacy. But the commitments of vaccine doses are tiny compared with the need. He has not as yet put serious resources to his broader vision of providing middle-income countries with alternatives to taking money and business from China. Congress would not let him.

Where America does not lead, its allies seem unlikely to go of their own accord. In May the European Parliament responded to China's bullying over the EU's earlier Xinjiang sanctions by freezing ratification of an investment treaty. But many governments still want such deals and are not looking for trouble. On July 1st Rishi Sunak, Britain's chancellor, called for a "mature and balanced relationship" with China, eyeing the City's potential to sell financial services into the world's second-largest national market. On July 7th Boris Johnson, the prime minister, said he did not want to scare away investment because of an "anti-China spirit".

Emmanuel Macron, the French president, and Armin Laschet, who may succeed Angela Merkel as German chancellor, have shown a lack of enthusiasm for confronting China. Smaller countries feel similarly. Not coincidentally, the number of countries with which China shares more trade than America is far greater than the other way round (see chart).

There are also American voices opposed to a tougher line. Businesses and financial institutions are lobbying hard to maintain access to the China market and for the easing of export controls. On July 7th more than 40 progressive groups wrote to Mr Biden urging him to drop America's "antagonistic posture" towards China and to co-operate on climate change. Such calls are music to Mr Xi's ears. As Mr Doshi writes, Chinese officials routinely treat America's wish for progress on major challenges—such as climate or nuclear non-proliferation—as opportunities for leverage. China's determination to link issues America would like to keep separate makes America's interest in cordoning off areas for co-operation somewhat moot. They are not decisions it can make on its own.

The climate looks likely to fall victim to this antagonism. Both countries will lower ▶



▶ their emissions (though Mr Biden's ambitions may be thwarted by opposition at home) but it will be hard for them to come together to set rules of the road for others. There are economic risks, too. There are almost no advocates for free and unfettered trade around Mr Biden, and that suits the architects of his China policy well.

During the 2020 presidential campaign Jake Sullivan, now Mr Biden's national security adviser, co-authored an article calling on foreign-policy experts to stop deferring to economists and move past the assumption "that more trade is always the answer". He is in no rush to get rid of Mr Trump's tariffs and "phase one" trade deal, which required China to meet specific import quotas; they may not be to his taste, but they could supply leverage for future negotiations. This was despite the judgment of economists outside the administration—and some inside—that the tariffs hurt America more than they hurt China.

There are also areas where trade with China is seen as a risk in and of itself. China's dominance over the markets for some key resources, while not yet a national-security problem, could become one. Mr Sullivan, Mr Campbell, Mr Doshi and others want America to reduce the degree to which it relies on its antagonist for some critical commodities. In June the administration completed a supply-chain review that identified areas that China dominates—including rare-earth metals, lithium and cobalt (vital for high-capacity batteries) and some drugs and drug ingredients—and called for America to work with other countries on how to wean themselves off the Chinese market.

Such concerns could lead to a bifurcation in global trade. But voices warning of the economic costs such a split would impose are exactly those to which Mr Sullivan wants policymakers to pay less heed. If his security-first view prevails Mr Biden may go further to decouple the two economies than did Mr Trump, parts of whose administration exploited his inattention in order to do less than he would have wished. The treasury secretary, Steven Mnuchin, delayed efforts to impose sanctions on Chinese institutions. Officials at the Bureau of Industry and Security (BIS) dragged their feet on drawing up a list of emerging technologies that could be subject to broad export controls. Customs and Border Protection issued most of its orders to block imports of goods made by forced labour in Xinjiang only in 2020, after Mr Trump had taken to blaming China for the pandemic.

Mr Biden's administration is more responsive to his intentions. The machinery that can be used to blacklist more Chinese companies has been fine-tuned, in part to make it more resistant to legal challenges. It has maintained virtually all the existing sanctions, export controls and customs or-

ders, and instituted a few more that were under way before Mr Trump left office. These included a ban in June on imports from a Xinjiang-based company which produces the type of silicon needed for solar cells, because of concerns about the forced labour of Uyghurs there. Some 45% of the world's supply of this highly refined silicon comes from Xinjiang, and sanctions against more of its manufacturers are expected, if not from the administration, then through a bill pending in Congress.

How blunt, exactly?

In a speech on July 13th Mr Sullivan signalled concerns about companies evading export controls "in ways that harm national security". What that posture means in terms of slowing China's progress in technologies such as artificial intelligence and quantum computing is still a matter of concern for those watching proceedings. The tech industry has its worries about China (particularly over the long-term security of Taiwan Semiconductor Manufacturing Company, the main supplier of the highest-end chips). But it still wants to sell it more stuff. The most ardent foreign-policy hawks want the toughest actions, including things they are sure the Biden administration would not dare to do, such as banning dollar-denominated transactions with leading Chinese chipmakers.

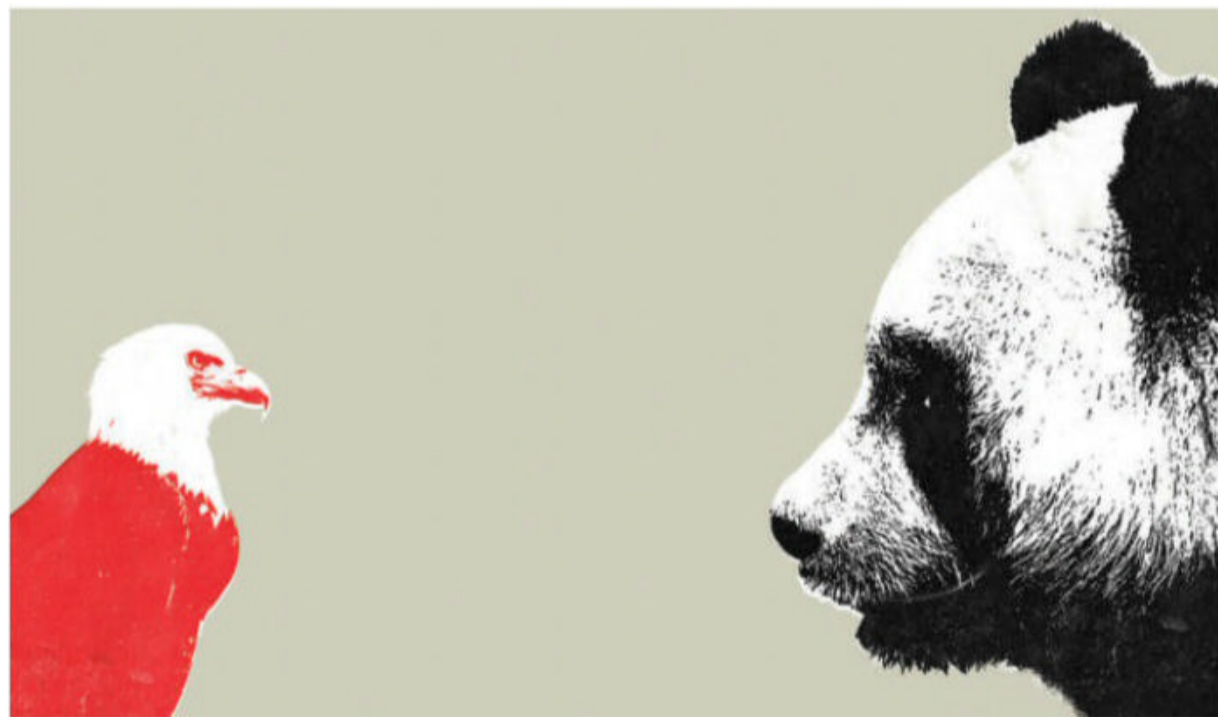
Both sides have been keenly interested in who would serve as the new head of the BIS, seeing the position as a bellwether. But when, on July 13th, they learned it would be Alan Estevez, a former Obama-era Pentagon official with experience conducting national-security reviews of foreign investments, they seemed at first little the wiser. As a nominee to a sensitive post his chief attribute may be a lack of preconceptions as to how he will approach the job.

Beyond the question of how hard to push, though, lies the disconcerting realisation that China may well be an immov-

able object. If American businesses turn away from China, others will step in. Bonnie Glaser, a China expert at the German Marshall Fund, a think-tank, says the best hope of shaping China's choices lies in forming an "anti-China coalition" (though not explicitly calling it that). Like those around Mr Biden, she believes that, even then, the odds of affecting change will not be good, but "we have to try".

An us-v-them approach has problems. When Mr Biden presents it as a dichotomy of democracies versus autocracies, European officials wince—and the status of a country like Vietnam, which Mr Biden wants on-side, becomes problematic. Jude Blanchette of the Centre for Strategic and International Studies, another think-tank, argues that the Biden administration would be better-served if it stopped paying such close-up attention to China and instead zoomed out to take a broader view of the world. America reacts to everything Chinese leaders do, he says: they adopt an industrial policy, America adopts an industrial policy; they secure supply chains, so does America; they have a Belt and Road Initiative, so must America.

Mr Blanchette argues that America should take a different page out of Mr Xi's playbook: talk less about its adversary and more about the world it wants to build. "Xi just does not talk about America a lot. When they articulate their vision it's not an America strategy," he says. "It's 'this is the role China wants to play in the world over the next 10, 20, 30, 40, 50 years'." Like some members of the Biden administration, Mr Blanchette looks to the early days of the cold war for inspiration. Then America placed its attempts to contain the Soviet Union within a broader vision of the world. If today it could articulate such a vision again, it might become clearer how China fits in and open up a policy shaped by America's continuing role, rather than purely by China's rise. ■





Infrastructure year

Joe Biden's mystery train

WASHINGTON, DC

The president's agenda depends on somehow steering two trains at once

“INFRASTRUCTURE WEEK” was one of the triter gags of the Trump era: like Samuel Beckett’s *Godot*, it was perennially promised and never arrived. President Joe Biden’s go at infrastructure investment has started to acquire a similar feeling of interminability, with fitful progress and no legislative text since he announced his plans more than three months ago. Fidgety Democrats vow serious progress before Congress decamps for its August recess. On July 13th Chuck Schumer, their Senate leader, announced the headline cost of the mammoth package being prepared: \$3.5trn. Delivering it will require deft and perfectly executed legislative manoeuvres.

Back in April, Mr Biden packaged his infrastructure ambitions differently. There were to be two parts. One piece of legislation would be devoted to “hard” infrastructure—such as roads, bridges, broadband fibre, and water pipes—and climate: building rehabilitation, an electric-vehicle charging network and other necessary investments that the private sector was poor-

ly placed to make. The second portion was to be “human infrastructure” (the concept has acquired a certain plasticity in Democratic messaging). The striking components of this package included an expanded child benefit, universal pre-school, paid family leave, and hefty subsidies for child care and community college. The hard and the soft parts would each cost about \$2trn, and would be just about paid for (the White House employed some artful accounting) by raising taxes on wealthy Americans and businesses, especially multinationals.

But Washington specialises in the

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crushing of beautiful visions. Though Democrats hold the White House and both chambers of Congress, their narrow majorities mean they must stick together to pass legislation unilaterally, as with the president’s \$1.9trn covid-19 stimulus bill, passed by reconciliation (a provision that allows budget bills to circumvent the *de facto* 60-vote threshold in the Senate). Since then, the moderate and progressive factions of the party have become more willing to exert their implicit veto powers. Mr Biden’s response is another two-part plan: a bipartisan bill focused on hard infrastructure, without much in the way of climate expenditures or compensating tax increases; and a reconciliation bill stuffed with everything else (the Big Bertha recently announced by Mr Schumer).

Because of the filibuster, a bipartisan bill, which moderate Democrats want, needs ten Republican votes in the Senate. The framework for such a compromise has already been agreed on, though its size—\$579bn in new spending—is modest in comparison to the president’s stated ambitions. Hence the second part of the plan: stuffing the leftover policies into an immense omnibus bill. It will probably include vast climate-related expenditures, trillions for the safety-net and tweaks to the health-insurance regime, all balanced out by increased taxes that Republicans have declared a non-starter, and all passed through budget reconciliation.

Both legislative tracks are fraught with hazards and obstruction, but Mr Biden needs both trains to arrive simultaneously. Progressives are threatening to block the compromise measure unless the Senate passes the maximalist bill. And on this point they have an unlikely and powerful ally in Nancy Pelosi, the Democratic speaker of the House, who said: “Let me be really clear on this: We will not take up a bill in the House until the Senate passes the bipartisan bill and a reconciliation bill.” Republicans who agreed to the compromise legislation, meanwhile, fear looking like patsies. Lindsey Graham, a Republican senator from South Carolina, angrily broke away from the deal after news of the two-track approach emerged, telling a reporter that “There’s no way. You look like a fucking idiot now.”

Mr Biden’s initial attempt to drive both trains was more Buster Keaton than Lyndon Johnson. “If they don’t come, I’m not signing,” he threatened. That nearly killed the compromise deal entirely; Mr Biden walked back those words, admitting that “my comments also created the impression that I was issuing a veto threat on the very plan I had just agreed to, which was certainly not my intent.” He then promised to sign an unpaired bill if it were the only one to pass the House and Senate.

For now the plans remain abstract. No legislative text has yet emerged from the bipartisan framework agreed to by the president and a contingent of senators. A separate surface-transport bill passed by the House, costing \$715bn, may give the Senate a starting point—though despite spending on hard rather than soft infrastructure, and earmarks to sweeten the deal for Republicans, only two members of the opposition actually voted for it.

Announcing that \$3.5trn headline figure of a reconciliation bill is only the first in a sequence of technical legislative manoeuvres. “Reconciliation instructions” on total spending must be agreed and disseminated to the various committees. Europeans will not be surprised to learn that trains, literal and metaphorical, run slow in America. The lengthy parliamentary procedure may not yield an actual package until the autumn.

This tortuous, incremental procedure may give Mr Biden flashbacks: his presidency is starting to resemble Barack Obama’s. Momentum from passing a large, hasty stimulus package is grinding to a halt as partisanship places obstacles on the track. The main achievement of Mr Obama’s day, the Affordable Care Act, took more than a year of shunting to and fro. A landmark climate-change bill, meanwhile, went down to defeat. Perhaps one train will arrive many months from now. But that would still be shy of Biden’s huge policy ambitions when he came to office. ■

Lone-Star politics

Texodus

HOUSTON

Texas Democrats suspend democracy in the name of upholding it

STATE REPRESENTATIVE Armando Walle, a Democrat from Houston, brought an unusually big suitcase when he travelled to Washington, DC, this week. For several months Democrats in the Texas legislature have been fighting an uphill battle against an “election integrity” bill touted by Republicans, including Governor Greg Abbott. The flight of the Democratic caucus to the capital temporarily halts a measure that would have been controversial at any time. Now, when so many Republicans are still repeating the former president’s lie that the last election was fraudulent, the struggle has assumed Texan proportions.

In May, on the final day of this year’s regular legislative session, Democrats walked out of the Texas House, denying Republicans the quorum they needed to pass the bill, or any other (the Texas House has a rule stating that two-thirds of members need to be present for the chamber to pass laws). Mr Abbott responded by vowing to summon the legislators back for a special session to tackle the issue, and to veto funding for the legislative branch of state government in the meantime. He followed through, calling legislators back to Austin for a special session which began July 8th, triggering the events that led to Democratic lawmakers leaving the state by private planes, and could, perhaps, end with an outright constitutional crisis in Texas.

Republicans control both chambers of the state legislature by healthy margins. If Congress remains unmoved by the pleas of



Quorum blimey

the refugees to pass a new federal voting law, the Democratic state lawmakers will soon find themselves in an awkward limbo, counting down the days until the special session ends on August 7th, with no clear plan after that point. “We are living on borrowed time,” a group of Democratic leaders said in a statement.


Meanwhile, in Austin, Republicans are fuming. “As soon as they come back in the state of Texas, they will be arrested,” Mr Abbott declared on a local news station (thereby rather undermining his claim to be upholding democratic standards). “They will be cabined inside the Texas Capitol until they get their job done.” He also vowed to call as many special sessions as necessary until the end of next year to ensure that the legislation is passed.

Stopping the state legislature from functioning in the name of saving democracy puts Mr Walle and his Democratic colleagues on tricky ground. There is precedent for quorum-breaking flights, but breaking one norm to save another one requires a weighing of relative damage. The Democrats argue, fairly, that the Republican bill is motivated by the Trump-boosted myth about a stolen election and, perhaps less fairly, that Republicans cannot win Texas without suppressing the votes of non-white Texans, who lean Democratic. That the first version of the elections bill targeted early voting on Sundays, when many African-Americans go to the polling station after church, was the tell.

The current version of the bill is better. A couple of provisions would bar innovations that Houston’s Harris County pioneered last year (such as 24-hour and drive-through voting). These proved popular and worked well, but banning them would be failing to encourage voting rather than suppressing it. However the bill also seeks to expand the power of partisan poll watchers, which could facilitate voter harassment and intimidation. In the 2020 election some local Republican officials tried to recruit poll watchers to volunteer in heavily black and Hispanic precincts.

“I’m OK having a battle of ideas and losing; that happens to me, as a Democrat, all the time,” says Diego Bernal, a Democrat representing San Antonio. “This is about rigging the system to produce a certain outcome.” This view is so widely held by Texas Democrats that they will happily take a stance that looks doomed. “We live on these ideals of freedom—well, not everybody was free in this country when it was created,” says Mr Walle. “Not everybody had the right to vote. We had a civil war; we had Reconstruction; we had Jim Crow, we had state-sanctioned discrimination.” His grandfather, born in 1930, lived through some of those experiences, and is now, at age 91, still a Texas voter. Hence the big suitcase. ■



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Baseball's waning popularity

Pastime

DENVER

The sport's fascination with its history makes changing it difficult

STANDING BEHIND left field during Major League Baseball's (MLB) annual Home Run Derby is much like loitering in the middle of a mosh pit at a death-metal concert. Balls, bodies and beers are flying. If a dinger is hit in that direction, the mass of fans becomes a tangle of limbs until someone emerges from the bottom of a pile, bruised but triumphant, home-run ball in hand. But enthusiasm for the derby, the All-Star Game and MLB's electric young players belies the fact that the sport is facing a series of challenges that put the future of the national pastime in question.

The past year has been a turbulent one for sports, but especially for baseball. The league has cracked-down on the use of "sticky stuff", tacky substances pitchers used to help them grip the ball and throw harder. A star pitcher from the Los Angeles Dodgers is being investigated for sexual assault, reminding fans of the prevalence of assault-related suspensions among MLB stars. Rob Manfred, MLB's commissioner, says the league suffered operating losses of \$3bn in 2020 because of covid-19.

All these problems—even the covid-related ones—seem manageable compared with the existential threat that is young people's lack of interest in the sport. A Morning Consult poll from 2020 found that only 32% of Gen Z Americans said they were "casual" or "avid" MLB fans, compared with 50% of all adults. That is the biggest gap among all sports considered. In fact, younger Americans are more interested in e-sports than baseball. The league has taken notice, and is testing ways to shorten games (which average over three hours) and pump up the action.

But many fans assume a defensive posture when it comes to rule changes or adopting new technology to make the game more entertaining. "Baseball has this extremely conservative culture", says Jacob Pomrenke, of the Society for American Baseball Research. "The idea that baseball was somehow better in the past is one we should throw by the wayside. The golden era of baseball is now." That is easier said than done. Historical sluggers still loom large in fans' consciousness, and there is a sense that the game played today should be the same game that was played by Babe Ruth or Jackie Robinson. But that would suggest that baseball has never changed, an idea that baseball historians scoff at.

Even if fans come round to the idea that



Little sluggers

the sport needs to adapt to grow, labour troubles threaten to get in the way. The collective-bargaining agreement that governs schedules, salaries and safety precautions is set to expire on December 1st. The relationship between players and owners is already acrimonious, thanks to last year's bitter negotiations over the shortened season. If the sides cannot agree terms, a strike or a lockout looms. And if it is hard to get young fans enthused about the sport, it will be near-impossible to do it when there is no baseball being played at all. ■

Drug prices

Blowing the inheritance

WASHINGTON, DC

Aduhelm may not cure Alzheimer's, but it might help fix drug prices

WHEN A LONG-AWAITED drug for Alzheimer's was approved by the Food and Drug Administration (FDA) last month, controversy quickly followed. In November ten of 11 members of an FDA expert panel rejected the treatment, but it received accelerated approval anyway. Three panel members resigned in protest. It also has a large price tag: about \$41,000 for year one and \$56,000 for subsequent years. The unusual approval process and high cost has sparked a congressional investigation into the developer's business practices. The treatment is also becoming the focus of new legislation which, if passed, would allow the government to negotiate drug prices for federal health-insurance plans.

About 6m Americans (one in nine old people) have Alzheimer's disease, a form of dementia. Aducanumab, marketed as Aduhelm, successfully clears the brain of beta-

amyloid, a protein that clumps between neurons and disrupts their functioning. Some researchers believe that this protein causes Alzheimer's. Aduhelm is the first new drug for Alzheimer's since 2003, so it will probably be popular despite its controversial approval. "There are so many people and their families who are suffering from this condition with no treatments, and that just leads to an understandably desperate situation," says Meredith Rosenthal of Harvard University's School of Public Health. "People are really willing to try anything, at almost any cost. But of course, that cost isn't just borne by the families, but by all of us."


The cost is high, even for those with health insurance. Patients receive an intravenous infusion every four weeks at about \$4,300 each for the average patient, totalling about \$56,000 a year. Since dementia tends to hit older people, many patients will qualify for Medicare. The Centres for Medicare and Medicaid Services, the agency in charge of Medicare, has not decided if it will cover Aduhelm nationally yet. A decision is not likely until the spring. Until then, coverage will be determined by each of the 12 local jurisdictions.

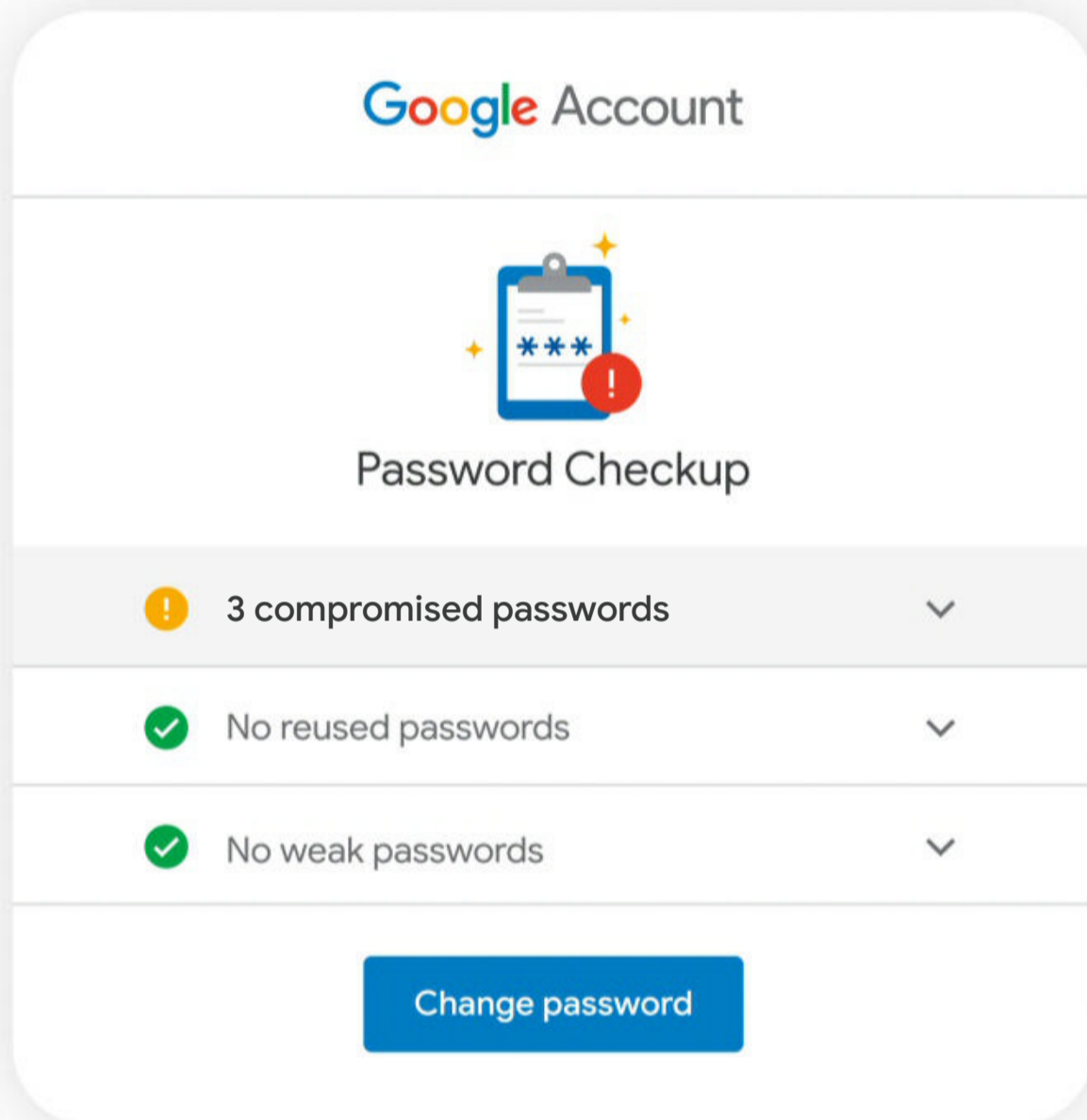
If Aduhelm is included, Medicare will probably cover 80% of the price. Patients will need to pay the rest. That adds up to about \$11,500 per year (about 40% of the median annual income of each Medicare beneficiary, according to the Kaiser Family Foundation, a health-research outfit). Since Aduhelm is not a cure, patients could pay for years. Most Medicare patients are protected by an annual out-of-pocket spending limit, but one in ten are not.

The high cost of this drug may raise premiums for everyone, says Tricia Neuman of the Kaiser Family Foundation. Ms Neuman and her colleague Juliette Cubanski estimate that if 500,000 Medicare patients receive Aduhelm, that could cost Medicare and its patients \$29bn in one year (total Medicare spending for all doctor-administered drugs reached \$37bn in 2019). And this estimate is probably conservative. Nearly 2m Medicare patients used an Alzheimer's treatment in 2017, and Biogen, in an investors' presentation, estimated that 1m-2m will use the drug. If 1m patients are treated, the cost could rise to \$57bn.

That is why two committees in the House of Representatives, the Committee on Oversight and Reform and the Committee on Energy and Commerce, have launched an investigation into Aduhelm's price. Drug pricing has been a political issue for years. HR3, a bill that would allow the Department of Health and Human Services to negotiate drug prices, passed the House of Representatives in 2019 and was reintroduced in April. Aduhelm, a triumph for the pharmaceutical industry, is now also the poster-child for this campaign. ■



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Competition

Anti-trust in me

WASHINGTON, DC

Can the federal bureaucracy resuscitate market dynamism?

TWO TRENDS in American capitalism in past decades are too stark to be ignored. The first is rising market concentration—a phenomenon observed in 75% of industries ranging from those that traffic in bodily fluids (kidney dialysis and blood-plasma donation centres) to those that traffic in data (broadband providers, credit-card companies, and the tech giants roaming Silicon Valley). The second trend is the declining share, up until the mid-2010s, of spoils going to the suppliers of labour. Whether these are unhealthy indicators has been hotly debated. Some argue that intense competition unleashed by globalisation and technological progress may destroy the least efficient firms, leaving only a small cadre of the most productive (the “winner take most” model). Others insist that it is a sure sign of market sclerosis.

On July 9th President Joe Biden indicated that he identifies fully with the critics. That was when he signed an executive order arguing that a lack of competition had been increasing prices for consumers and squashing wages for workers, and stating that the federal government would not stand for it. Casting himself as a latter-day Roosevelt (both Teddy and Franklin enjoyed a trust bust), Mr Biden vowed that the whole federal government would devote itself to “address over-concentration, monopolisation and unfair competition”. His order specified 72 initiatives for more than a dozen federal agencies to work on, alongside the creation of a new competition council made up of cabinet members and senior White House staff.

For this to have teeth, competition regulators would have to be more aggressive than usual in bringing cases, and judges more deferential to the newly expansive definition of antitrust action. Gauged by stockmarket movements on the day of Mr Biden’s executive orders, investors were undaunted. But analysts on a quarterly earning calls with Goldman Sachs were sufficiently perturbed to pepper David Solomon, the CEO, with questions about the possible effect on the investment bank’s mergers and acquisitions business (see Finance and economics).

The most consequential changes, if they materialise, would be to labour markets. One of the spicier debates among labour economists is over “monopsony power”, a rather ugly phrase meaning the degree to which concentration among the de-

manders of labour (otherwise known as firms) depresses the price paid for it (otherwise known as wages). The most irksome source of this are non-compete clauses, which prevent more than 36m workers from easily leaving their jobs for better-paying ones. These are prevalent among both highly paid and lowly paid workers, including, according to one study by the late Alan Krueger and Orley Ashenfelter, 58% of workers for low-wage franchises like McDonald’s and Jiffy Lube.

Mr Biden wants the Federal Trade Commission (FTC), which has broad but conservatively employed authority to limit anti-competitive behaviour, to ban or limit this practice. He also wants the FTC to end needless occupational licensing, onerous rules that turn some professions into glorified guilds. To be a certified interior designer in California, for instance, you must have more than six years of experience and pass an exam. The FTC has often issued advisory opinions to states contemplating these sorts of licensing requirements; Mr Biden is now urging it to intervene under its existing legal authority.

Most of the president’s other goals are more bite-sized. Mr Biden thinks, justifiably, that lack of competition among industry incumbents has led Americans to pay too much for things like off-patent drugs, hearing aids, internet connections, and journeys on trains and planes.

An equally consequential, if more arcane, debate is also raging within the legal academy over what justifies antitrust en-

forcement. Ever since its introduction by Robert Bork, a conservative legal scholar, the so-called consumer-welfare standard has dominated American jurisprudence. This holds that regulators and courts should mainly scrutinise the effects of corporate actions on prices paid by customers. Given that most big tech companies offer their services to consumers free, that standard would suggest little ability for regulators and state attorneys-general to contest their growing market share. Instead a more expansive definition of anti-trust, sometimes called the neo-Brandeisian school after the ideas of the monopoly-hostile Supreme Court justice Louis Brandeis, is gaining ground.

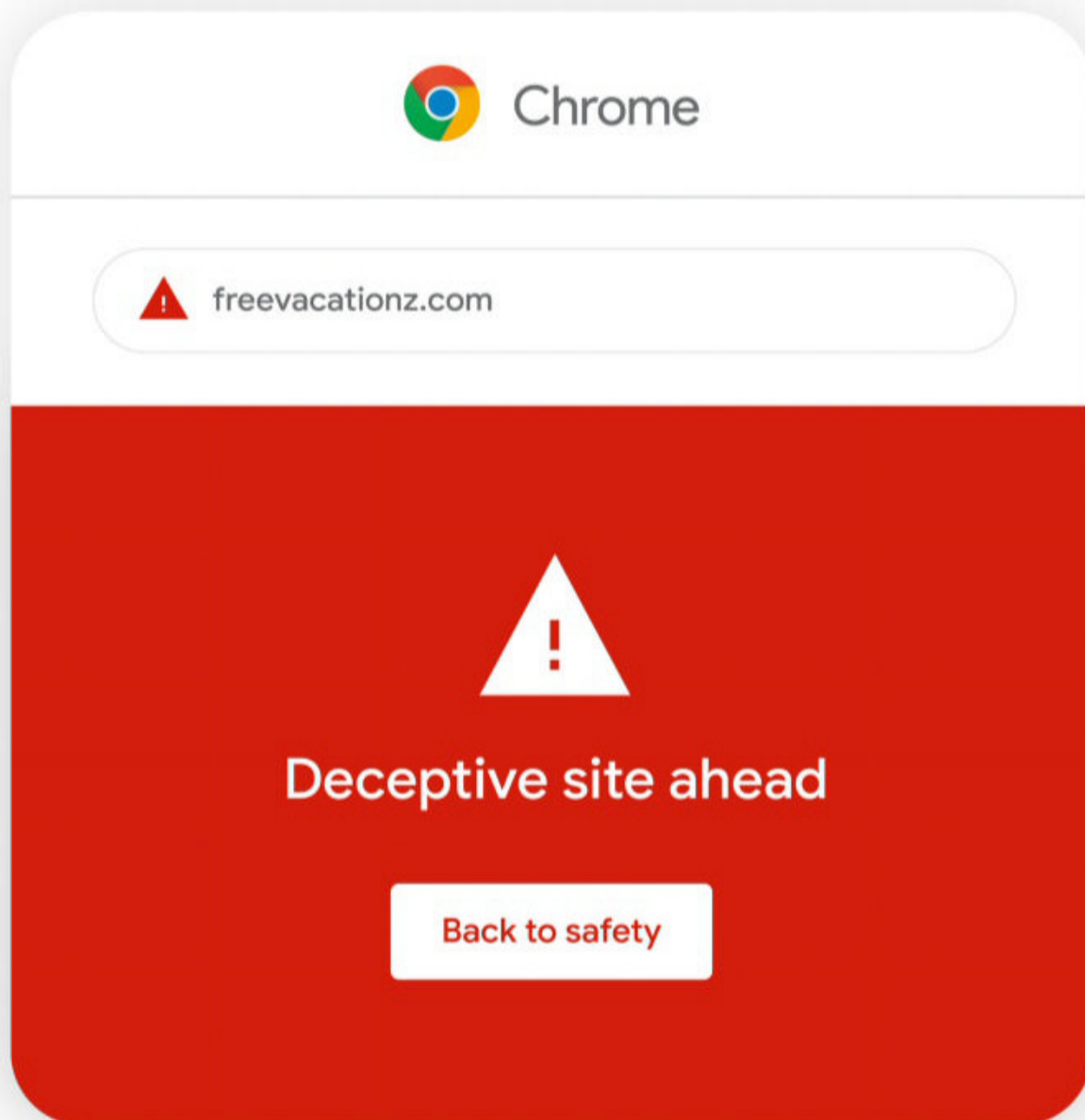
“At that time, people were laughing at me,” says Barry Lynn, executive director of the Open Markets Institute and a longtime anti-monopoly agitator, about his testimony against the consumer-welfare standard in December 2017. Lina Khan, an affiliate of the Open Markets Institute for seven years, who wrote a law-review article making the case for antitrust action against Amazon while she was still a student at Yale, is now the head of the FTC. On her shoulders rests the fate of Mr Biden’s nascent competition-promoting agenda.

But it will also depend on whether judges are willing to accept more expansive antitrust action. So far the signs are not promising. In June a federal judge dismissed a complaint against Facebook filed by the FTC and 46 state governments arguing that the social-media giant had tried to stymie competition by buying Instagram and WhatsApp. However, Mr Lynn thinks that the judiciary can be brought round. “We’re going to get them into the 21st century. We’re going to get them out of Bork’s garage. Justices of the Supreme Court, judges in the us judiciary—these people don’t read! They just bask in the adoration of lesser people. Educating these people, it ain’t easy. But we will.” ■





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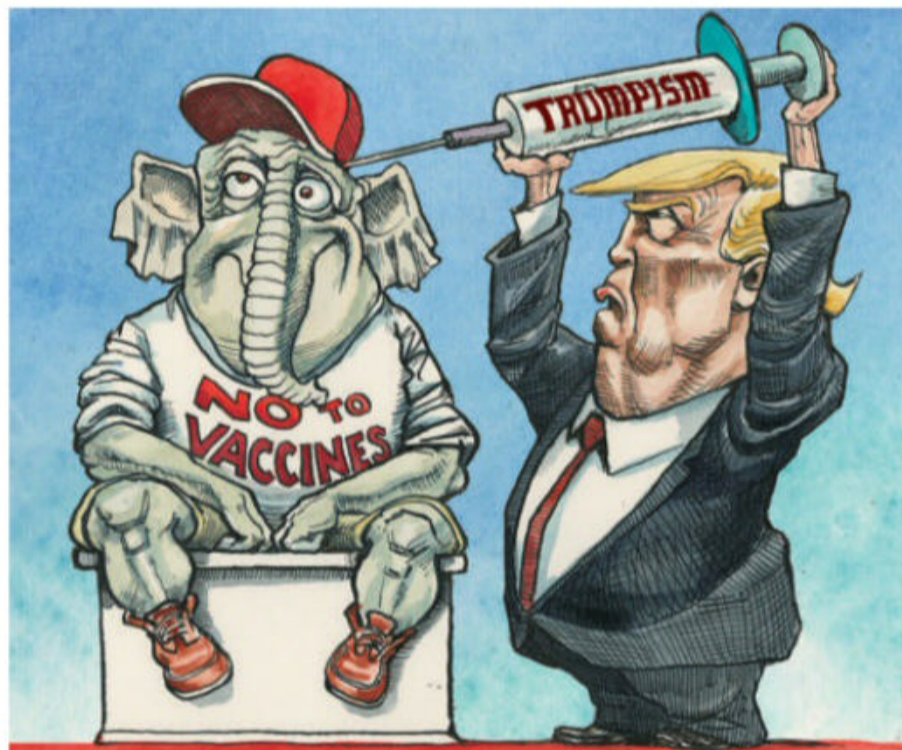
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Lexington | The anti-vax delusion

America's vaccination programme is stalling. Populist conservatives are to blame



IN EARLY MAY, with the Food and Drug Administration expected to approve the first covid-19 vaccine for teens any day, Michelle Fiscus found herself fielding questions from Tennessee vaccine dispensers on what this would mean in practice. Could 12- to 15-year-olds be vaccinated without parental consent, for example? Dr Fiscus, the state official in charge of immunisations, sent back the official legal advice on that. Referring to a 34-year-old ruling of the Tennessee Supreme Court, it noted that any sensible 14-year-old could request a vaccine of their own accord. What happened next, according to Dr Fiscus, “can only be described as bizarre”.

Her memo was shared on social media, seized on by angry conservatives and the Tennessee Department of Health duly accused of machinating to destroy families and subvert children. Scents an opportunity, Tennessee’s Republican legislature summoned the state’s public-health officials to explain why they were “targeting” the young and innocent in this “reprehensible” way. One lawmaker demanded the health department be disbanded.

The department vowed to try less hard to vaccinate Tennesseans against covid-19 and other diseases. According to reports and internal emails shown to Lexington by Dr Fiscus, this has involved ending all vaccine outreach to teens. Any Tennessean adolescent who has received a first covid jab is no longer being sent a reminder to show up for the second; the department has stopped sending information about immunisations—against measles and meningitis as well as covid-19—to schools. This week Dr Fiscus was asked to resign. When the veteran paediatrician refused, she was fired.

America has a long history of anti-vax conspiracy theories. But the vaccine denialism that has gripped the Republican Party in Tennessee and everywhere is unprecedented. Past anti-vax movements have been disparate, fringe and, at least on an individual basis, responsive to patient dissuasion. Their adherents have included rich Californian suburban moms, gulled by misinformation about the risks of immunising babies, and poor African-Americans, with a part-justified suspicion of the medical profession. The results, by and large, have been small measles outbreaks and a marginal contribution to black Americans’ poor health.

Anti-covid vax sentiment on the right, by contrast, is fuelled by the country’s deepest divisions and the conservative entrepre-

neurs, in media and politics, who aggravate them. It explains why America’s vaccination rate has slowed in recent weeks, despite the availability of vaccines, an uptick in infections and deaths, and the fact that a third of adults have not received a first dose. Surveys suggest this large minority is overwhelmingly Republican. It represents half the party’s voters, predictably dominated by its most pessimistic and conspiracy-prone groups, white evangelicals and rural folk: the Trumpian base.

The problem looks even worse—politically, economically and health-wise—where such voters are concentrated. Vaccination rates are lowest wherever Donald Trump romped to victory last November. In Tennessee, where he won 61% of the vote, 43% have had a first dose. In Ohio, a more divided state with a pragmatic governor in Mike DeWine, it is a slightly more hopeful 48%. But in the most conservative Ohioan counties, the rate plummets. In Holmes County where the former president won 83% of the vote, 15% of people have had a first dose. The chances of succumbing to the virus in such places is correspondingly high; 99% of America’s recent covid-19 fatalities had not been vaccinated.

It is tempting to see this calamity as a predictable development in the politicisation of American identity, whether concerning race, sexuality or attitudes to health care. Yet it was not inevitable. The one thing Mr Trump got impressively right in his handling of the pandemic was his early investment in the vaccines his voters now consider to be unnecessary or part of a Democratic plot to spy on their innards. Poisoning the minds and jeopardising the bodies of so many Republican voters has taken a concerted campaign.

Mr Trump is chiefly responsible for it. Analysis by Shana Gadarian, a political scientist, suggests scepticism about covid-19 vaccines is largely a consequence of his efforts to play down the virus and mitigation measures such as mask-wearing. As so often with Mr Trump, it was an approach that mingled conservative ideology with demagoguery and personal strangeness. Conservatives prize freedom of choice over the common good; demagogues rubbish expert advice in order to propagate their own reality; and Mr Trump, a conservative demagogue but also a lifelong conspiracy theorist, probably believed some of his own misinformation.

Just a small prick

He was once a noted anti-vaxxer—which may explain why he did not publicise his own covid jab until weeks after it took place. By thus minimising his role in the vaccinations he made it easier for like-minded entrepreneurs, such as Tucker Carlson, to denigrate and blame the jabs—one of the biggest successes of Republican government in years—on Joe Biden. Fox News’s biggest star calls a Biden administration effort to step up local vaccination campaigns “the greatest scandal in my lifetime.”

This extreme politicisation has encouraged vaccine-hesitant Republicans to dig in. To be conservative is now to a great degree to be against covid-19 vaccination. And interviews with senior officials in Ohio and Tennessee (including Mr DeWine, who recently completed a statewide tour of vaccine centres) suggested there is little confidence that this can be reversed.

Some public-health experts wondered whether the accelerating Delta variant might tip the balance. But it seems unlikely. Tennessee, like other states, has already seen so much death. “It is a mystery to me why watching your loved ones die of an infectious disease that we can easily prevent doesn’t move more people to reconsider,” said Dr Fiscus, revealing, yet again, the insidious pro-life sentiment that got her fired. ■



Cuba

A revolt against the revolution

The communist island has not seen such big displays of discontent for decades

ON JULY 11TH thousands of protesters took to the streets spontaneously in more than 50 Cuban towns and cities. They had a long litany of grievances: recurring electricity shortages, empty grocery shops, a failing economy, a repressive government and an increasingly desperate situation regarding covid-19. In a display of discontent not seen on the communist island for perhaps six decades, people of all ages chanted and marched, some of them to the tune of clanging spoons and frying pans. They shouted “Patria y Vida!” (Fatherland and Life)—a riff on the revolutionary slogan “Patria o Muerte” (Fatherland or Death), and the name of a rap song which criticises the government—along with “Libertad!” (Freedom) and “Abajo la dictadura!” (Down with the dictatorship).

Although protests continue, by the next day cities were quieter as the police went from house to house, rounding up the demonstration leaders. Riot police spread

out across cities, plainclothes officers took to the streets and pro-government mobs brandishing images of Fidel Castro were called in to chant revolutionary slogans and wave Cuban flags. Miguel Díaz-Canel, the president and first secretary of the Communist Party, appeared on television to declare: “Cuba belongs to its revolutionaries.” Around 150 people have gone missing, and one protester has been killed. There are rumours that young men are being forcibly conscripted into the army.

The big question is how much staying power the protests will have. The coming weeks will show whether the regime's stock response of swatting down any signs of dissent will work again. The govern-

ment has little leeway to buy social peace. Cuba has been badly hit by covid-19 and by a precipitous drop in tourism, on which it heavily depends. A lack of foreign currency with which to buy imports has led to acute food shortages and blackouts. Under the administration of Donald Trump, the United States tightened sanctions on Cuba. These have added a little to the island's longstanding economic troubles.

Cuba's reluctance to buy foreign vaccines, born of a mix of autarky and a shortage of cash, means that only 16% of the population is fully inoculated. Home-grown vaccines are being developed, but have not yet been fully rolled out; meanwhile, pharmacies are short even of basics like aspirin. Whereas tourism has resumed in nearby places where covid-19 has receded, such as Jamaica and the Dominican Republic, Cuba is suffering from rising infections. Even the official data show the number of new cases doubling every seven days. In a video posted to Facebook, Lisveily Echenique, who lives in the city of Ciego de Ávila, described how her brother spent 11 days battling covid-19 without treatment because he could get neither medicine nor a hospital bed. After he died, his corpse remained in her home for seven hours before an ambulance arrived.

The Cuban economy came close to collapse in the early 1990s, after the fall of the ▶▶

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► Soviet Union brought foreign aid to an abrupt halt. There were public protests then, too, which were quickly dispersed. But Cubans now have access to the internet and are adept at using it to mobilise. Videos of police violence and arbitrary arrests have been circulating rapidly in recent days. At one point in the afternoon of July 11th, as the protests reached their height, the authorities appeared to block all internet access. Some social-messaging sites have also been suspended.

But much as the government may wish to turn the internet off, it cannot afford to: the exorbitant access fees charged by the state telecoms monopoly are an important source of foreign exchange. The internet is also a vital conduit for remittances from Cubans abroad. Mobile data and Wi-Fi charges bring in perhaps \$80m a month for the government, estimates Emilio Morales of Havana Consulting Group in Miami.

“The government has closed itself up like an oyster,” says José Jasán Nieves Cárdenas, editor of *El Toque*, a Cuban magazine mostly published online. “Instead of acknowledging that it has to come out and establish a dialogue with its people, it has chosen repression.” Tear gas and rubber bullets were used against crowds, although in some instances security officers were so outnumbered by protesters that they were forced to retreat. As things escalated, police cars were overturned and some dollar stores, symbols of the regime’s economic incompetence, were ransacked.

Mr Díaz-Canel blames Cuba’s troubles on the embargo imposed by the United States, as the government always does. He has ignored the complaints of the protesters, dismissing them as mercenaries, and offered excuses rather than plans for reform. After the president gave a speech on July 12th more protesters gathered outside the Capitol building in Havana. Other than stepping down, there is not much Mr Díaz-Canel could do to make amends to his people, says the owner of a small business. “You can’t cover the sun with one finger,” she says. Rumours are circulating that even members of the police are starting to defy their orders, as some think the protesters have a point.

Alfred Martínez Ramírez, a member of 27N, a group of activists, artists and intellectuals campaigning for greater freedom of expression, joined a protest outside the Ministry of Culture in November. Some 300 people were present, which at the time seemed a huge number. Cubans rarely protest, not least because unauthorised public gatherings are illegal. Seeing thousands of people on the streets of Havana and elsewhere in Cuba gives Mr Martínez Ramírez hope that his group is not alone, and that they may have even helped many others overcome their fear of dissent. “There has been an awakening,” he says. ■

Haiti’s crisis

Après Moïse, le déluge?

No one knows who killed Haiti’s president or what to do about it

THE LAST time a president was murdered in Haiti, in 1915, troops from the United States occupied the Caribbean country for 19 years. They introduced racial-segregation laws, built infrastructure with forced labour and left a bloody legacy by stamping down on *cacos*, the insurgents who defied the occupation. Writing in the *New Yorker* in 2015, Edwidge Danticat, a Haitian-American novelist, described how her uncle recalled seeing marines kicking a man’s decapitated head around like a football, to scare the rebels in their area.

A week on from the murder, on July 7th, of Jovenel Moïse, Haiti’s increasingly autocratic president, much remains unclear. No one knows who ordered the hit, or why. And no one knows how the United States will react if its poor and chaotic neighbour once again slides into mayhem.

The Haitian authorities’ version of events is murky. They allege that a team of 28 mercenaries, mainly Colombians but also two Haitian-Americans, stormed the president’s house, riddling his body with 12 bullets. Colombian investigators say that some of their compatriots, who were paid around \$3,000 a month each, did not know they were part of an assassination plot. It is unclear how the killers got past the president’s bodyguards, or why Mr Moïse’s head of security at the residence seems to have recently visited Colombia.

Conspiracy theories are rife. Léon Charles, Haiti’s chief of police, declared



Who’s giving the orders?

that Christian Emmanuel Sanon, a Haitian doctor who lives in Florida, was behind the attack. A report in the *New York Times* suggests that Mr Sanon had aspirations to become the head of a transitional government, but that plans for a coup or murder were never discussed.

Mr Moïse’s death has left a power vacuum. Haiti has no sitting parliament; the president had ruled by decree since January 2020. Three men are now jostling for control: Claude Joseph, the interim prime minister at the time of Mr Moïse’s death, who has declared he is in charge of the country and instituted martial law; Ariel Henry, who was prime minister-designate and due to be sworn in on July 7th; and Joseph Lambert, one of the ten remaining elected officials in the country.

In previous moments of crisis, foreign powers have swiftly intervened in Haiti. The United States got involved in 1994 to reinstate Jean-Bertrand Aristide, Haiti’s first democratically elected leader, who was ousted in a coup in 1991. (Mr Aristide claims that American troops were also involved in another coup to oust him in 2004.) Many Haitians accuse the United States of interfering in elections, including those in 2010-11 that brought to power Michel Martelly, a singer who anointed Mr Moïse, a former banana-plantation manager, as his successor.

Such meddling has tended to be unpopular. “All my life, foreign interventions have brought a lot of misery to Haiti,” says Sabine Lamour, a Haitian activist. So it surprised some when, soon after claiming the top job, Mr Joseph called for America to intervene to protect Haiti’s “infrastructure”. This may be a cynical move to consolidate his power. The United States and the UN initially recognised that he was in charge; the presence of American troops would reinforce that idea. But for now Joe Biden’s administration has declined to send any. On July 11th FBI agents were dispatched to help the Haitian police force work out who was behind the assassination. (One news report suggested that the FBI was investigating whether Mr Joseph was involved.)

It is impossible to know whether Haiti would be in a better position, now, had the United States always left it alone. Amy Wilentz, the author of two books on Haiti, says Americans have mostly involved themselves with “institution imitation”. “They may have built a palace of justice and put in place judges, but not a real justice system,” she argues.

After an earthquake in 2010 that killed perhaps 200,000 people, foreign governments and NGOs donated \$10bn, about 150% of GDP at the time. About \$1.2bn of that came from America. Since 2010 the United States has spent \$312m on training and equipping the Haitian police, who are weaker than the many gangs that control ►

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parts of the country. It is trying to help them deal with kidnappings, which by one estimate rose by 50% in the first three months of this year.

The legacy of UN interventions in Haiti is mixed. In the 1990s the UN sent four missions to the country, all of which by its own admission failed to achieve their goals. Between 2004 and 2017 it returned, providing some stability after the ousting of Mr Aristide. But when the blue helmets withdrew, they were lambasted for having inadvertently introduced cholera, starting an outbreak that killed 10,000 Haitians. Other

NGO workers were accused of sexually assaulting children and women.

Aid has undoubtedly given Haiti a boost in some areas. NGOs have helped build schools, hospitals and sewers. But their proliferation and vast budgets have reduced incentives for Haiti to develop its own institutions. The sheer volume of charitable cash has tempted corrupt bigwigs. Indeed, one source of anger against Mr Moïse was his alleged pilfering of money from PetroCaribe, a cheap Venezuelan oil scheme.

Many Haitians would welcome some

foreign help to restore a semblance of security. More support could be given to counter gangs. On July 11th a delegation of American officials, including from the National Security Council, met the three men who claim to be in charge. But activists and intellectuals are adamant they do not want outside powers to back the same old, discredited political faces or to push Haiti into elections planned for September, for which the country is unlikely to be ready. Fritz Jean, a former prime minister, speaks for many when he says, "It is time to listen to the voices of Haitian people." ■

Bello A Mexican show trial?



A battle against corruption with more theatre than substance

IT IS A question that might have been devised by Cantinflas, a comic actor who turned the Mexican taste for circumlocution into an absurdist art form. "Are you in agreement or not that appropriate actions in accordance with the constitutional and legal framework be carried out in order to undertake actions of clarification of political decisions taken in the past by political actors, aimed at guaranteeing justice and the rights of the possible victims?" This is what President Andrés Manuel López Obrador wants Mexicans to decide in a national referendum on August 1st. Decoded, what it means is, should he be authorised to orchestrate a kind of unofficial show trial of his five most recent predecessors and their subordinates?

Mr López Obrador (or AMLO, for short), has always insisted that he became president in order to draw a line under 30 years of what he calls "neoliberal", corrupt government. He holds those five presidents responsible, variously, for corruption, the concentration of wealth, electoral fraud and a failed drug war that begot yet more violence. Shortly after his landslide victory in 2018 he began to talk about holding a referendum over whether to put the ex-presidents on trial.

To resort to a popular vote to decide whether or not to prosecute someone is a travesty of the rule of law. The Supreme Court, whose president boasts of an "affectionate" relationship with AMLO, narrowly ruled that the referendum was constitutional but softened the question to its current convoluted form. What makes the exercise even more surreal is that the president says he won't vote, because he is not "vengeful" and doesn't want to dwell on the past. If "the people" decide otherwise, however, he will act on their wishes.

This referendum serves several of the president's purposes. He is fond of consultative votes. They support his claim to take more notice of the people than his predecessors did. He has used them to provide backing for decisions he wanted to take anyway, such as the cancellation of a half-built new airport in Mexico City.

This one will have binding force if 40% of the electorate take part and a majority votes in favour. If that happens, some think the government will set up a kind of truth commission into the recent past. But turnout may fall short. The opposition is boycotting the vote. The independent electoral authority, which complains that the government is starving it of funds, says it will install only a third of the number of polling stations it used in a mid-term election last month.

The vote also confirms that, in fighting corruption, AMLO prefers theatre, which he can direct, over substance. Mexicans are fed up with graft; the government of Enrique Peña Nieto of 2012-18 was notoriously corrupt. AMLO made ending corruption a central plank of his campaign.



Nevertheless, "corruption in Mexico is in robust good health," says María Amparo Casar of Mexicans Against Corruption and Impunity (MCCI), a watchdog. "There is talk against corruption but there is no anti-corruption policy."

Rather, there has been regression. Although public contracts are supposed to be tendered, as Mr López Obrador promised to do, his government has awarded them by fiat in 81% of cases, more than the 79% under Mr Peña Nieto, according to Ms Casar. The office of the special prosecutor for corruption cases has had its funding and staffing cut. The fight against corruption has become a political tool. Last year Spain extradited Emilio Lozoya, a former head of Pemex, the state oil company, who is wanted for taking bribes from Odebrecht, a Brazilian construction firm. He has not been jailed and has become a protected witness, incriminating enemies of the government. AMLO hounds anti-corruption campaigners: he has criticised MCCI dozens of times in his morning press conferences, and the tax authorities have subjected it to punitive audits.

The president claimed victory in last month's election because his party gained ten state governorships. But it lost its majority in the lower house of Congress (it can still eke one out with allies) and suffered a humiliating defeat in Mexico City. Though he remains popular, Mr López Obrador is no longer invincible. Many Mexicans continue to think he is on their side. But they are suffering from the pandemic, the government's mishandling of it and the related economic slump, as well as unabated violent crime. To distract attention from policy failures, their president needs all the Cantinflas spectacles of political theatre that he can muster.



The Tokyo Olympics

Rings on the ropes

TOKYO

The 2020 games will be memorable—but not in the way Japan hoped

CLOUDS GATHERED over Komazawa stadium in Tokyo as the Olympic torch arrived on July 9th. Because of the pandemic, the traditional public relay was replaced by a small ceremony behind the stadium's closed doors. Protesters outside held signs that read "Protect lives not the Olympics" and "Extinguish the Olympic torch". As Kyogoku Noriko, a civil servant, put it, "Now is not the time for a festival." More enthusiastic onlookers lined a nearby footbridge, hoping to catch a glimpse of the flame through the stadium's rafters. For Honma Taka, an office worker, the torch offered "a bit of light within the darkness".

Mr Honma longingly recalled a brighter day in the same park eight years earlier, when he joined thousands of others to celebrate as Tokyo won the right to host the games. Abe Shinzo, Japan's prime minister at the time, said he was happier than he had been when he became prime minister. Mr Abe saw the Olympics as a chance to lend credence to his bullish catchphrase: "Japan is back". He hoped the games would

help the country snap out of its gloom after decades of economic stagnation, demographic decline and devastating natural disasters. The games, says Taniguchi Tomohiko, a special adviser to Mr Abe, were seen as a source of "a commodity that was in scarce supply: hope for the future".

The grand designs had a powerful precedent in the previous Tokyo Olympics, in 1964. Just two decades after defeat in the second world war, those games came to encapsulate both Japan's rise from the ashes and its re-entry into the global community. Tokyo, which had been reduced to cinders by American firebombing, was smartened up. New roads and rail lines, including the first *shinkansen*, or bullet train, were built.

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"There was a feeling in the 1960s that everyday life was becoming richer: today is better than yesterday, and tomorrow will be better than today—and the Olympics became a symbol of this," says Togo Kazuhiko, a former ambassador who was a student at the time. The excitement left a lasting impression on a generation, including Mr Abe, who invoked his childhood memories of 1964 when Tokyo won the bid for this year's games.

If not for the pandemic, excitement may well have materialised again. The current Tokyo Olympics has had its share of controversies, from an over-budget stadium to rank sexism from the (now departed) head of the organising committee. Nor would a sporting event alone be enough to resolve Japan's problems. But the games were shaping up to be a source of pride. Tens of thousands of young Japanese had signed up to volunteer. Japan planned to welcome 40m foreigners in 2020, when the games were originally scheduled. Tourists would have found an impeccably clean, safe, well-run metropolis. Akita Hiroyuki, a commentator for *Nikkei*, a Japanese daily, reckons that the Olympics could have been a "white ship" that catalysed the country to "wake up and open up". (The Americans who forced Japan to open to the world in the 19th century arrived in "Black Ships".)

Instead, the games will be held without fans, foreign or domestic, in a city under a ▶▶

▶ state of emergency (see next story). Ito Yuko, one of the fans gathered outside Komazawa stadium, lamented that the mood is “200% different” from 1964, when she first fell in love with the Olympics. Rather than coming together for the games, Japan has been riven by them. Recent polls show that as many as 80% of Japanese did not want them to go ahead this year.

The sense that national leaders are pulling an unwilling population into a disaster has led to comparisons not with the previous Tokyo Olympics, but with the war that preceded them. Even Emperor Naruhito, who almost never speaks about politically sensitive matters, has made his concerns about pressing on with the games known.

Opposition to the Olympics stems only in part from fears of covid-19. Japan has managed the pandemic well by global standards, with just 15,000 deaths; Tokyo has seen just eight covid-19 deaths so far this month. But many Japanese feel that the success has been thanks to ordinary people who behaved responsibly and made sacrifices in their personal lives, whereas the government is stubbornly persisting with a risky undertaking. “It’s not just the health crisis, but the democratic crisis—it’s the lack of accountability,” says Nakano Koichi of Sophia University.

Many fume that the interests of sponsors, TV networks and the International Olympic Committee (IOC) seem to be more important than those of the Japanese people. That the games have moved forward despite public opinion shows they are “not for the people”, but for “the people to whom the money flows”, says Miyakawa Taku, a software engineer who joined the protest outside Komazawa stadium.

Things could go badly wrong. A covid-19 outbreak in the Olympic Village could prevent events from being held and leave competitions with asterisks in the history books. A careless member of the press or an official delegation could sneak off and seed a larger outbreak among the Japanese public. Athletes from the developing world could bring a more infectious strain of the virus home, turning the games into a global superspreader event. Such a fiasco would reinforce a sense of Japan’s decline and leave the public more wary of engagement with the outside world.

Japan might also manage to keep the virus mostly under control and the sport on schedule. Executing the games in such difficult circumstances could instead serve as a reminder of Japan’s ability to overcome adversity. Either way, the legacy of these Olympics will be contested. “If this was a picture, we could say that the frame itself has become rotten,” says Sakaue Yasuhiro, a sports historian at Hitotsubashi University in Tokyo. “The picture might turn out to be beautiful, but it is still surrounded by this rotten frame.” ■

Making the Olympics safe again

No fun and games

TOKYO

No spectating, no fraternising and no lingering

WHEN THE world’s best athletes gather for the Olympics every four years, they do a lot more than run, jump and swim. In a memoir published after the previous Tokyo games, in 1964, Dawn Fraser, an Australian swimmer, pulled back the curtain on life inside the Olympic bubble. “Olympic morals are far more loose than any outsider would expect,” she wrote. The village’s reputation for debauchery has only grown since. Organisers began handing out condoms to athletes in 1988, ostensibly to raise awareness about HIV; at the last summer games in Rio de Janeiro in 2016, they handed out a record-breaking 450,000. As one former Olympic skier put it to *ESPN The Magazine*, an American sports publication, the Olympic village is “just a magical, fairy-tale place, like ‘Alice in Wonderland’, where everything is possible. You could win a gold medal and you can sleep with a really hot guy.”

At this year’s Olympics, the atmosphere will be gloomier, duller, chaster. For the athletes, life in the village will be circumscribed, as laid out in a 70-page book of prohibitions. They have been asked to arrive in Japan as late as possible (no earlier than five days before the start of their events) and to leave as soon as possible (within two days after their event’s end). They must present negative results in two tests taken during the four days before they leave for Japan, and another negative test result on arrival. Though more than 80% of athletes are expected to be vaccinated, they

will undergo daily tests, with a confirmed case leading to possible disqualification. Masks will be mandatory except when sleeping, eating and competing, meaning that athletes will be required to wear them even while working out in the Olympic village’s gyms and, if they make it that far, while standing on the podiums to receive their medals. They will not be allowed to go anywhere except to their accommodation and competition venues. All meals must be eaten quickly and without mingling at the village’s cafeteria. Alcohol will not be served in the village, and drinking in groups or in public areas will be forbidden.

The athletes will not be the only ones on lockdown. Japan’s government has declared a state of emergency in Tokyo and three surrounding prefectures to last until August 22nd, long after the Olympics finish. The government does not have the authority to limit the public’s movements, but other restrictions will put a damper on any celebrations: restaurants are being asked to close by 8pm and not to serve any alcohol; residents are implored to avoid “non-essential” outings.

There will be no viewing parties; a promenade near the Olympic Village which had been envisioned as a raucous fan zone will be closed. Tokyoites have been asked to enjoy the games on TV from their homes. Nearly all of the events will be held without fans, foreign or domestic. “It will feel very jarring,” says Sakaue Yasuhiro of Hitotsubashi University in Tokyo: “People are being told not to go out, not to meet up, not to have drinks; kids’ sports days are being cancelled—and yet a global sporting event is going forward.”

The contortions are the price for staging the games despite the pandemic, a state of affairs the government’s main medical adviser, Omi Shigeru, has called “abnormal”. Though Japan’s vaccination campaign has picked up pace after a slow ▶▶



Back when the Olympics were maskless

▶ start, only 21% of the population is fully inoculated. Rates are much higher among the elderly (some 75% of Tokyoites over the age of 65 have received at least one jab), leading to a decrease in deaths and seriously ill patients in the capital. Nonetheless, Tokyo recorded 1,149 new cases on July 14th, the highest tally since January. The spread of the more infectious Delta variant worries medical experts. Christian Tagsold of the University of Düsseldorf quips that the circumstances of these Olympics bring to mind “Akira”, a cult Japanese *manga* and *anime* from the 1980s that depicts a post-

apocalyptic “Neo Tokyo” hosting the Olympic games in 2020.

Organisers admit that it will be impossible to control the virus completely. A handful of athletes and officials arriving early have already tested positive. The authorities hope instead to avoid an Olympic outbreak. That will require compliance not just from athletes, but from 53,000 officials, staff and press who are expected to attend. They will be bound by a “written pledge”, but face less drastic penalties for misbehaving than the athletes, who risk disqualification. Many worry

they will be less rule-abiding than the Japanese public, which has tended to heed the government’s requests.

Those fears were amplified this week when four foreigners working for a subcontractor at a venue were arrested on suspicion of cocaine use in a nightlife district far from the Olympic facilities. Pandemic or not, the Olympics will be a temptation for some to party. That may be one reason why the organisers backtracked on plans to hand out condoms in the village this year. Instead, the athletes will receive their prophylactics only when they leave Japan. ■

Banyan Rajapaksa raj



Sri Lanka’s ruling dynasty is not as secure as it appears

SINCE WINNING the presidency in a landslide nearly two years ago, Gotabaya Rajapaksa has worried not that he has too many relatives in government, but that he has too few. One of the 72-year-old’s elder brothers, Mahinda, himself president for ten years until a surprise election defeat in 2015, is prime minister. Another, Chamal, is minister for irrigation. Chamal’s son, Shasheendra, is minister of state for “paddy and grains, organic food, vegetables, fruits, chillies, onions and potatoes, seed production and high-tech agriculture”. Mahinda’s son, Namal, is minister for youth and sports. And state minister for digital technology and enterprise development. And everything else, to judge by his hyperactive Twitter feed.

But there is always room for one more Rajapaksa, 69-year-old Basil above all. “Gota” and Mahinda acknowledge him as the brains and organiser-in-chief of the family. He devised the electoral strategy behind its return to power, founding a new party, the Sri Lanka Podujana Peramuna (SLPP), which used digital wizardry to rally chauvinists from the ethnic majority, the Sinhalese—all while in prison on a corruption charge stemming from his time as economy minister (his detractors called him “Mr 10%”). On July 8th he was back in the cabinet.

Basil’s return to government required both a constitutional amendment to allow dual nationals to hold senior government positions (he has an American passport) and the resignation of a docile member of Parliament to free a seat for him. He faces a budget and current-account mess caused by poor policy under Gota and Mahinda, from whom he inherits the finance portfolio, and exacerbated by the pandemic.

On coming to power, his older broth-

ers slashed taxes as a stimulus. Tax receipts fell by a quarter and the budget deficit climbed to 14% of GDP. Two-thirds of government revenue now goes on interest payments. A downgrade by credit-rating agencies late last year shut Sri Lanka off from international capital markets. The Sri Lankan rupee is sliding. Foreign debt is being serviced from the central bank’s reserves. These, warns Deshal de Mel of Verité Research, a think-tank in Colombo, the capital, are now down to less than three months’ worth of imports. Default is becoming more likely.

The obvious solution is to apply to the IMF for an assistance programme to help restore confidence among external creditors. Such a move would not sit easily with Gota’s talk of “prosperity and splendour”, however. An easier first step will be to seek more help and forbearance from a major creditor, China. The central bank recently minted gold coins to celebrate the Chinese Communist Party’s 100th birthday.

In following their next moves, however, never fail to bear in mind what is in it for the Rajapaksas themselves. The next

parliamentary and presidential elections are a way off. Basil presumably calculates that economic recovery by then will return them to power. But there are complications.

One has to do with Mahinda, who is rumoured to be suffering from ill health. Basil is his obvious replacement as prime minister. Yet it is from Mahinda’s folksy charisma that the family’s aura derives. When he goes, so does a big part of the Rajapaksa appeal.

The obvious family response would be to tighten its hold on power yet further. The tendencies are there. Gota, who as defence secretary prosecuted the end of Sri Lanka’s brutal civil war in 2009, retains the defence and intelligence portfolios. By temperament a martinet, he has stuffed his administration with ex- and current brass. During Mahinda’s presidency the security services were all-powerful, and critics were intimidated and on occasion wound up dead.

The complication here is getting Sri Lankans to play along. These days, Gota’s irascibility inspires more scorn than fear. Farmers decry Gota’s ill-considered push for organic farming free of imported fertiliser. Others call for justice for the civil war’s victims. Activists who recently took to the streets against the expansion of a military-backed university that is exempt from national oversight were bundled away for supposedly breaking coronavirus restrictions and given 14 days’ enforced quarantine. In response, the country’s teachers have gone on strike. Even SLPP members grumble that the Rajapaksa tribe is taking too much power, leaving too little for the hangers-on. Sri Lankans have a history of hoofing overweening governments out. That makes the Rajapaksas’ suffocating hold on power look like a weakness.



The pandemic in South-East Asia

The next covid catastrophe

SINGAPORE

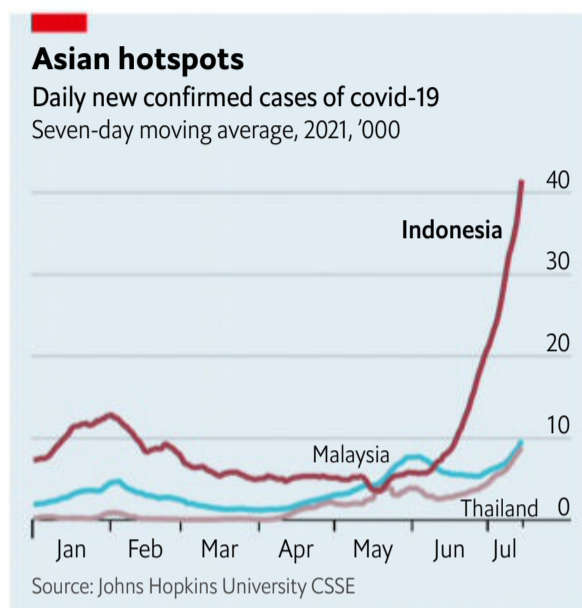
A wave of the virus is engulfing Indonesia

TRI WAHYONO was trying to keep it together. It was rush hour on a weeknight in late June in Yogyakarta, a city on the Indonesian island of Java, but the streets were almost empty. It had been like that for a couple of weeks, since the number of covid-19 cases in the city had begun to spike. Mr Tri was speeding through the streets on his motorbike, searching for a hospital that would admit his 63-year-old mother, gasping for air in the makeshift ambulance behind him. The first one was full. The second one had run out of oxygen. As they pulled up in front of the emergency ward of yet another hospital, four medics in protective gear rushed out to meet them. Mr Tri hoped for a “miracle”, but by then it was too late. He chokes back tears remembering how his fear of catching the virus prevented him from holding his mother in her last moments.

South-East Asia is swimming in covid-19. For much of the past year, it had far fewer cases than Europe and North America. But low rates of vaccination, limited testing and the arrival of new, more transmissible variants mean the disease is surging through the region. Cambodia, Myanmar, Thailand and Vietnam are posting record numbers of new cases each day. Malaysia has the highest caseload in the region relative to population.

But in absolute terms, Indonesia has the most new cases in Asia. It surpassed other hotspots like India and, for a time, even Brazil. The daily number of new infections has grown by a factor of ten in the past month, exceeding 54,000 on July 14th. And because testing is patchy, the virus is likely to be much more widespread than these figures suggest. The proportion of tests that come back positive—a whopping 26%—suggests that the disease is running rampant.

Indonesia's health-care system is drowning. Over the past five weeks, the number of hospital patients has more than trebled to around 81,000. Nearly three-quarters of hospital beds are now occupied, according to the Indonesian Hospital Association. On the island of Java, where most Indonesians live and most cases are found, only a few hospitals are still admitting patients. On July 5th the health minister said: “Hospitals are full.” Oxygen supplies are running dangerously low. Because of the shortage of medical supplies and equipment, doctors report being



forced to choose which patients will live and which will die.

On July 5th the health minister urged those with mild symptoms to refrain from going to hospital. Many Indonesians are taking his advice. Some who stay at home are dying. LaporCovid-19, an NGO which collects data on the pandemic, has recorded 451 instances of infected people perishing while self-isolating or looking for a hospital. The true number is likely to be much higher. There has been a steep rise in deaths since June, says the UN's World Health Organisation.

The rapid spike in cases and the “collapse” of the health-care system, as Pandu Riono, an epidemiologist at the University of Indonesia, puts it, have invited compari-



An ever more common sight

sons to India, another big country with a weak health system. But Indonesia is even more poorly equipped to deal with such a crisis. It has just four doctors for every 10,000 people—less than half India's ratio. Deaths from covid-19 relative to population are higher now in Indonesia than they were in India at the height of the outbreak there, at least according to the official data.

Several factors have exacerbated the latest outbreak. The government never imposed a full lockdown, for fear of paralysing the economy and impoverishing the country's millions of informal workers, who cannot toil from home. The restrictions that it did impose were poorly enforced. During Eid, a recent Muslim holiday, 1.5m people intent on celebrating in their home villages flouted a travel ban—an example of “herd stupidity”, as Dr Pandu puts it. The travellers brought the pernicious Delta variant with them from the cities to the countryside. It now accounts for some 90% of cases in the country.

Most Indonesians are not protected against the virus. Just 7% have been double-jabbed. The elderly are particularly vulnerable. The government, which at first prioritised vaccination for those of working age, did not begin jabbing the elderly for over a month after shots became available in mid-January. This was a mistake, says Dicky Budiman of Griffith University in Australia.

Making matters worse is the shortage of health workers. Although 97% of them have been fully vaccinated, the vast majority have received the shot from Sinovac, a Chinese firm, which is less effective than other vaccines. The Indonesian Hospital Association surveyed big state-run hospitals across Java's main cities and found that 10% of their staff had tested positive. LaporCovid-19 found that 131 vaccinated health-care workers had died since June, 50 of them in the first week of July.

The government has sprung into action. It is trying to accelerate vaccination. In early June it expanded eligibility for jabs to anyone over the age of 18. In July it announced new rules to slow the disease's advance. Houses of worship, malls and restaurants on Java and Bali, another island, have closed their doors until July 20th. Non-essential workers on those islands must work from home. Big roads in some cities have been blocked off. On July 10th, in a sign of its growing concern, the government announced that these restrictions would also be imposed in 15 provincial capitals outside Java and Bali. It may extend the curbs by six weeks.

For Dr Pandu, the government's efforts are too little, too late. He thinks measures to suppress the virus should be much stricter. The government says it will think about further restrictions. That will be little comfort to Mr Tri. ■



Independent publishing

The small print

BEIJING AND SHANGHAI

Despite strict controls, independent publishers are quietly flourishing

THE BEIJING International Book Fair, which takes place in August, gives the better-known view of China's publishing industry: state-controlled and gargantuan. The organiser, China Publishing Group, owns 40 of the 580 government-run firms that dominate the country's \$15bn book-publishing market—second in size only to America's. But another book jamboree, held one month earlier in the capital, shows a less familiar aspect. The abC Art Book Fair, which this year ran for three days from July 9th, is all that the other is not: independent, eclectic and lean. Readers piled in to buy and browse the works of 140 independent publishers (last year's event is pictured). It reflects a small but lively indie-publishing scene.

The government tightly controls printed matter. Publication codes, such as ISBNs, that must be used by all books and periodicals sold in China are allocated only to state-run publishers (half of them based in Beijing). Censors pore over works before

they go to print. The government gives another 200 privately owned publishers special permits to operate.

There are other small unofficial publishers scattered across China. They may be legally registered as businesses, but lack publishing licenses. At the latest abC fair, an event dating back to 2015, the majority of exhibitors were illustrators, comic-strip authors, photobook makers and publishers of what the industry calls zines (small pamphlet-like magazines). Some were papermakers, or studios offering high-quality printing by letterpress, silk screen or, more affordably, by Risograph.

For decades until "reform and opening" began in the late 1970s, only one retailer was allowed to sell books to the public:

Xinhua Bookstore, a state-run firm. But under Deng Xiaoping private publishers and bookshops were allowed to operate again, under close watch. Some bypass restrictions on circulation by designating their magazines as *neibu*, or for "internal" reading. That allows distribution among a limited group: *neibu* materials may not be sold to the public. Non-government producers of periodicals have to rent the required codes from state entities that no longer need them because the journals using them are defunct. Independent book publishers have to buy ISBNs from state counterparts, an arduous procedure. Small publishers sometimes purchase them in Hong Kong, where doing so is cheaper and far simpler. Such an ISBN does not give automatic access to China's market.

But independent publishers who keep their content free of anything the Communist Party might seriously dislike, and who limit their print-runs to just a few hundred, can still manage to thrive. "No one is doing this to resist" authority, says a magazine-maker in Shanghai. Another, in the southern city of Guangzhou, says she devoted one issue to technology, but avoided mention of debate about facial recognition. "I can't risk the magazine for one sentence," she says. "I want to survive."

Some publications are more daring. One is *Missionary*, a thoughtful magazine about gay life in China. (Official tolerance ▶▶)

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of gay rights is limited; see next story.) A recent issue was on sale at abC. It included discussion of the stigma surrounding pornography. Photography books sometimes push boundaries. Buried in the pages of one at the fair were a few scenes from the Cultural Revolution, showing people being persecuted by a crowd. The book's editor checked them with a friend at a state-run publisher, who did not think they would cause trouble (a few independent publishers scoff at the ability of censors to spot subtle censure). Some print in a mixture of Chinese and English, in part because they hope this will deflect criticism. State publishers have little interest in illustrated books for adults. So in 2018 Aki Jiang set up AKIPRESS to give herself and fellow artists an outlet. "Publishing through formal channels is so hard in China," says Ms Jiang. "I wanted to draw freely."

Officials appear fine with that, within limits. State publishers attend indie book fairs to scout for talent. One such event, called UNFOLD, which was first held in Shanghai in 2018, even receives subsidies from the local district-level government. Officials there are eager to jazz up the derelict industrial zone where the fair takes place. Such co-operation involves added scrutiny by censors. *Missionary* does not participate in UNFOLD.

Most authors and illustrators feel that Shanghai offers a more relaxed environment than the strait-laced capital. Indie publishers there, lacking the requisite codes for selling their work in conventional bookstores, instead put them in the city's cafés and boutiques. Officials overlook this transgression.

Independent book fairs have also sprung up in bigger inland cities where demand is growing among young, well-educated inhabitants. Bookshops are booming: 4,000 opened in China last year, despite the pandemic. Sisyphé, a big private chain, has spread to hundreds of malls. Chengdu in the south-west, home to more bookshops and libraries than any other Chinese city, subsidises new bookshops.

But the public can be a problem. Some readers use city-government hotlines to report on books they deem unsuitable for circulation. One customer at Bananafish, a bookshop in Shanghai, complained that it was selling a magazine from Taiwan, the government of which China loathes. In fact, the publication had been cleared for sale in China. Another called the hotline about an 11-page book, printed locally, called "The Old Man and the Pigeon". It is unclear how the work had offended. Perhaps the reader had seen sexual innuendo in an illustration of two birds, above a line that read: "mating pigeons". Local censors visited the shop. But they chuckled at the story. They took one copy away with them, and left the others. ■

Gay rights

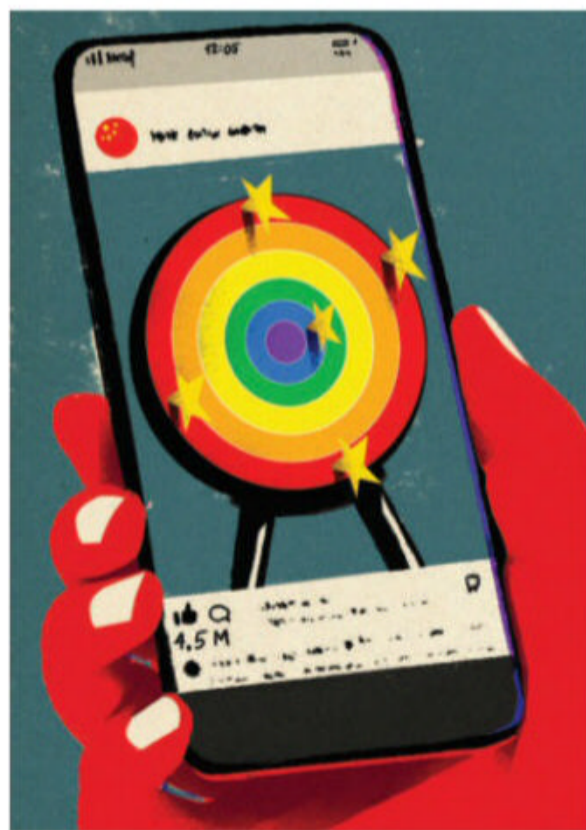
Patriotism and prejudice

Rising nationalism is making life harder again for gay people in China

TO FREE-THINKING users of WeChat, a social-media platform, it was a depressingly familiar event. Late on July 6th, those who tried to browse accounts run by LGBT societies at several universities in China were greeted with messages saying the forums, which had been used to publicise events such as webinars and film nights, had been closed for violating unspecified rules. The accounts had probably offended the government, which has little regard for the rights of sexual minorities and even less for freedom of speech.

In the past, such clampdowns have met resistance. In 2018 Weibo, a Twitter-like service, announced a three-month campaign to eradicate pornographic, gay and violent content from its services. In 2019 the platform shut down a discussion group called Les, aimed at homosexual women. It had 140,000 members. In both cases, online anger prompted Weibo to rethink. The service conducted the clean-up, but decided not to suppress content simply for being gay-themed. It allowed the lesbian group to reopen.

This time the online reaction has been more mixed. Many social-media users hailed the closure of the LGBT accounts as a victory for patriots. "External forces are trying to weaken China's competitiveness by spreading propaganda about LGBT to reduce China's fertility rate," wrote one blogger, gathering more than 66,000 views.



Some accused LGBT groups of trying to promote a "colour revolution" in China, a reference to uprisings against other autocratic regimes. Hongwei Bao of Nottingham University says popular nationalism in China sometimes adopts the language of the far right in the West. That includes anti-Semitic drivel: one Weibo user with nearly 150,000 followers described LGBT activism as "a culture war initiated by the Jewish elite and the white left". The term "white left" was coined in China a few years ago to describe Western liberals obsessed with identity politics. Now it is also used to insult Chinese who are deemed to sound like woke Westerners.

Homosexuality has long been vilified as foreign in China. But in the 2000s, as China grappled with rising rates of HIV/AIDS, the government dialled back the bigotry. In 2001 it removed homosexuality from an official list of mental disorders. Since then, at the UN and other international forums, it has gone further by endorsing the rights of LGBT people. At least in big cities, gay people have reported growing acceptance of their sexuality among fellow citizens. "The government doesn't really care," says Eric Wang (not his real name), who works for an LGBT-rights organisation in mainland China. "They've got more important things to do than oppress us."

But rising anti-Western sentiment is hampering this progress. Nationalists, egged on by the Communist Party, have become even more vocal during the covid-19 pandemic. They have trumpeted China's success in controlling the virus while heaping scorn on the West's fumbling response. Mr Wang says a growing number of Chinese, even those who know gay and transgender people, have started "believing in conspiracy theories". One is that all LGBT groups are funded by Westerners.

Seker Ma, a graphic designer in the eastern city of Suzhou who was involved with LGBT groups during his recent time at university, says the atmosphere for gay people in China has worsened in the past few months. "A lot of the current wave of patriotism takes this view: 'Whatever the West supports, we must oppose,'" says Mr Ma.

A worker at an LGBT-rights group in Beijing says that even some gay people think that Western countries use LGBT issues to attack China. Very few such organisations are officially recognised as NGOs—the government views them with deep suspicion. Most are able to operate only by registering as youth centres or charities related to HIV/AIDS. In the build-up to celebrations of the party's 100th birthday on July 1st, officials warned leaders of such groups to lie low. "We are very vulnerable," says the LGBT activist. Now nationalism may be posing an even greater threat to their work than the interference of security-obsessed bureaucrats. ■

Chaguan | Turning inward

Covid-19 fears are combining with rising nationalism to keep China closed



IT IS BECOMING clear that China will not, or perhaps cannot, re-open its borders soon. The reasons are many. Chinese leaders have declared that zero tolerance of covid-19 is a mark of good government. Officials are fired if cases are found on their patch, so they lock down whole cities to crush even tiny outbreaks. Ordinary Chinese associate the virus with fear and stigma, knowing that a single infected person may force thousands of neighbours, colleagues or classmates into quarantine.

The outside world stands for chaos. Propaganda outlets stress that new cases involve arrivals from abroad. State media describe foreigners, notably Americans, as too selfish, science-scoring and obsessed with individual rights to control the virus. Images of mask-less Westerners on crowded beaches or rampaging at anti-lockdown protests are a staple of Chinese news coverage. Lots of Chinese are cross about a lack of overseas praise for their country's strict approach. Their resentment is both sincere and stoked by propaganda that accuses American leaders of slandering China to cover up their cruel incompetence and 600,000 pandemic deaths.

Finally, though open discussion of this question is taboo, the authorities are being oddly secretive about how well Chinese-made vaccines work. Locally made jabs have been given to two-fifths of the population, with assurances that they are highly effective. But few data have been released about how Chinese vaccines cope with variants, or how long they work. This opacity is a problem. Many developing countries have relied heavily on Chinese shots. Indonesia and Thailand are among those now planning booster jabs with Western vaccines, at least for medical workers.

Chinese officials grumble that America and the European Union have yet to approve a vaccine from China. But in May, EU regulators trying to inspect a vaccine production site near Beijing were stymied by Chinese officials who insisted that those busy scientists would have to spend three weeks in quarantine. The government rejected an offer for them to fly in by charter plane for a brief inspection visit in protective suits.

Meanwhile, mainland China has yet to approve any foreign vaccines, including the most effective ones that use mRNA gene technology. Perhaps China wants to protect domestic drugmakers from competition, suggest foreign diplomats. Equally, China may

want to buy time for a locally made mRNA vaccine that is known to be in development. Given all these factors, it is not obvious how China will start to re-open, especially before some big events have safely passed. These include the Winter Olympics that Beijing will host next February and a Communist Party congress in late 2022, at which Xi Jinping is set to seek a fresh term as supreme leader.

For their part, foreigners who live in mainland China appreciate being in a country that has the virus under control: in spring 2020 hundreds of millions of Chinese spent weeks at home to break the chain of transmission, often without pay. But quite a few have also had enough. Surveys by the American and European chambers of commerce suggested the number of foreign residents in China had fallen by 30% in 18 months. International schools are braced for a fresh exodus this summer, it is said, including of teachers who have not seen families outside China for more than a year. This spring several embassies debated whether China should become a hardship posting reserved for diplomats without dependents. Their concerns include rules obliging all international arrivals, including children, to quarantine in a hotel for three weeks, and to enter an isolation clinic if they test positive. (Ambassadors may quarantine at home for 21 days, but only if their residence is a detached house and they are driven there with a police escort.)

In June Spain's consulate-general in Shanghai protested after a newly arrived Spanish citizen was made to sign documents that she could not read and undergo days of tests and MRI scans in a clinic. The Spaniard had apparently tested positive for antibodies, either as a result of having been vaccinated or after recovering from a bout of covid-19. Chinese officials declined to explain.

Foreign companies in favoured sectors can secure visas for executives, or for engineers who are needed to build advanced manufacturing sites that China wants. But even the largest such businesses struggle to obtain visas for the families of their expatriate staff. As many as half a million foreign students at Chinese institutions are stuck outside the country: their visas were cancelled in March 2020. Let them study online, Chinese officials tell diplomats who mention their plight. International tourism, both inbound and outbound, has ground to a halt.

China now issues a few visas for temporary business and family visits. But any further opening provokes nervousness. The southern province of Guangdong, hit by a recent virus outbreak, is building a quarantine clinic for international arrivals with 5,000 beds. Those foreign airlines allowed to operate limited flights into China are often running at 10% of pre-pandemic capacity. Visits by political leaders from abroad have largely ceased. Some foreign ministers have been admitted to China to meet their counterpart, Wang Yi, but only in provincial cities. Beijing, where top leaders live, is off limits. Mr Xi attends overseas summits by video-link.

China wants foreign know-how and respect, not foreigners

Chinese history has seen many cycles of opening and turning inward. Anecdote by anecdote, evidence is mounting that foreigners, whether suspected of bearing dangerous germs or ideas, are becoming less welcome. On a recent domestic flight, Chaguan's neighbour pointedly asked to move seats. It is growing more common to face demands from members of the public to agree that China is strong and the West failing. Nationalism and impatience with foreign criticism were on the rise before covid-19. The pandemic has sped up those trends—as it has inspired at times nasty anti-Chinese racism abroad. Mutual distrust will be hard to overcome until China re-opens. That may take a while. ■



Air mobility for humanity

Urban Air Mobility will add a new dimension to cities, changing the way we move, live and connect

In 2020 the aviation industry suffered what the International Air Transport Association (IATA) describes as “the worst year in history for air travel demand”, with figures showing international passenger demand dropped 75% from 2019 levels. “Aviation is one of the sectors that experienced a tremendous setback,” says Dr Jaiwon Shin, a president of Hyundai Motor Group and the leader of its Urban Air Mobility (UAM) division.

But despite the current crisis for aviation, the human need for connection remains unchanged, which Dr Shin considers a cause for optimism. The current bout of isolation “will actually make people feel how valuable the human interaction was, after being confined in their homes, having food delivered and not having their social interactions”, he says. As we approach the mid-century, he predicts that a resurgent need for connection will combine with the global trend towards greater urbanisation to swell demand for transport that UAM will be able to fulfil. “Consumption and purchasing is bouncing back, and I think transportation will probably go through a very similar cycle,” he says.

THE KEYS TO AIR MOBILITY: ELECTRIFICATION AND AUTONOMY

This demand for human interaction will drive adoption of the mobility solutions that Dr Shin’s division is bringing to market. Hyundai’s UAM initiative is built around electric, vertical take-off aircraft that have much in common with today’s small multi-rotor drones—though Hyundai’s much larger aircraft are built to carry people and more substantial cargo. The first vehicle expressing the Hyundai UAM vision was the S-A1, first unveiled in January 2020, and the first prototype is expected to begin test flights in 2024.

One of the biggest challenges for air mobility in an urban environment is covering short distances in anything other than a helicopter. “Two technology advances have really made UAM feasible: electrification and autonomy,” says Dr Shin. “Both of these started much earlier in the automotive industry with electric vehicles and self-driving cars.” Electrification allows motors and rotors to be distributed throughout the aircraft, making UAM vehicles quieter and safer, while the potential for autonomy will help Hyundai transition from being known as a vehicle manufacturer to an expanded role as a provider of “smart mobility solutions”.

“When you combine the human need for connection with the unwavering global trend towards urbanisation, the demand for urban mobility opening up the third dimension will only grow.”

Dr Jaiwon Shin,
president and head of Urban Air Mobility,
Hyundai Motor Company

ADDING A THIRD DIMENSION TO CITY LIFE

Urban air mobility has the potential to transform our cities, not just by introducing air mobility to the skies, but by making urban environments safer, cleaner and more liveable. UAM vehicles don’t need runways, airports or even roads. That will dramatically improve city life, spurring adoption. “The minute people experience flying over a traffic jam, that’s going to bring the tipping point pretty quickly,” says Dr Shin.

City air will be cleaner with electrified UAM, since it emits no particulates or other pollutants. Hyundai, known as a pioneer in hydrogen fuel-cell electric vehicles, is likely to put hydrogen technology into UAM vehicles. Powered by fuel cells or charged with zero-emission electricity, UAM will not contribute to climate change.

One of the greatest challenges facing the world’s big cities is lack of land, since growing populations need more roads, railways and parking spaces to serve them. “If 20% to 30% of urban land is no longer needed to support ground transportation infrastructure,” says Dr Shin, “maybe the city area could be small enough that people will like to walk.” Smart mobility will improve vehicle utilisation, saving on embodied energy and parking space relative to ground vehicles, which are only in use 10-15% of the time.

UAM has the potential to open up the sky. “We will be able to live in a truly three-dimensional world,” says Dr Shin. Imagine how different cities might be if office buildings and hotels were as easily entered from the roof as from the street. And while today’s airline passengers are bound to a schedule, in a smart

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mobility solution built around UAM, both ground and airborne vehicles will be available on demand. “I just push the button on my smartphone and something will be waiting for me at my doorstep,” he says.

INFRASTRUCTURE AND REGULATORY SUPPORT WILL ENABLE AIR MOBILITY

In 2017, there were already 1.32 billion cars and trucks on the world’s roads, while just 26,000 commercial jets currently handle global air travel. UAM utilisation will be somewhere in between. Achieving full urban air mobility will require several hundred thousand flying vehicles, and possibly millions of them. Morgan Stanley has predicted that the UAM market will grow to US\$1.5 trillion by 2040.

To make that valuation a reality will take appropriate regulation and infrastructure. “Just developing and introducing flying vehicles will do very little to open the market,” says Dr Shin. In the United States, the Federal Aviation Administration (FAA) applies a safety standard that there should be only a one in a billion chance of a “catastrophic event”. “People expect UAM will have the same safety standard,” he says.

Air-traffic management will be essential. During the 30 years he spent at NASA before joining Hyundai in 2019,

UAM: US\$1.5 trillion

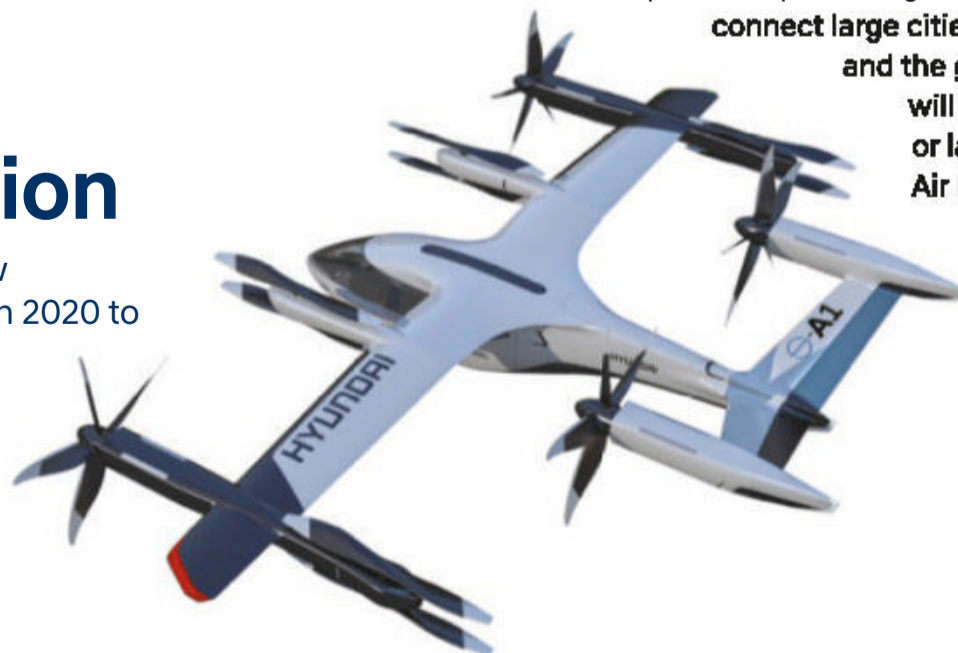
The UAM market will grow rapidly from US\$7 billion in 2020 to US\$1.5 trillion in 2040

Dr Shin started a research program to develop UAS Traffic Management (UTM), a system intended for drones. “UAM will have to build on the back of this UTM,” he says. Organisations like the FAA and businesses like Hyundai will have to work together to certify the new class of vehicles, and there will need to be production certification. “That’s also challenging, because we may introduce many new manufacturing technologies,” says Dr Shin.

CONNECTING PEOPLE’S FUTURES

Once the groundwork is in place, Hyundai will be in a position to build its UAM business to 30% of its total portfolio, covering both logistics and passenger transport. Hyundai is involved in every aspect of the value chain for mobility: not just vehicles, but aftermarket service, infrastructure construction and finance. That could let it offer a solution where Hyundai’s customers will be able to book journeys involving multiple modes of transport with a single app. “Hyundai Motor Group is an organisation that can actually be holistic and put all these necessary elements together,” Dr Shin explains.

Key milestones begin towards the end of this decade with the launch of the first, autonomous UAM vehicles in 2028. Hyundai also plans to operate regional air mobility (RAM) vehicles that **connect large cities** from the 2030s. “Human nature and the global trend of rapid urbanisation will not change,” says Dr Shin. “Sooner or later, people will need Urban Air Mobility.” And when they do, Hyundai will be there to meet them.





South Africa

Jacob's looters

JOHANNESBURG

Order must be restored quickly in Africa's most industrialised country

SHOPPING CENTRES should be a symbol of South Africa's progress. Their core customers, as well as their staff, are the black middle class that has grown since apartheid ended. In the past week, however, looters have destroyed malls in cities such as Pretoria, Durban and Johannesburg. Thousands of criminals have ransacked shops, departing unchallenged with their booty.

The mayhem does not end there. Arsonists have burnt lorries along the country's major motorway, forcing its closure. Vandals have attacked infrastructure, including industrial warehouses and more than 100 telecommunications towers. The country's largest oil refinery is shut. Rioters have blocked roads used by nurses and doctors to reach hospitals dealing with a massive third wave of covid-19. Ambulances have been attacked. Vaccination sites have shuttered. Thousands of businesses have been wrecked; many will never reopen. Food, petrol and medicines are in short supply in the province of KwaZulu-Natal (KZN) and parts of Gauteng, which contains Johannesburg. At least 72 people

have been killed and more than 1,234 arrested. The worst violence since the dawn of democracy in 1994 not only threatens the presidency of Cyril Ramaphosa but shows how his enemies can exploit the weakness of the post-apartheid state.

In South Africa there are plenty of sources of discontent. The official unemployment rate is the highest in the world, according to the World Bank. Gaping inequality means a minority enjoys a rich-world standard of living while most people struggle to get by. Parts of the country regularly go without power and water. The police are a blend of incompetence and cruelty. The pandemic has made life harder in every way. And when corruption is rampant, some ask, what is raiding a super-

market compared with looting a state airline or the national energy company?

But the riots are not random. They have been urged on by supporters of Jacob Zuma, the former president whose faction of the ruling African National Congress (ANC) wants to topple Mr Ramaphosa. On June 29th the Constitutional Court sentenced Mr Zuma to 15 months behind bars for refusing to appear before a judge-led inquiry into corruption during his time in office from 2009-18. Just before midnight on July 7th, as the highest court's deadline for the police to arrest him approached, Mr Zuma was taken into custody. His allies, including family members, then spread misinformation about the basis for his arrest and encouraged unrest. His foundation called it the "righteous anger of the people...which others have characterised as violence", in response to the "violent provocation" of his sentencing.

Some Zuma supporters may have done more than applaud the destruction. In a veiled reference to the Zulu nationalists who make up Mr Zuma's base, Mr Ramaphosa said on July 12th that "there may have been some people who sought to agitate for violence and disorder along ethnic lines." The next day, Ayanda Dlodlo, the State Security Minister, said the government was investigating whether former agents of the domestic spy agency and senior ANC members aligned with Mr Zuma had actively organised some of the violence. On July 14th *News24*, a South African outlet, reported that the government was

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▶ looking into allegations that Thulani Dlo-mo, a Zuma-era spy boss and former ambassador, was one of the instigators.

Some 25,000 troops will soon be deployed, said the defence minister on July 14th. They are needed. In KZN, Mr Zuma's stronghold, the violence was still unabated as *The Economist* went to press. Police were conspicuous by their absence at the sites of some of the worst criminality. The first state of emergency since the apartheid era is being considered, according to government ministers. Several business groups are pleading for it.

As is often the case, South Africans let down by the state are taking matters into their own hands. In parts of KZN, armed neighbourhood groups are controlling entry to and exit from their areas. The country's many private-security firms, which between them have more than three times as many guards as there are police officers, are patrolling suburbs and defending businesses. In Johannesburg townships, such as Alexandra and Soweto, community groups are banding together to protect malls and sweep up the broken glass.

Recovery will take years. Some South African business owners, teetering after years of slow growth, will give up or go overseas. Some foreign investors will look at the chaos, see every bad stereotype about South Africa confirmed, and put their money elsewhere. Already strained public finances will be hit by the cost of rebuilding infrastructure and of payouts from a state insurer used by firms to cover against riots. Even after trashed, burned buildings have been repaired, the damage to the social fabric may prove enduring.

Mr Ramaphosa has defined his presidency as the opposite of Mr Zuma's. In his speech on July 12th he told the country: "This is not who we are as South Africans. This is not us." He pledged to "restore calm and order". But if his government does not do so soon, it will cement the malign legacy of his predecessor and emphasise his own weakness. Mr Zuma may no longer be in charge. But is anyone? ■

Sudan

Unlikely bedfellows

KHARTOUM

A general, a warlord and an economist vie to run a would-be democracy

A STALWART OF the previous regime, now in charge of dismantling it. A camel-rustler turned warlord, now ensconced in a palatial home. And an avuncular economist, who once was a communist.

These are unlikely bedfellows. Yet they are entrusted with the task of building democracy in Sudan. Barely two years after a ruthless Islamist despot, Omar al-Bashir, was deposed, they are supposed to be shepherding the country towards elections in 2024. "We call it the Sudan model," smiles Abdalla Hamdok, the economist (below left). He is the prime minister appointed by protest leaders in 2019. "A model of partnership between civilians and the military, paradoxically, to bring democracy."

That model emerged from a power-sharing pact struck in 2019 between leaders of the protesters, who had first taken to the streets eight months earlier, and the generals who had tossed out Mr Bashir when it became clear he would fall. At the top is Abdel-Fattah al-Burhan (centre), Sudan's de facto president and chairman of the sovereign council, a military and civilian body that oversees Mr Hamdok's mostly civilian cabinet. Burhan is a general who rose to prominence under Mr Bashir.

Beneath him is a desert warlord, Muhammad Hamdan Dagalo (known as Hemedti). He heads the Rapid Support Forces (RSF), a paramilitary unit that grew out of the Janjaweed, militias notorious for rape and butchery of civilians in the Darfur region. Mr Dagalo (pictured right), now dep-

uty chairman, rose to power through ruthlessness towards rebellious Sudanese. Today he is jostling for primacy in a struggle that may determine whether Sudan's third attempt at democracy since independence from Britain in 1956 also ends in failure.

Each tells *The Economist* that the spirit of unity is undimmed. "All components of the transition work together in harmony," says General Burhan. As evidence he points to successes: a peace deal signed with armed rebels, and the repeal of repressive laws, such as one that banned women from wearing immodest clothing.

General Burhan also highlights the restoration of full ties with America and Israel, which prompted America to remove Sudan from its list of state sponsors of terrorism. This has paved the way for Sudan to win relief on more than \$56bn of its debt. "Our international isolation of more than 30 years is now over," says the general.

But behind the façade of camaraderie tension runs deep. Speaking more candidly than his colleagues, Mr Hamdok warns of a "political crisis" stemming from three challenges that could derail the transition. The first is division among civilian leaders. "This was probably the broadest coalition the country has seen for decades," Mr Hamdok explains. "It managed to topple the dictatorship. But immediately afterwards we started seeing cracks and divisions." Several of its members have withdrawn from the coalition and returned to the streets. Those that remain squabble ov-▶





er jobs and government portfolios. Critics blame Mr Hamdok's aloof and timid governing style for failing to maintain unity.

The fragmentation makes it harder for the civilians to handle the prime minister's second challenge: to rein in the army. Mr Hamdok says he had "very frank discussions" with the generals early on about the army's excessive power over the economy. General Burhan says this has ended, but that stretches credulity. Several firms which used to belong to Mr Bashir's family, for instance, now belong to the army.

General Burhan, meanwhile, has emerged as the most powerful and effective of the three. He has muscled in on foreign policy, which is Mr Hamdok's job. He has strengthened Sudan's relationship with Egypt and overridden civilian objections to the deal with Israel last year. He has also burnished the army's nationalist credentials by taking back control of disputed territory on the border with Ethiopia (see box). "Burhan is a shrewd general," says Yasir Arman, a former rebel who is now advising Mr Hamdok. "He bought time to shore up the army's position. And now it is stronger than ever."

But General Burhan's assertiveness may have exacerbated the third problem Mr Hamdok identifies: fragmentation within the armed forces, and competition between the army and the paramilitary RSF. Created by Mr Bashir as a counterweight to the army and the intelligence service, the RSF has its own command structure and funding. As part of the power-sharing deal, Mr Dagalo is supposed to integrate his forces into the army, which would mean giving up some of his power. The general says this will happen "in the right time". Mr Dagalo insists it has already happened.

But this superficial harmony could quickly evaporate. In June the RSF and the army began barricading their respective headquarters in Khartoum with sandbags. "It had reached a point where they could have been killing each other on the streets," says Shaddad Hamid Mauwid, an academic at Khartoum University. Talks

Al-Fashaga

The most dangerous place in the Horn

AL-FASHAGA

Why nerves are jangling on the border between Ethiopia and Sudan

AT FIRST SIGHT it looks an unremarkable place. Open savannah scattered with thatched-roof homesteads. Bumpy and unpaved roads. Upturned soil that appears rocky and blackened.

But then come Sudanese soldiers. One is on a tractor. Another walks through a field, cigarette in one hand, rifle in the other. Tanks face east towards Ethiopia.

For eight months this slice of fertile farmland known as al-Fashaga has been on a war footing. Army camps have sprung up across fields of sesame and sorghum. There are thought to be tens of thousands of soldiers on the Sudanese side. Nobody knows how many have been deployed by the Ethiopians. But after months of skirmishes and some small battles, many fret that just one spark could trigger a full-blown war.

The conflict dates back to the early 20th century, when the British who then ruled in Khartoum signed border treaties with Ethiopia placing al-Fashaga inside Sudan. Ethiopia has long disputed them. But an uneasy compromise established between Sudan's former dictator, Omar al-Bashir, and Ethiopia's late prime minister, Meles Zenawi, allowed Ethiopians to till the land, provided they recognised Sudanese ownership of the area.

That bargain ended in November when war erupted in Tigray, a northern Ethiopian region which borders al-Fashaga. Abiy Ahmed, the Ethiopian prime minister, asked the Sudanese to seal the border to stop the Tigrayans from smug-

gling in supplies. Sudanese troops moved in and expelled thousands of Ethiopian farmers. Ethiopian officials called it an invasion and sent in reinforcements backed by units from neighbouring Eritrea.

Some reckon that Sudanese generals, including the de facto president, are using the threat of war to strengthen their hand within Sudan's interim power-sharing government (see main story). Also, several army officers are known to own land in al-Fashaga. But the civilians sound as incensed as the generals. "We are actually very surprised by the [Ethiopians'] rhetoric," says Abdalla Hamdok, Sudan's civilian prime minister. "You can't invade your own land!"

Aggravating matters is the Grand Ethiopian Renaissance Dam (GERD) being built by the Ethiopians on the Nile near the border. Abiy's government suspects dirty tricks by downstream Egypt, which it believes wants to scupper the dam. "If you search for the cause of every problem, you find the GERD behind each of them," said Abiy in March.

In June rebels in Tigray seized control of most of their region. Some of Abiy's defeated troops are now being sent to reinforce those on the border with Sudan. His government has also indicated that it will blockade Tigray in order to weaken its leaders. If so, the rebels are likely to fight for access to the Sudanese border—making al-Fashaga the civil war's next front line.

between General Burhan and Mr Dagalo have since calmed nerves. Some reckon the general may have agreed to postpone integration indefinitely. Yet that would put him at odds with Mr Hamdok, who feels Sudan should "have one national army".

Big questions remain about Mr Dagalo. Few doubt he has presidential ambitions. (Over a sumptuous breakfast at his home he tells *The Economist* he has been taking English and French lessons.) But his footing looks a bit shaky. Saudi Arabia and the United Arab Emirates, which used to pay for thousands of his soldiers to fight in Yemen, no longer have much use for him. And the death of Chad's dictator, Idriss Déby, has deprived him of another regional ally. Recent visits to both Qatar and Turkey suggest he is seeking new friends.

Perhaps in a sign of anxiety, Mr Dagalo warns of a "coup" by people tied to the old regime. Though this is unlikely, Islamists

from Mr Bashir's former party may conceivably ally with factions in the army to force Mr Dagalo out, notes Jean-Baptiste Gallopin, a French researcher. This could set off fighting across Sudan. Yet other observers believe Mr Dagalo himself would pose a bigger threat to the transition, should he fear for his economic interests—or his freedom. An investigation into a massacre of over 100 protesters in 2019 may point the finger at his gunmen.

Mr Hamdok has been sounding the alarm. In June he warned of civil war if the armed factions are not unified in a single army. He has set a deadline for forming a legislature with civilians in charge and called for a constitutional convention to clarify the place of the army in politics. "For all the years since independence to today, we have been dominated by the military," he says. The civilians have a chance to reverse this. But only a fleeting one. ■

Jordan

Courting trouble

A trial in Jordan has exposed the fissures in King Abdullah's rule

FOR KING ABDULLAH it is like old times. On July 19th he will be back in the White House, the first Arab leader to meet the new president. Gone are the cast of old antagonists, Donald Trump and his chum, Binyamin Netanyahu. President Joe Biden has ditched Mr Trump's "deal-of-the-century" for Arab-Israeli peace, which had sidelined Jordan and its king. Naftali Bennett made Amman, Jordan's capital, his first foreign destination as Israel's new prime minister. Without Mr Trump's support, Saudi Arabia has backed off from trying to supplant Jordan as the custodian of Jerusalem's holy sites. Confident of this geopolitical realignment in Jordan's favour, Abdullah and his queen, Rania, have taken a three-week jaunt around America.

Back home, though, Jordan is seething. Bedouin tribes, historically the regime's bedrock, openly challenge the king, who has reigned for 22 years. "I've never seen such dissent," says a former official. "It's seeping into the heart of the system itself."

On July 12th Jordan's State Security Court sentenced two of the king's former confidants, Bassem Awadallah and Sharif Hassan bin Zeid, to 15 years in prison for plotting against the monarch. The trial was quick, closed and devoid of key witnesses. No army officers were charged, casting doubt on the prosecution's claim that a coup was being planned. Lawyers for the accused could not call as a witness the alleged chief protagonist, Prince Hamzah,

the king's half-brother, because he is under house arrest.

Instead of uniting Jordan behind the king, the case has inflamed tensions. Several Bedouin tribes, a minority who fear losing their dominance to the descendants of Palestinians, have pledged their allegiance to the prince. One of their parliamentarians led protests waving a sword. (He was subsequently jailed for threatening to shoot the king.) Protesters praise Hamzah's fluent Arabic, deep tribal connections and facial resemblance to their beloved former king, Hussein, and deride Abdullah's Western upbringing and ties by marriage to Jordan's Palestinian majority. They call him an American lackey and chant in English—"so he'll understand".

In the past the king (pictured below) has bought off the tribes by offering them jobs in the security forces. But the country's economic woes are stoking anger. Covid-19 has hit the mainstays of tourism and remittances. Oil-rich Gulf states have been cutting aid and investment. Debt is set to reach 118% of GDP this year. Almost two-thirds of young Jordanians are jobless.

With no vision for recovery, the king rarely addresses his nation. America already gives \$1.5bn annually (making the country America's second-largest recipient of aid). Israel has direct flights to the Gulf and no longer needs Jordan as a stepping stone to the Arab world and beyond. For appearances ahead of his visit to America, the king has appointed a commission stacked with toadies to consider political reform. But he prefers to stifle dissent than listen to it. He closes trade unions and curbs civil liberties. This year Freedom House, a think-tank in Washington, downgraded Jordan's ranking from "Partly Free" to "Not Free". The king's meeting with Mr Biden may offer him a photo opportunity. It will not cure his country's ills. ■

Israel and China

The enemy of my friend

JERUSALEM

Israel must choose between an alliance with America and trade with China

THE ADVISORY Committee to Inspect National Security Aspects of Foreign Investments is the dull title for one of the more secret and sensitive bodies in the Israeli government. Its membership is unknown and meetings are held under a blanket of opacity. It is essentially a committee to assess deals with China. It was set up in 2020 after pressure from America, which was concerned that China could be getting Israeli weapons technology. The committee's chilling effect on trade and ties with China is already being felt.

Although there is no official policy or written directive banning Chinese investments in key areas of the economy, there has been a marked slowdown in new deals. "The Americans made it clear to us that they would not accept any Chinese involvement in critical infrastructure and Israel belatedly got the message," says a former Israeli minister in the government that left office on June 13th.

In May 2020, for instance, Israel rejected a bid by Hutchison Water, a Chinese firm, to build a desalination plant. Chinese firms are still involved in previously signed infrastructure projects, including the new Tel Aviv light-rail network. But Israel, under American pressure, is discreetly trying to replace the Shanghai International Port Group, which is set to manage a new container terminal in Haifa Port, with an Emirati company.

"In the past we got a lot less guidance from the government on how to do business with China," says one Israeli executive who has spent over a decade working on Chinese investment. "Now things are a lot clearer. They can invest in fields like food-tech and fintech, but not in anything cyber- or security-related and not in infrastructure." Chinese investment in Israeli tech companies has fallen from 72 deals in 2018 to 45 in 2020. This can be explained partly by the pandemic and new regulations within China on foreign-currency transfers, but also by what one Israeli diplomat calls the "recalibration of relations".

"Under Netanyahu, Israel felt that it could have its cake and eat it—do business with the Chinese without the Americans being angry with us," says Doron Ella, an expert on Israel-China relations at the Institute for National Security Studies, a think-tank in Tel Aviv. "It took Israel time to realise the extent to which the US now sees China as its chief rival." ■



My crown I am



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Germany

Auf Wiedersehen, Amerika!

BERLIN

As Angela Merkel prepares to bow out, Germany's export-driven foreign policy is being challenged

ANGELA MERKEL and Joe Biden will dine together on July 15th in Washington during what is almost certain to be her final trip to America as Germany's chancellor. The date is a reminder of the unique closeness of the two allies. It is the 75th anniversary of the arrival in Bremerhaven of the first CARE packages (Co-operative for American Remittances to Europe), parcels of food and supplies that prevented starvation for many in war-ravaged Germany.

There will be a great show of warmth between the lame-duck chancellor and the American president. Mr Biden is trying to mend relations with America's closest allies after Donald Trump treated them with scorn. But the love-in will have its limits: on Russia and China, Germany and America are not aligned. "Russia is work in progress between the two allies, but there is a wide gap in what is the right strategy for China," says Charles Kupchan of the Council on Foreign Relations, a think-tank.

Despite rumblings of discontent at home, even within her own party, Mrs Merkel continues to stick to her course in many of her dealings with Moscow and most

of her relationship with Beijing. This has become an acute problem with Nord Stream 2, a €9.5bn (\$11.2bn) undersea pipeline, fiercely opposed by America's Congress, that will bring natural gas from Russia's Yamal peninsula to the German coast, circumventing Ukrainian and Polish transit routes. The project is expected to be completed in August.

"Nord Stream 2 is a heavy millstone around our necks that is harming our credibility," says Wolfgang Ischinger, a former German ambassador to America. The pipeline has largely nullified the credit Mrs Merkel won for press-ganging other Europeans into imposing sanctions against Russia after its annexation of Crimea in 2014. In May Mr Biden attempted to defuse the row by waiving sanctions on the company building the pipeline and on Matthias Warnig, a former East German intelligence officer who is its chief executive. But he needs something in return, as Congress looks likely to demand fresh sanctions next month.

Mrs Merkel is expected to achieve a compromise so that Mr Biden can placate

congressmen. Germany could promise that it would turn off the gas coming through Nord Stream 2 if ever the Russians stopped the transit of gas through Ukraine, which fears the loss of transit fees. It could bolster Ukraine by helping it develop new sources of revenue and energy infrastructure. Lastly, it could help to pay for the American-fostered Three Seas Initiative, an effort to modernise infrastructure, including ports and pipes, between 12 eastern members of the European Union that is needed to switch to liquefied natural gas from America or other suppliers.

Like her predecessors Mrs Merkel has tried to balance loyalty to Germany's allies with attempts to engage with adversaries economically. Yet whereas Willy Brandt's *Ostpolitik* (eastern policy) was one of the ►►

More Handel than Wandel

Germany's trade with China

Exports and imports, \$bn



Sources: Destatis; Bernstein

VW China passenger car sales, as % of global VW car sales



▶ most successful doctrines of the post-war years, *Wandel durch Handel* (change through trade), the mantra of the past two decades, is a distortion of *Ostpolitik*, argues Hans Kundnani of Chatham House, a British think-tank. *Ostpolitik* at least had reunification as a strategic objective: the idea of political change through trade is often little more than an excuse for closer commercial ties with autocratic regimes. It is one of the reasons that other EU leaders recently scuppered Mrs Merkel's push for the first EU summit with Vladimir Putin since the Russian president annexed Crimea.

Until a couple of years ago Germany's China policy was guided mainly by *Wandel durch Handel*, promoted in particular by the big carmakers that are Germany's most important industry. Over the past ten years China has become Germany's biggest trading partner, with goods exchanges growing to \$243bn last year. And Volkswagen, Europe's biggest carmaker, now sells more than 40% of its passenger cars in China (see charts).

But German enthusiasm for doing business with China has abated. At the start of 2019 the BDI, the main German industry association, published a paper calling China a "systemic competitor" and outlining its concerns about high barriers to entry, state subsidies to local firms and other distortions in the Chinese market. Siegfried Russwurm, the BDI's boss, recently said that Germany needs "an honest discussion about how we deal with autocratic trading partners". Human rights are not an internal affair, insisted Mr Russwurm, describing as "unacceptable" China's treatment of the Uyghurs, a Muslim minority.

Policies are changing too. A new law requires German firms with more than 3,000 employees to prove by 2023 that their supply chains are free of human-rights abuses (from 2024 it will apply to those with more than 1,000). Penalties for infractions can be 2% of a company's annual revenue.

Even so, Mrs Merkel is sticking to her policy of treating China with kid gloves. She was loth to ban Huawei, a Chinese firm, from bidding for contracts to build Germany's fifth-generation telecoms networks, as America wanted. In the last days of Germany's rotating presidency of the EU last December, she pushed through a treaty that is meant to grant European firms better access to the Chinese market. This irritated the incoming Biden administration, and has been blocked by the EU parliament. And in June Mrs Merkel made fellow G7 leaders water down their summit's final communiqué to avoid upsetting China.

Will Mrs Merkel's successor chart a different course? Of the three people vying to replace her after an election in September, two give the impression they are not aware of the extent of the challenge posed by Russian and Chinese aggression, says Con-

stanze Stelzenmüller of the Brookings Institution, a think-tank. Armin Laschet, the Christian Democratic (CDU) candidate, and Olaf Scholz of the Social Democrats make feeble arguments about America wanting a "new cold war" and trying to force Europeans to "decouple" from China.

In contrast Annalena Baerbock, the Greens' candidate, wants to stand up to Russia and China. But her chances are receding, with the latest polls giving the Greens less than 20% of the vote while the CDU and its allies hover around 30%. As a potential junior partner she would carry some weight on China and Russia policy, but it is hard to say how much; her priority would be climate change. That is why Mr Biden will listen to Mrs Merkel, even though she is on her way out. Her successor is likely to follow her faithfully. ■

Moldova

An anti-corruption party triumphs

Moldova has a chance to clean up. Bulgaria, not so much

SHE IS SLIGHT, polite and gets what she wants. On July 11th the party founded by Maia Sandu, Moldova's president, won parliamentary elections by a landslide. Over the past two years Ms Sandu (pictured), briefly prime minister in 2019, has seen off a local oligarch and has now dispatched the men from Moscow, too.

Moldova is one of Europe's poorest countries. Weak institutions have made it even poorer. From 2012 to 2014 almost \$1bn, or 12% of the country's GDP, was stolen from the country through its banking



The Vlad impaler

system. Most of those believed to be responsible are still at large. From 2013 to 2019 Moldova was controlled by an oligarch, Vlad Plahotniuc, prompting the Council of Europe, which promotes human rights and democracy, to label it a "captive state". Mr Plahotniuc used to claim he was pro-Western and that Moldovans should vote for him to stop their country falling into the hands of pro-Russian parties.

Ms Sandu founded a reformist party in 2016. Though harassed and bullied, it grew. In 2019 she struck a deal with Igor Dodon, the president at the time, and became prime minister, prompting Mr Plahotniuc to flee the country. But Mr Dodon, close to Vladimir Putin, Russia's president, later turned on Ms Sandu and engineered her removal as prime minister. Undeterred, she beat him in presidential elections last year. Now her victory is complete.

Unlike Moldova's pro-European politicians in the past, she appealed not only to Romanian-speakers (the majority) but also to Russian-speakers, who often get their news from Moscow's propagandists. Corruption hurts everyone, she says, except the bribe-takers. A recent UN study estimates that illicit financial flows, from tax evasion to organised crime, cost Moldova \$1bn a year. If a tenth of that could be recovered, it would pay the salaries of 20,000 teachers. Such brazen looting has hastened an exodus of Moldovans that has been swift even by eastern European standards. In 1989 Moldova had 4.3m people; now it has fewer than 3m.

With her hands on all the levers of power, Ms Sandu now has a unique opportunity. Her government must now clean up the judiciary, she says. Vadim Pistrinciu, a reformist former MP, agrees but adds that if the government moves too slowly, a historic chance to break the link between the judges, the oligarchs and the media they control will be lost. They will regroup fast, he says. "Unless their power is smashed within six months, they will never leave."

To the south, Bulgarians also voted on July 11th, with less happy results. They had already done so in April but neither the then incumbent prime minister, Boyko Borisov, nor the opposition was able to form a government. It is unclear if the situation is much different now. A stream of allegations of corruption and gangsterism, always denied, has eroded support for Mr Borisov. But there is no love lost between his many enemies.

Mr Borisov's party was pushed into second place by that of Slavi Trifonov, a former TV showman. Then Mr Trifonov shocked the other anti-Borisov parties by declaring "coalition" to be a "dirty word". He presented a take-it-or-leave-it proposal that he should lead a minority government. The other parties seem to have left it. ■



Viticulture

The grapes are off

Climate change is affecting the flavour of Europe's wines

IN THE FOOTHILLS of Chianti Classico in central Italy, Elena Lapini and her husband make their way down neat rows of grapevines and inspect their fruit. The grapes are ripening too fast under the blistering sun. Too much bronzing on the vine and they will wither into raisins, turning the wine into a syrupy, unpleasant blend. Getting the harvest date right is crucial for this reason, Mrs Lapini says. But climate change is making it increasingly hard.

An analysis of harvest dates going back to 1354 from Burgundy in France found that air temperatures have increased so much that grapes are now harvested two weeks earlier than in medieval times. Higher peak temperatures have become the norm, with the biggest jump over the past 30 years. Elizabeth Wolkovich, a biologist at the University of British Columbia researching the impact of climate change on vineyards, says rising temperatures are also changing the taste of wine itself.

For some cooler regions, warming conditions have allowed winemakers to grow more flavourful berries and enjoy longer growing seasons. Germany, best known for its Riesling white wines, has become more favourable to the heat-loving grapes used to make reds like pinot noir. Parts of rain-soaked Britain now have the perfect climate to make sparkling wines, giving British bubbly from Kent and Sussex a fair fight against French champagne. But warmer places like France, Italy and Spain have had a rotten deal. Ripening grapes at a higher

Greece

Electric island

ATHENS

An experiment in low-carbon living

ABUTTERFLY-SHAPED island in the central Aegean hopes to become Greece's first carbon-free tourist destination. Under a deal with the government, Volkswagen, a carmaker, has donated several new electric vehicles for use by Astypalea's public services; it will sell others at cost price to its 1,200 year-round residents. In return, the government has bumped up subsidies for islanders to buy electric cars and will build a hybrid solar and wind-fuelled power plant to replace a cluster of polluting diesel-fired generators.

Unlike other nearby islands, Astypalea is not connected to Greece's electricity grid. With only 3,000 rooms for visitors in small hotels or flats, tourism is still low-key. Many residents make a living the old-fashioned way: raising goats, keeping bees and fishing. The island was selected for Volkswagen's e-mobility experiment after Nikos Komineas, the go-ahead mayor, contacted the transport ministry for help in finding an electric bus to try out on its rugged roads.

Most islanders sound keen on the project. Mr Komineas expects the number of private cars on Astypalea to fall by a third over the next five years. Its residents, he says, will get around on e-scooters and electric minibuses, which will be free, linked to a mobile-phone app and available round the clock.

Some observers detect a whiff of

greenwashing. A tender for a solar park that would generate half the island's electricity within three years will not get under way before the tourist season ends. A single wind turbine will be installed only in 2026, assuming the licensing process goes smoothly. That is not normally the case in the Aegean, where islanders worry that tourists will go elsewhere if the view is spoiled by a turbine 200 metres high. And even then, the hybrid power unit is planned to cover only about 80% of summer demand. But it is a start.



Helios triumphant

temperature means more sugar and less acid in the berry, making high-alcohol, honey-like wines.

Climate change is threatening the world's wine supply, not just the wines' flavour. In April producers in Italy and France found themselves lighting thousands of bucket-sized candles to warm the air and ward off a killer frost that threatened to destroy buds emerging with the first warm spells of spring. It wasn't enough. In some regions the frost wiped out 90% of the crop, resulting in an estimated €2bn loss. French officials described it as "probably the greatest agricultural catastrophe of the beginning of the 21st century".

Scientists concluded that the plants were coaxed to bud early by record-breaking temperatures in March. This made the chilly nights of early April particularly damaging. Climate change may make such events more common.

Some regions are better dressed for the weather; 51% of Europe's shrublands are

vulnerable, compared with just 7% in North America. Part of the problem is that European species are not well-adjusted to a warming world. They bud early, quickly reacting to warming air temperatures only to die once they suddenly drop. North America, by contrast, harbours cautious species with adaptive strategies. They do not bud until they have experienced a sufficiently long winter, regardless of short warm spells in spring.

Geographical differences help explain why. With no east-west mountain ranges in North America, warm air from the Gulf of Mexico and cold air from Arctic regions move freely across the continent, creating large fluctuations in temperature over short time periods. Constantin Zohner, a biologist at ETH Zürich, jokes that plants don't want to take any risks in such an unpredictable climate. European winemakers, he reckons, need to take note and plant more resilient and diverse varieties of vine. There is no time to lose. ■

Charlemagne | A less than jolly green giant

The EU is better placed than national governments to set green standards. This will be painful



A SIMPLE RULE applies when analysing an EU scheme: the sillier something's name, the more important it is. When the EU launched €750bn of common debt, it came under the seemingly Star Trek-inspired title of Next Generation EU. The European Semester, which makes little sense in any of the club's 24 languages, dictates whether a government's budget fits with EU spending rules. Schengen, the radical experiment in passport-free travel across an entire continent, is named after a nondescript village in Luxembourg. Nomenclature of Territorial Units for Statistics is a vital tool for dishing out EU funds, turning Europe's map from a land of wiggly rivers and mountains into a patchwork gerrymandered by cynical officials aiming to scrape up cash. It is better known by a satisfying French acronym: NUTS.

"Fit for 55" is the apogee of this rule. What sounds like a gentle aerobics class for the middle-aged is in fact a series of sweeping environmental reforms that will set the direction of climate policy for the next decade. In a glut of legislation, the European Commission put forward 13 proposals with the aim of slashing emissions to 55% below their 1990 level by 2030. Carbon-intensive imports, such as industrial materials, face a levy at the EU's border for the first time—which is already causing grumbling among trade partners (see *Free exchange*). Sectors once exempt from emissions-trading schemes, such as transport and domestic heating, will have to pay for the carbon they spit out. Those already covered will have to pay more. Cars with internal combustion engines will disappear from European forecourts by 2035.

Speak to the more enthusiastic officials and they claim this is nothing less than a revolution, changing the way Europeans live, determining the EU's place in the world and providing the bloc with a purpose for a generation. It is, in their mind, a legislative "big bang" on a par with the creation of the single market or even the euro. Speak to others and all they can see is an almighty political fight brewing.

Climate should be a perfect topic for the EU. At heart, the club is a bet that nation states are a 19th-century invention no longer fit for the 21st century. Climate policy is an area where this argument is strongest. Solo national efforts are absurd. There is little point in Austria going green if petrol-guzzling Audis spew out emis-

sions on German autobahns, or in the North Sea filling up with Danish wind turbines if Poland still relies on coal.

Environmental policy is also a fine canvas for the EU's geopolitical ambitions. The EU fancies itself as a standard-setter: if the EU goes green, other countries will follow, runs the logic. What the EU lacks in hard power, it makes up for with regulatory clout. The "Brussels effect" allows EU regulations to ripple out from Belgium to Borneo. A combination of the EU's economic size and its (usually) exacting standards means that other governments tend to adopt its rules too to save their businesses from having to abide by multiple codes.

Climate policy is the first big area where the "Brussels effect" will be properly tested. On issues such as online privacy, where the EU's norms have become global ones, countries and companies fall in line because it is not especially expensive to follow suit. Likewise, timber producers in Indonesia have to abide by EU rules otherwise they will not be able to sell into its market. In short, the Brussels effect works when following EU rules is an easy or obvious compromise to make. Expecting other countries to mimic an expensive carbon-trading system is a much bigger ask—particularly when all it guarantees is access to a market that will only shrink as a proportion of the global economy. "Fit for 55" will demonstrate how much soft power the EU can actually wield.

With this potential comes peril. Environmental policy has long been an EU-level matter, but it is one that has traditionally been dealt with away from voters' eyes, as businesses have been forced to deal with the consequences and quietly pass the bill on to consumers. Now voters will be asked to give up petrol cars, take fewer flights or pay far more for heating. They may rebel, as the *gilets jaunes* did in France in 2018 when fuel prices went up. Now this tortuous debate will be played out primarily on a European stage, rather than a national one. Frans Timmermans, the Dutch commissioner overseeing the package and the main remaining exponent of British English within the EU's institutions, declared that reaching the target would be "bloody hard".

Good cop, green cop

Climate policy is, after all, meant to hurt. Some behaviour is supposed to become more awkward and expensive. This rubs against the EU's previous interactions with most citizens, which were to make things easier and cheaper: as in cut-price flights or the abolition of mobile-phone roaming fees. When it comes to environmental policy, European institutions will find themselves in the role they reluctantly played a decade ago during bail-out programmes in southern Europe: the face of unpopular reforms. Rather than representing the ability to fly from Amsterdam to Athens for the price of a round of drinks, the EU will come to be associated with the steep tab for going green.

Slashing emissions is a rotten problem for the officials, politicians and diplomats who must solve it. The costs come now and the benefits are reaped only in a generation, points out Elisabetta Cornago of the Centre for European Reform, a think-tank. Industry lobbyists are happy to accept targets for climate neutrality by 2050, when they will have retired but—funnily enough—not by 2030 when they will mostly still be in their jobs. Voters, too, are keen on going green, yet do not expect any aspect of their lives to change significantly. National politicians have a choice: share the political burden with Brussels, or shift the blame. Brussels provides a convenient scapegoat. For the EU, the process of going green will be painful, whatever silly name Eurocrats give it. ■



House-building

Blot on the landscape

MELKSHAM, WILTSHIRE

New housing is changing the contours of the countryside—and of politics

TO THE WEST of the road, a housing estate blossoms behind the hedgerows. Identikit boxes bestride gravel drives; the gardens are festooned with decking. The eastern side of this road in Wiltshire is another England: rolling fields where cattle stare down traffic. But that idyll is being encroached on, too. At one end of the road, two new estates near completion; at the other, a third welcomes its first residents. Locals bemoan a damaged environment and homeless newts. But in this competition between two Englands, it seems clear which is winning.

In the key battleground of London and the south-east, however, housing developers are facing stiffer resistance. After decades of demand far outstripping supply, Britain is once again building lots of homes, but not yet as many as the government wants—and, worse, not in the right places. It wants to force councils in popular, pricey regions to allow more development, but is wavering in the face of electoral opposition. At stake is not just Britain's

urban and rural landscape, but its political landscape, too.

In 2017 Theresa May, then prime minister, reiterated a long-standing but never-met target of 300,000 new homes per year for England. Between April 2019 and March 2020, 244,000 were built, the most since 1987. That followed six years of net increases in the housing stock. But many were in cheaper areas, such as the south-west and west Midlands, and not enough were in London and the south-east, where already-high prices and projected population growth suggest expansion is most needed. The population of East Sussex, for example, has grown by 9% over the past decade and is expected to grow by 8% over the coming one. But its housing stock has increased by just 5.8% since 2010. Last year Mrs May's successor, Boris Johnson, proposed a big overhaul of the planning system, both to hit the national target and to rebalance where houses are built.

Planning rules have already been loosened in several ways over the past decade.

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— Bagehot is away

— Read more at: [Economist.com/Britain](https://www.economist.com/Britain)

A change in 2012 made it easier to build on farmland near towns, the effects of which can already be seen in places such as Wiltshire. According to Residential Analysts, a research firm, over the past decade the price paid per plot by the big housebuilders stayed steady or even fell. This suggests that supply constraints caused by over-restrictive planners have not been reflected in the price of land, says Neal Hudson, the firm's founder.

In 2013 rules about redeveloping existing buildings were loosened, which encouraged the conversion of derelict warehouses in city centres into flats. And last year Mr Johnson reiterated a previous Tory promise to allow developers to build higher. A subsequent boom in such projects shows that local authorities had indeed been acting as a brake on development, says Anthony Breach of the Centre for Cities, a think-tank.

Even after these reforms, however, planners often stop local supply rising in response to local demand. The Local Government Association (LGA), a trade body for councils, argues that nine out of ten planning applications are approved. But that disguises wide regional variation. Councils within commuting distance of London still block much development. According to the Centre for Cities, over a fifth of urban neighbourhoods outside city centres have built no new houses since 2011. Getting lots more houses built, says Mr ▶▶

► Breach, will require “every expensive area to do their bit”.

There has also been too little thought about the mix of new housing, says Mr Hudson. Britain isn't suffering from a monolithic housing crisis, but several different ones. Some big cities struggle to build anywhere near enough; Liverpool has too few homes for well-paid professionals; the north-east's existing stock needs upgrading; much of the south-east needs more homes for young families.

Mr Johnson's government briefly seemed ready to tackle these problems head-on. A white paper last August promised the biggest shake-up of planning in decades. Every council would have to write a ten-year plan consistent with providing its share of the national target, categorising all land as protected (no building allowed), or earmarked for renewal (some building) or growth (proposals that conformed with the plan would be automatically approved). Locals would lose the ability to comment on individual applications, but would still get a say on the new ten-year plans that underpin the zones. Builders reckon such a streamlined system would allow more development in the highest-priced areas.

But such places are precisely where opposition is stiffest. In local elections in May the Green Party and the Liberal Democrats, both opponents of many building projects, made inroads in Tory-voting counties such as Cambridgeshire and Suffolk. The next month the Lib Dems won a by-election in Chesham and Amersham, a pair of pricey London suburbs, by opposing new housing and a high-speed rail line running through the constituency.

In a speech on July 7th to the LGA Robert Jenrick, the housing secretary, gave the strongest signal yet that the planning bill expected in Parliament this autumn would fall far short of the radicalism of last year's white paper. He promised that the current planning system would not be ripped up, and hinted that English councils with a track record of permitting lots of new housing could retain greater control over planning. Analysts fear that the national target could thus be retained, even as the areas where demand is highest are allowed to shirk their duty. “The 300,000 homes a year target is useless if you just end up building 300,000 micro-apartments in Sunderland,” says Mr Hudson.

It is hard for any government to take on vested interests who have always voted for it. For a Conservative government, however, the dilemma is particularly sharp. The fight to build more housing is not just a fight between existing homeowners and would-be ones: it is a fight between those who vote Conservative now and those who might in the future—if their aspirations for a home of their own are satisfied. ■

The new NIMBYs

Eco-warriors

Opponents of housebuilding claim to care more about the environment than about house prices

IN JULY 1998 the *Reading Evening Post*, a now-defunct paper, ran a story about opposition to housebuilding. Rhodri Hughes, a councillor, was concerned that new flats would overshadow residents' gardens and that “the loss of trees would change the look of the area”. Last month another local, the *Reading Chronicle*, ran a similar story about housing in nearby Wokingham. Clive Jones, a Liberal Democrat councillor, is exercised about the ecological crisis, railing that developers are destroying the wildlife and habitats of “muntjac deer, badgers, birds, rabbits”.

The sharp increase in housebuilding in recent years has given a fillip to NIMBYs, people who don't mind development as long as it is Not In My Back Yard. This month YouGov, a pollster, found that 47% of Britons would oppose new housing in their area, up from 40% since mid-2019. Some 43% would support it, a drop of seven percentage points. But as hinted at by this tale of two councillors, today's NIMBYs are citing new concerns: not just “my environment” but “the environment”.

NIMBYs have always worried about wildlife, noise, pollution and the like, says Philip Hubbard, a geographer at King's College London. And their concerns are not merely mercenary: a recent survey by Tom O'Grady of University College London found that Britons who expressed opposition to local housebuilding were largely motivated by a desire to preserve the beauty and amenity of their area, rather than the value of their home.

Such attitudes can be characterised as



Won't someone think of the rabbits? ■

environmentalism, albeit of an intensely local, personal sort. But a growing number of NIMBYs now claim a broader green agenda. Some cite biodiversity, saying they support new housing as long as it does not spoil land teeming with wildlife. Andrew Stringer, who leads the Green, Liberal Democrat and Independent Group on Suffolk County Council (and who has built four houses himself), says he has teamed up with residents to get developers to change their plans. He claims to have stopped trees being felled and barn owls being made homeless.

Green-tinged NIMBYs in Essex want land slated for housing to be “rewilded”—helped return to a natural state. Elsewhere, they are seeking to block development by citing its impact on carbon emissions. Some groups are aligned with Extinction Rebellion, an international climate campaign. In Newbury a plan to build 1,000 homes is being opposed because of the “climate crisis”. Campaigners in Chesham claim its carbon footprint would rise by a fifth if planned building goes ahead.

An environment bill making its way through Parliament aims to protect nature despite high volumes of house-building. Developers are supposed to ensure that biodiversity on the plots they develop increases overall. One large housebuilder says it has researched green housing in Japan, and found that wildflower meadows can be created cheaply. But some green NIMBYs dismiss such mitigation measures as shabby and ineffective. One mocks a trend for developers to fix bird-boxes on houses—likely to be unpopular with owners because of “bird poo on doorsteps”.

The Green Party's gains in May's local elections could be a sign that the new eco-NIMBYs are sincere about their motives. Jonathan Bartley, a co-leader of the party, says that erstwhile Tory voters in the south-east saw in the Greens a party “that gets wildlife, that gets the ecological emergency, that gets the countryside”. But others wonder if the conversion to greenery is merely strategic. Locals may not share her environmentalism, says Wendy Turner, a Green councillor in Suffolk, but they see supporting her party as the best route to stopping new development. Since 2019, at least 230 councils have declared a climate emergency; some campaigners may simply be seizing on a new weapon in the same old fight to protect their back yards. ■



America, China and the Moon

The eagle and the rabbit

The destination is the same but the race back to the Moon today differs in important ways from the first

ON JULY 11th, climbing through the darkening sky like a bolt of lightning in reverse, Richard Branson stole a whisper of Jeff Bezos's thunder.

In early June Mr Bezos had garnered headlines and pageviews by announcing that when his rocket company, Blue Origin, launched a space capsule with humans on board for the first time on July 20th he would be among those passengers. Virgin Galactic, a company founded by Sir Richard, had already flown its rocket-plane *Unity* to the edge of space. Plans were quickly hatched to bring its next test flight forward and to put Sir Richard himself on the crew manifest (he had been planning to take a later flight). On July 11th *Unity* did its thing, and Sir Richard, returned to Earth, proclaimed a new space age open (see Business section). Blue Origin tweeted, snarkily if accurately, that its capsule goes higher and has bigger windows.

If Mr Bezos has lost his precedence, he has kept his date. And that matters. July 20th is the anniversary of the first landing of a crewed spacecraft on the Moon: that of the *Eagle*, Apollo 11's lunar module, in 1969.

As such it was, for a long time, a date for retrospection. But now it is also a date for looking forward.

There is every reason to think that, by the time Apollo 11's 60th anniversary rolls around at the end of this decade, American astronauts will once again be leaving footprints on the barren lunar plains. And while Sir Richard has no realistic human-spaceflight ambitions beyond tourist flights to the top of the atmosphere, Mr Bezos wants Blue Origin to play a big role in that next great adventure.

A place for the private initiative of Mr Bezos and those like him is one of the ways in which the plans and context for America's return to the Moon differ from those that saw it first go there—and then stop going there—half a century ago. There are many others. One of the goals of the Artemis programme, as NASA's back-to-the-Moon programme is known, is to highlight the ways in which America has changed in the intervening decades. Another is to be comparatively cheap. Whereas Apollo had to be a uniquely American achievement, Artemis will encourage the participation

of allies. And rather than providing just a few brief visits, Artemis is meant to lead to the creation of permanent outposts.

One thing remains the same. Artemis, like Apollo, is shaped by the geopolitics of great-power rivalry—then between America and the Soviet Union, now between America and China. Even here, though, there are crucial differences. In the 1960s America was in a race, the outcome of which could not be known. Today it is the reigning champion, seeking merely to maintain its pre-eminence. But the question in the minds of the spectators is strikingly similar. Does the American system work better than the alternative when faced with the challenges of the future?

In the 1960s America started off on the back foot. The Soviet Union had launched the first satellite into space in 1957 and the first human in 1961. If the space race was to get into orbit, and thereby demonstrate both your remarkable technological prowess and your ability to drop a nuclear weapon onto any point on the Earth, the Soviet Union had already won. Part of the genius of Apollo was to redefine the race as being one to the Moon.

The fact that getting to the Moon requires a very large launcher meant that the more limited technology which had allowed the Soviet Union to take the lead in Earth orbit no longer counted for much. Both sides needed a fundamentally new capability. It was America which, through a remarkable and extremely costly effort, successfully built that capability in the

▶ form of the Saturn V.

When, at the beginning of that great drama, President John F. Kennedy told Congress that America's eagerness to go into space was "not governed by the efforts of others" he was being less than candid; the Soviet Union's efforts were fundamental to the programme's rationale. One of the differences between that era of lunar rivalry and this one, though, is that China seems to be living up to Kennedy's ideal. It is not trying to leapfrog ahead of America as America tried to overtake the Soviet Union. It is trying to build a similar set of capabilities—and thus catch up to some extent—and to meet its own national needs, whether defined in military and economic terms or, more nebulously, in terms of prestige.

China is capable of routinely launching satellites of all sizes which it uses for its own communications, reconnaissance and intelligence services and also makes available to third countries. Last year it completed a satellite navigation system, BeiDou, that is a global rival to the GPS system which America originally fielded in the 1980s, and to the more recent Glonass and Galileo systems developed by Russia and Europe, respectively.

The rover that China landed on Mars in May was much smaller and less capable than the most recent rovers America has sent there. But no other country has yet managed such a feat at all. Nor has anyone else landed a rover—called Yutu-2, after the rabbit who lives on the Moon in Chinese folklore—on the far side of the Moon. The modular space station that China is currently assembling in low Earth orbit is much more modest than the International Space Station (ISS) on which America, Canada, Europe, Japan and Russia have collaborated. But it is a more ambitious undertaking than any of those powers other than America or Russia could field alone. Xi Jinping, China's president, certainly seemed proud when he had a videocall with the "taikonauts" on board.

My spaceship knows which way to go

And China has started developing big boosters, rockets similar in size to the Saturn V. Officials in the Chinese space programme have said that when there is a working version, probably in the early 2030s, it will be used to put people on the Moon; recently the Chinese and Russian space agencies announced that they would work together towards such a goal. Again, this is a matter of catching up. The difference is that this time China is recreating a capability which America has let lapse.

Recreating a capability is not the same as running in a race, much less winning one. But for China it is just one stage in a longer drawn-out strategy which would see it eclipse America as the leading power in space sometime in the 2040s through a

mixture of its own perseverance and America's decline. China would be headed for the Moon even if America was not; it will go there even if, as seems likely, America gets back there well beforehand. China's leaders seem to see a presence on the Moon as having a meaning which goes well beyond beating an adversary to a largely arbitrary finish line. There are things that great nations do which small nations cannot; there are types of grandeur reserved for nations which embody ancient civilisations of global import. China's leaders think their country must be seen to share in all such perquisites. A presence beyond the Earth is one of them.

A truly confident America might look at these ambitions in the context of its own achievements half a century ago, say "been there, done that" and move on. Today's America lacks such composure. For China to land on the Moon in the absence of an active American presence there would be a public-opinion disaster.

When making the case for the Artemis programme in May, Bill Nelson, the NASA administrator, brandished a picture of China's Mars rover at the House appropriations committee. "They're going to be landing humans on the Moon. That should

tell us something about our need to get off our duff and get our Human Landing System programme going vigorously."

Beating China is a simple and popular proposition. The Artemis programme as drawn up under President Donald Trump has been embraced by Joe Biden's administration and seems to enjoy solid bipartisan backing in Congress. It is an approach to making America great again which is hard to oppose in principle, even if it is not everyone's priority.

The new administration has yet to face up publicly to the fact that it will not meet the original goal of boots on the Moon by the end of 2024 (which would have been the end of Mr Trump's second term). But it seems highly likely that it will manage it sometime before the end of Mr Biden's second term, should he serve one. As long as the programme remains on course to succeed before China gets off the pad, a little delay is unlikely to badly affect support.

Artemis also serves other political goals. The Americans put on the Moon by Apollo were all white men. This did not go unnoticed at the time; one of the most enduring works by Gil Scott-Heron, a black poet and musician, begins "A rat done bit my sister Nell (with Whitey on the Moon)". Much has recently been done to publicise the contribution that women and people of colour made to the programme behind the scenes—this year NASA's Washington, DC headquarters building was renamed in honour of Mary W. Jackson, the agency's first black female engineer. Their role in today's space programme is routinely celebrated. Wally Funk, a campaigning aviator who met all the criteria for being an astronaut in the 1960s save for her sex, will be a spacefaring guest of Mr Bezos's on July 20th. Artemis, named after Apollo's sister, is to be the means by which women and non-whites first reach the Moon.

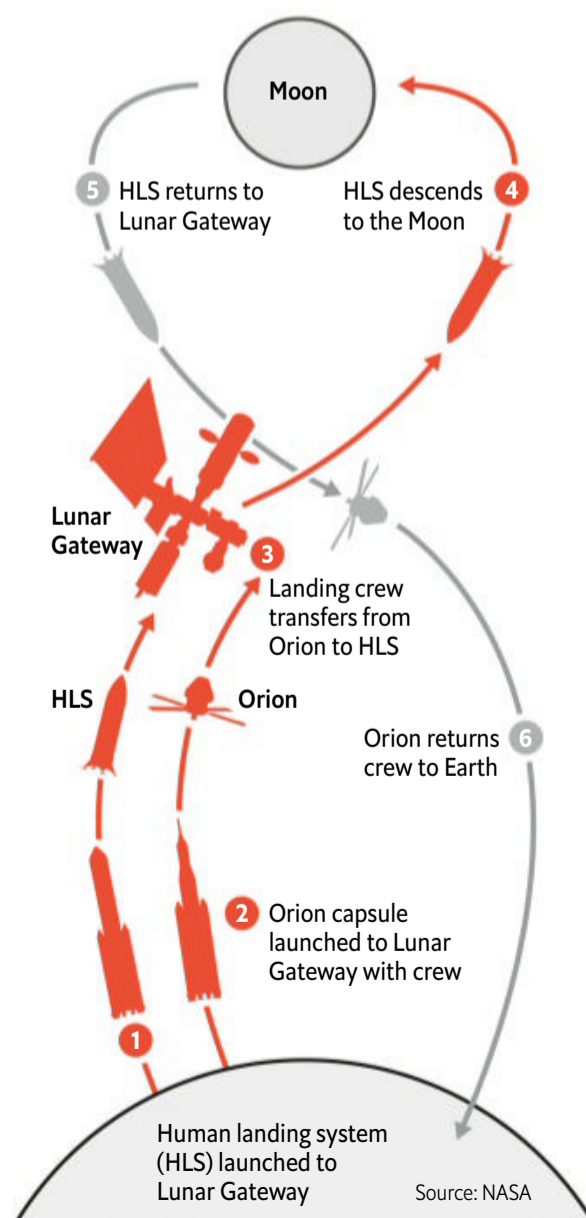
Giant steps are what you take

What is more, it has the advantage of being comparatively cheap. For Apollo NASA had to create not just the Saturn V but also the command and lunar modules which it hurled aloft; the total cost is put at around \$300bn in today's dollars. Then, though, the size and expense of the task were not an insuperable obstacle; indeed, they were part of the point. The project was a signal of just how much America was willing to stake on technological pre-eminence.

Having to expend similar amounts to recreate an old capability would not send a similar message. Fortunately, it is not necessary. A new NASA rocket with Saturn V-like capabilities, the Space Launch System (SLS), is already close to completing its development, as is a new long-duration crew capsule, Orion, that can ride on top of it. NASA also had pre-existing plans for a small space station, now known as Lunar

Hit and Artemis

United States, proposed landing on the Moon, 2024



► Gateway, which would orbit in the Moon's vicinity. At its simplest, all Artemis requires beyond what is already in development is a system for getting people in an Orion orbiting in the vicinity of the Moon down to the surface and back up again (see diagram on previous page).

For NASA to develop such a landing system itself would still be a pricey undertaking. But the space agency's greatest achievement over the past decade has been demonstrating that it does not have to develop its spacecraft itself. After the last space shuttles were retired, NASA asked private companies to submit proposals for new spacecraft to get first cargo and then crews up to the ISS. Various companies won contracts under these schemes, most notably SpaceX, the rocket company founded by Elon Musk.

Grants, milestone payments made when particular goals were achieved and the promise of long-term contracts once the vehicles were up to scratch allowed SpaceX to develop the Crew Dragon spacecraft, now used to ferry astronauts up to the ISS. The overall cost to NASA of developing the Crew Dragon this way was \$3.1bn: that is only a little more than the total cost of the most recent Mars rover mission.

It's lonely out in space

During the Trump administration NASA decided that Artemis should take the same approach to developing its Human Landing System (HLS). Three proposals survived the first round of bidding last year: one from a "national team" led by Blue Origin, one from a consortium led by Dynetics, an American aerospace and computing contractor, and one from SpaceX. It was expected that two of the three would receive contracts to build systems, just as Boeing and SpaceX had both received contracts to develop capsules to take crew to the space station (Boeing has yet to fly a crew in its capsule, but will undertake a crewless test flight later this month).

On April 16th, though, NASA awarded a single contract worth \$2.9bn to SpaceX, saying it lacked the money to offer two. Both Blue Origin and Dynetics challenged the award, which is now being reviewed by the Government Accountability Office; its findings are expected on or before August 4th. Maria Cantwell, a senator from Blue Origin's home state of Washington, subsequently sponsored an amendment to the bill authorising NASA's budget which requires the agency to issue a second HLS contract. The bill has passed the Senate, but as yet has no counterpart in the House.

This will probably lead to delays. But the competitive approach is the right one. When NASA builds its own spacecraft prices go sky high, not least because politicians like to see federal money spent in their home states. The SLS is a case in point. Its

development costs, now sunk, have been enormous; it is far too expensive for frequent flights. A private company could have done the job much better—as SpaceX is showing with the development of its Starship launch system, similar in capacity to the SLS but much more technically ambitious. Its "Raptor" engines are of an advanced design that no one has previously managed to make practical. It is intended to be entirely reusable.

Prototypes of the sleek, stainless-steel-hulled Starship have been launching, landing and sometimes exploding at SpaceX's plant in Texas for months as the company tests their new engines and their ability to change their orientation in mid-air. The next test flight will be the most ambitious yet. It will see the first use of a "Super Heavy" booster to launch a Starship almost into orbit (it will in fact come down about 6,000km away in the ocean off Hawaii). The 33 Raptors on the Super Heavy will generate twice as much thrust as the first stage of a Saturn V did. The eventual goal is for the Super Heavies, like the first stages of SpaceX's Falcon boosters, to return and make a vertical landing after sending their Starships into orbit. There the Starships will either launch satellites and return to Earth or wait for a subsequent launch to refuel them before heading off to more distant destinations.

The SpaceX HLS Moon lander is a version of such a Starship, and NASA's selection of it over its competitors is a vote of confidence in the company's scheme. If it comes to fruition, it will outcompete the SLS by more or less every measure save the employment of government contractors.

Blue Origin's plans for a booster far larger than the petard with which Mr Bezos will hoist himself next week are not yet as far along. But Mr Bezos has money and determination, as well as friends in Washington. America could have three boosters ca-

pable of supporting human missions to the Moon, two private and one public, before China has even one.

It is in such possibilities that the real promise of Artemis lies. The Chinese Moon programme is entirely a creature of government. Although there is a nascent private space sector in the country, it is not yet capable of anything so ambitious. (Nor is it entirely clear that the government is; the engines a booster big enough for Moon duty requires are far more sophisticated than anything it has yet built.) In this, China's programme will resemble in form, if not in scale, America's huge, centralised Apollo programme. One of the great ironies of the first space race was that at the peak of its efforts to stop the Moon from turning communist America was devoting more than 4% of government spending to a 400,000-worker planned economy entirely run by government officials.

The stars look very different today

This time round, it is possible that America will instead get to the Moon by supporting the aspirations of brilliant and determined—if sometimes petty—entrepreneurs and harnessing the capabilities they provide. It promises to be a more effective mode of exploration. It could also be the beginning of something more. While Mr Musk dreams of his Starships taking settlers to Mars, Mr Bezos talks of using resources from the Moon to build new industries in space (such as power-generation, asteroid mining or the production of exotic new materials). It is a vision shared by Chinese space enthusiasts such as Lieutenant-General Zhang Yulin, who works in a part of the People's Liberation Army devoted to space- and cyber-operations. Its realisation, should it come to pass, may offer a truly dramatic answer to the question of which system can better respond to the challenges of the future. ■





China Inc abroad

Inconspicuous expansion

HONG KONG

Chinese companies are adapting to a more hostile global climate—and thriving

DEEPLINT, A CHINESE facial-recognition firm, was one of 14 companies slapped with American sanctions on July 9th for alleged links to human-rights abuses in China's far-western region of Xinjiang. It is also a globally recognised leader in its field and has raised money from Sequoia Capital and other big American investment firms. DeepGlint's founders, who graduated from Stanford and Brown universities in America, must now discuss with their foreign backers the prospect of decoupling from the Western commercial sphere. Many Chinese companies have been forced to hold similar talks.

China Inc appears to be on the back foot. In America President Joe Biden has picked up where Donald Trump left off, placing restrictions on Chinese companies. Last year Congress passed a bill that may eventually force Chinese firms to delist from American stock exchanges, which would affect nearly \$2trn in market value. Huawei, banned from America, has struggled to sell its 5G telecoms kit elsewhere in the West. ByteDance was nearly forced to divest from its prized short-video app, Tik-

Tok, over American fears that the Chinese regime could access global users' personal data. Tencent, another internet giant, is said to be haggling with American regulators worried about its 40% stake in Epic Games, the developer of Fortnite.

Around the world Chinese companies are, fairly or not, viewed as instruments of the Communist Party. Britain's prime minister, Boris Johnson, said on July 7th that the government would probe the Chinese acquisition of Newport Wafer Fab, the country's largest chipmaker, on national-security grounds. Australia's defence department could tear up a 99-year lease with a private Chinese company for a big port. Completed outbound acquisitions by Chinese firms shrivelled from some \$200bn in 2016 to \$36bn in 2020. Cross-border lending, mostly to poor countries, by some of China's state banks has stopped growing.

It is not the first time that a wave of Chinese corporate expansion has met a frosty reception. When commodity giants such as CNOOC, an oil firm, began buying foreign reserves, and rivals, in the 1990s, it stoked fears of resource colonialism. In the

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2010s Chinese industrial groups' aggressive pursuit of Western rivals from chemicals (ChemChina's takeover of Syngenta) to cars (Geely's of Volvo) reminded some anxious rich-world governments of Japan's corporate conquests in the 1980s. At the same time, Chinese acquisitions of trophy assets such as the Waldorf Astoria hotel (by Anbang, a conglomerate) allowed other Westerners to dismiss China Inc as unserious or dodgy (a suspicion confirmed by the subsequent collapse of Anbang and a few similar groups after charges of fraud).

Now, just as innovative Chinese tech firms have captivated Wall Street, China's increasingly authoritarian regime is itself reining in its global champions. President Xi Jinping appears bent on disconnecting them from Western capital markets and controlling their data. Tencent and Alibaba, an e-commerce behemoth, have between them lost \$340bn in market value since the crackdown began late last year. Days after its \$67bn New York flotation, Didi found its ride-hailing app banned by Chinese data regulators. ByteDance has scotched plans to go public in New York.

Speak softly and carry a small cheque

All this looks like a treacherous climate for Chinese companies. Look closer, though, and a new generation of firms is not just adapting to it but thriving. Many have spent years expanding global operations and now make as much money outside China as they do within. Some are pursuing smaller investments under the radar. ▶▶

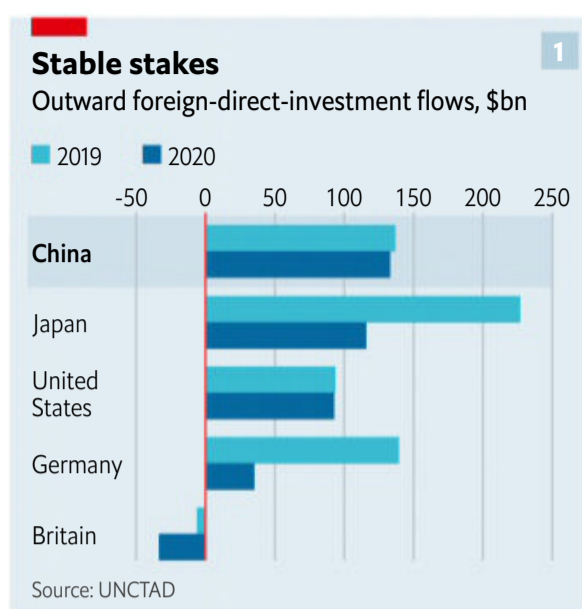
► And, inverting a decades-old trend of copying Western intellectual property (IP), a few have become tech powerhouses in their own right, selling advanced products to the world.

The scale of China Inc is formidable. China was the largest investor in the world in 2020. Foreign direct investment (FDI) from Chinese firms hit \$133bn, down only slightly from 2019 despite the headwinds (see chart 1). The country has some 3,400 multinationals, almost as many as America and western Europe combined, reckons Bain, a consultancy. Around 360 big listed Chinese groups report foreign revenues. These amounted to around \$700bn in 2020, compared with 250 large firms earning a total of \$400bn in 2012, according to data from Bloomberg (see chart 2). In 2020 Chinese venture capitalists ploughed an estimated \$3.2bn into American startups in 249 deals, the second-biggest year on record by value, calculates Rhodium Group, a research firm. Analysts at CB Insights say that Chinese investors' participation in American venture deals last quarter was the highest since at least 2016.

The Chinese presence is deep as well as broad. Last year more than 100 of the listed firms earned at least 30% of revenues outside China; 27 earned 70% or more. All told, China's top ten foreign earners booked \$350bn or so in overseas sales. This total has grown by 10% a year on average since 2005, Bain says, twice as fast as the equivalent figure in America, Europe or Japan. Tencent's foreign sales have risen at an annual rate of 40% for nearly a decade, and now make up 7% of its huge top line.

The first plank of China Inc's new global strategy is astute localisation. In the past most Chinese FDI consisted of asset purchases. Last year, by contrast, a lot was re-invested earnings from operations abroad. Hisense, a maker of consumer electronics, wants to treble its overseas sales, from \$7.9bn in 2020 to \$23.5bn in 2025, half its projected total, says Candy Pang, its head of marketing. That would leave a lot of money to spend on foreign factories, research and development, and marketing (it is sponsoring the 2022 football World Cup in Qatar, among other sports events).

Chinese firms have also retained their subsidiaries' foreign leadership. Despite recently merging with another state-backed giant, ChemChina has allowed its foreign assets to operate as global companies. Pirelli, which it bought in 2015 for €7.1bn (\$7.6bn), still makes tyres in Italy. Syngenta, for which it paid \$43bn a year later, maintains a Swiss headquarters, a mostly foreign executive team, and a nine-person board with only two Chinese state officials. Similarly, Geely has allowed foreigners to run Volvo, and Haier, an appliance-maker, kept most of GE Appliances' top brass after acquiring the American



firm. "You can belong to China without having a Chinese-dominated board," says an executive at one Chinese multinational.

The second pillar of China Inc's new globalisation strategy is to shun mega-deals in favour of smaller ones. The speculative wave of outbound investments between 2015 and 2017 swallowed up \$425bn in assets and raised plenty of eyebrows among foreign and Chinese regulators alike. By contrast, of the 235 outbound transactions so far this year only three were valued at more than \$1bn.

The master of mini-dealmaking is Tencent. It has made at least 85 cross-border investments since the start of 2019, according to Refinitiv, a data provider. Many of these are small stakes taken as part of a larger consortium of investors that includes prominent non-Chinese private-equity groups. This year, for example, Tencent bought a 4% stake in Rakuten, a Japanese internet group, for about \$600m—small change for a giant worth nearly \$700bn. It has also continued to invest in America, with at least 12 deals over the past two-and-a-half years, including the purchase of a \$150m stake in Reddit, an American online platform which hosts popular discussion forums.

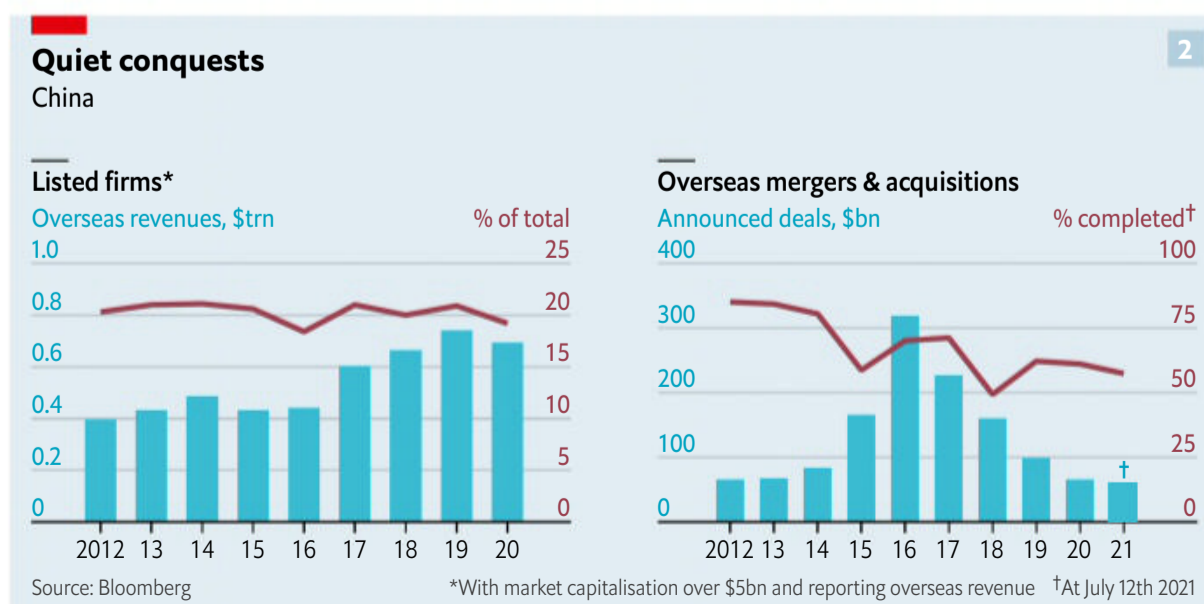
Chinese companies are making their global presence felt in one last way. Rather

than swooping into foreign countries to buy up technology, or copying Western IP, they are going out to sell their own, says Bagrin Angelov of CICC, a Beijing-based investment bank. Because Chinese subsidies to makers of electric cars and batteries require them to own some of the core IP, companies such as BYD, CATL, Gangfeng and sVOLT raced to develop it. Having done so, they are now targeting export markets. BYD and sVOLT are setting up factories in Europe. So is CATL, which in December also announced plans to build a \$5bn one in Indonesia (See Schumpeter).

BeiDou, China's state-owned answer to America's GPS satellite-navigation system, was used by more than 100 countries in 2020, according to EY, a consultancy. Chinese telecommunications services cover more than 170 countries with a population of 3bn people. Regardless of American sanctions, Huawei remains a popular choice for 5G networks even in parts of Europe. Horizon Robotics, which develops self-driving systems, counts Germany's Volkswagen and Bosch among its partners.

And new Chinese stars are rising all the time. Few fashionistas probably realise than Shein, a fast-fashion darling beloved of the hip TikTok set, is Chinese. The company boasts the top shopping app in 50 countries—including America, where it was downloaded on more iPhones than Amazon in June. OneConnect, a financial-technology platform owned by Ping An, a big insurer, is selling a number of digital-banking products developed for China to banks and other firms across Asia and beyond. It recently designed an artificial-intelligence fraud-prevention system for a Sri Lankan lender.

These subtle corporate conquerors could still be stymied—by the heavy hand of China's Communist rulers or America and its allies, which are bound to keep an ever beadier eye on Chinese commercial incursions. The go-getting Chinese multinationals would then need to adapt once again. They have shown themselves to be more than capable of doing so. ■





Space tourism

The finite frontier

NEW YORK

The private business of vaulting passengers into space officially gets off the ground. Now what?

IT WILL BE humbling. It will be spiritual. This is how Virgin Galactic wooed customers with the prospect of a moment in space in 2004. Within five years, it claimed, it would take a total of more than 3,000 passengers on life-changing jaunts in its spaceships. On July 11th the space-tourism firm began to make good on that promise. Its *vss Unity* rocket plane was released from a support aircraft, accelerated to three times the speed of sound and soared 85km above Earth's surface. Thence, for four minutes, its six temporarily weightless passengers, including the firm's British co-founder, Sir Richard Branson, beheld the planet's curvature against the blackness of outer space, before returning to a spaceport in New Mexico.

It is not known if Sir Richard, not famous for humility, felt any up there. He called the experience "magical". Inwardly he may have gloated a bit, having pipped Jeff Bezos, a much wealthier billionaire, to the heavens. On July 20th Amazon's recently retired boss plans to go slightly higher, for slightly less time, in the New Shepard, a vertical-launch vehicle built by his own spacefaring company, Blue Origin.

The tycoons are among a growing group of enthusiasts who think space tourism's time has come. A few paying customers have flown in government-issue Russian spacecraft. Virgin Galactic and Blue Origin, by contrast, built their own vessels for the purpose of lobbing passengers beyond the upper reaches of Earth's atmosphere.

Suborbital tourism is part of a broader private space business that has boomed of late, thanks to advances in rocketry and satellite technology. In 2020 investors poured \$28bn into such ventures, hoping to emulate SpaceX, which has slashed the cost of orbital launches thanks to its reusable rockets and is valued at \$74bn. Bank analysts at Morgan Stanley expect the entire space economy to generate \$1trn in revenue by 2040, from \$350bn today. Those at UBS forecast \$800bn by 2030.

Like a Virgin, for the very first time

Space tourism, UBS thinks, will make "a big contribution" to that total if it helps replace mass long-haul aviation with hypersonic travel. That is unlikely. For now Blue Origin and Virgin Galactic will offer brief suborbital flights. Sir Richard floated slightly below the Kármán line, usually defined as 100km above Earth's surface, where air becomes too thin for unpowered flight. Mr Bezos plans to float a bit above it.

Suborbital excursions are not Blue Origin's main goal. The company is developing a large rocket, the New Glenn, for launching satellites, is selling advanced rocket engines to others and is bidding for NASA contracts. In the long run, Mr Bezos's aim is to foster a large-scale space-based economy rather than amuse thrill-seekers. But Blue Origin's bigger rockets could, someday, take customers keen to go into orbit for fun. SpaceX, though not driven by the tourist market, is beginning to make

some money from it as a sideline.

As for suborbital jaunts, nearly 7,600 people bid to join Mr Bezos on his. The winner parted with \$28m. Virgin Galactic says its waiting list has several hundred hopefuls (including, according to Sir Richard, Elon Musk, SpaceX's boss). Cowen, an investment bank, found two in five people with a net worth of over \$5m would consider paying \$250,000, Virgin's current price, for a ticket. If, as consultants at Capgemini reckon, 2m Earthlings have that much dosh, that is a decent market. It could be a lucrative one, once regular flights begin to offset rocket-development costs. Chamath Palihapitiya, a venture capitalist and Virgin Galactic's chairman, expects operating-profit margins close to 70% at scale, similar to a software firm's.

Still, don't expect space tourism to be a big part of the space business, or of the tourist industry, in the next decade or two. Morgan Stanley recently cut Virgin Galactic's projected annual revenues by 2030 from \$1.8bn to \$1.3bn. Without tourist-friendly destinations to visit (the capacity of the ISS is limited), orbital tourism, with its far higher ticket prices, will not be a huger earner. A few space-tourism startups, such as Rocketplane, Armadillo Aerospace and xCOR Aerospace, have thrown in the towel. This year the popular space-themed exchange-traded fund run by ARK Invest, a tech-investment firm, dumped most of its shares in Virgin Galactic, which went public in 2019. Both Sir Richard and Mr Palihapitiya have sold much of their stakes in the firm in the past few months. Its share price soared after the successful flight, then tumbled when it said it would issue new stock to fund expansion.

The biggest uncertainty relates to safety. A disaster can set progress back by years. NASA suspended its programme to send untrained civilians into orbit in 1986 after a schoolteacher died along with the rest of the crew in the *Challenger* tragedy. It took 15 years for another civilian to brave the journey (on a Russian craft).

The risk is lower for suborbital missions, which place fewer demands on life-support systems and come fitted with abort technology. America's Congress instituted a "learning period" for commercial spaceflight in 2004, leaving medical and safety standards up to private firms, so long as they warn clients about the risks (which are considerable while barrelling at Mach 3 or more strapped to a pile of high explosives). *vss Unity's* sister craft perished in an accident in 2014.

Even with no accidents, regulatory problems may arise when the learning period expires in 2023. Add more humdrum annoyances such as launch delays, which are common, and space tourism may remain a hobby for a few super-rich daredevils with lots of time to spare. ■

Big law

White shoes are made for earnin'

NEW YORK

America's elite law firms are booming

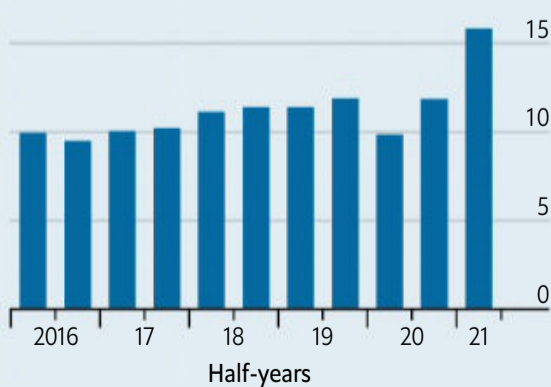
A LAWYER IN his early 30s pauses outside an elegant clothing shop in New York's Tribeca district. It is the first time he has been out in 30 days, he says, turning away from the shuttered establishment. Covid-19 is only part of the reason for his isolation. Unlike many main-street businesses that have not survived the lockdowns, his employer has been swamping him with work of late. And it is not alone. America's elite law firms are having a banner year. Associates, often toiling from home, have melded with their laptops. Senior partners, holed up in their second homes in the Hamptons, barely have time to enjoy the beach. The pandemic has pushed huge numbers of companies to raise capital, merge, buy rivals or be acquired by them.

Nearly 16,000 deals involving at least one American party have been announced in the first six months of this year, roughly half as many again as in the same periods in 2016-20 (see chart). Many involved novel legal structures such as special-purpose acquisition companies (SPACs), which list on a stock exchange in order to reverse-merge with a promising startup. On top of that, lockdowns have introduced fresh legal wrinkles (Does an infectious disease count as *force majeure*? How to conduct due diligence on a deal by Zoom?). Some law firms are so busy that they are declining assignments, in violation of an unwritten rule never to do so which, in the industry, is as revered as the constitution.

According to *American Lawyer*, an industry journal, total revenues at the 100 biggest firms rose by 7% last year, to \$111bn. At the same time, expenses such as travel and entertaining clients all but vanished.

Crisis of abundance

United States, mergers & acquisitions*
Number of deals, '000



Source: Bloomberg

*Deals involving a US acquirer, seller or target

As a result, average profit margins increased, from 40% to 43%. Profits per equity partner rose by over 13%, to an all-time high of nearly \$2.2m. These went up at all but six of the top 100 firms. At the most lucrative ones, such as Davis Polk, Kirkland & Ellis or Sullivan & Cromwell, they exceeded \$5m. Each equity partner at Wachtell, Lipton, Rosen & Katz, the richest of the lot, raked in \$7.5m, up from \$6.3m in 2019 (and, housebound, had to spend less of it to maintain a certain sartorial standard, captured in the term "white shoe" that still refers to New York's elite firms).

The billable-hour bonanza has left firms with more money to lure new recruits. That is just as well. With the supply of legal professionals limited by elite law schools' refusal to admit many more students, firms are engaged in a fierce battle for talent. Last month Milbank, another big firm, raised its starting salaries for new associates from the industry standard of \$190,000 to \$200,000. A day later Davis Polk offered freshman lawyers \$202,500. Partners at other firms say they matched Davis Polk within 24 hours, not wanting to be thought second-tier. Most big firms are awarding special spring bonuses to associates who have billed enough hours (typically 60 a week or more)—which plenty have done in these febrile times. The money, says the head of one big firm, is a reward for hard work. It is also, he acknowledges, an effort to stop desertions.

Poaching is rampant at all levels of these organisations. McDermott Will & Emery, a fast-growing firm from Chicago, hired six new outside partners in May alone. Even firms famous for staff loyalty, such as Cravath, Swaine & Moore or Wachtell, have lost lawyers to rivals. A senior partner at a large firm says he begins his day by opening emails from recruiters inquiring about his availability. He then peruses career announcements in legal periodicals. For the first time in 20 years Major, Lindsey & Africa, a large legal recruitment firm, is looking in Australia and Canada for associates with dealmaking experience to place at New York firms.

Not all elite American firms have prospered in the pandemic. The current conditions have favoured partnerships with expertise in complex transactions, such as Wachtell or Davis Polk. Some generalists have done less well. Profits per partner at Baker McKenzie, a Chicago-based giant, declined by nearly 10% in 2020. The dealmaking specialists could suffer if the merger-and-acquisition boom peters out. That is already happening to the SPAC craze, which provided lawyers with oodles of work in late 2020 and early 2021. And as America reopens, those covid-crimped expense accounts could begin to swell again, squeezing margins.

Managing partners are therefore think-

ing about what comes next. Mayer Brown is expanding its restructuring and bankruptcy practice, perhaps in anticipation of an end to government stimulus programmes that have kept many businesses afloat. Many others are beefing up their antitrust and regulatory practices as President Joe Biden and his Democratic Party in Congress threaten to regulate big business and go after dominant companies, from Silicon Valley to Wall Street. The white shoes will not soon suffer a shortage of well-heeled clients. ■

Staffing firms

Work in progress

PARIS

Matching workers to employers has become a hot business again

A YEAR AGO employers were furloughing staff. Now many of them are desperately looking for more. The rapid bounce-back in some bits of the labour market—notwithstanding the risk of a new pandemic flare-up—has been good news for workers angling for a pay rise. It is also a boon for staffing agencies, which match firms with potential hires. Beyond short-term dislocations to the workforce, the changing way in which people want to work should keep the recruiters busy.

Firms globally spend over \$400bn on human-resources services, according to Royal Bank of Canada. Much of the lime-light is hogged by headhunters that poach chief executives, star bankers or legal eagles (see previous article). In fact the bulk of the business consists of placing low-level office hands and blue-collar workers, often on temporary contracts. The industry is heavily fragmented, but a few global players have emerged, such as Adecco in Switzerland, Manpower in America and Randstad in the Netherlands.

Covid-19 dented revenues at staffing agencies as employers slowed hiring amid the recession and employees hesitated to jump ship. Now a post-pandemic churn is gaining steam. Vacancies are up in much of the rich world, as companies seek staff while workers still anxious about infection remain on the sidelines. The result is a bump in wages, which can be bigger for those ready to defect to a new employer.

The fortunes of recruiters—and their share prices—closely track economic-confidence indicators. But the resurgence has been especially rapid this time. After the financial crisis of 2007-09 it took Adecco and Randstad 7-8 years for revenues to return to previous highs, says Kean Marden of Jefferies, an investment bank. This time ▶▶

Bartleby Different pitches

The pros and cons of differing management styles

SQUINT DURING the final of the European football championships and it was possible to imagine that two corporate executives were at work on the touchline. One was the sharply dressed Roberto Mancini, manager of Italy, who was often shown angrily gesticulating at his team. His rival Gareth Southgate, the England manager, was also dressed in a suit but had a much calmer demeanour, often pausing to consult his colleagues.

The two represent different styles of football management. Mr Mancini has a domineering approach, akin to that of Sir Alex Ferguson, the former manager of Manchester United, who was famous for getting so close to his players that a tirade became known as the “hairdryer treatment”. Mr Southgate is a more emollient and inclusive character. During the tournament he took the time to praise the efforts of some of the reserve members of the squad who never made it on to the pitch. Like many a modern executive, Mr Southgate was promoted from within, managing the England under-21 squad before becoming coach of the senior team. The result was that he had a strong and lasting connection with many of the players.

In corporate terms, one could see Mr Mancini as akin to Jack Welch, the legendary hard-boiled former head of General Electric, or the hard-charging boss of a private-equity group. In contrast, the style of Mr Southgate resembles that of the new, socially conscious breed of corporate manager. He supported his players when they “took the knee” to protest against racism and wrote a letter to England fans, stating that it was the duty of players “to continue to interact with the public on matters such as equality, inclusivity and racial injustice, while using the power of their voices to help

put debates on the table, raise awareness and educate”. It is easy to imagine those sentiments coming from the mouth of Paul Polman, who as boss of Unilever championed a sustainable business model for the consumer-goods giant. This does not mean that Mr Southgate lacks a ruthless streak. One of his first acts as manager was to drop Wayne Rooney, England’s ageing talisman, and he has suspended some of his stars for misbehaviour.

Italy’s eventual victory makes it tempting to argue that this proves the greater virtues of a more aggressive style of management pursued by Mr Mancini. After all, the final represented the 34th consecutive game under his leadership in which Italy had avoided defeat. This was a complete turnaround after the squad failed to qualify for the 2018 World Cup under Mr Mancini’s predecessor. Italy started the tournament with a lower world ranking than England, which also enjoyed home advantage for the match.

But the final was exceptionally close. The teams were level after normal time and extra time; had one of England’s pen-



alties hit the inside of the post instead of the outside, the outcome might have been different. Mr Southgate also deserves credit for getting England into a big final for the first time in 55 years, having earlier guided them to a World Cup semi-final in 2018. Under his predecessor, the team was knocked out of the 2016 European championships by Iceland, a footballing minnow. In a time of polarisation, Mr Southgate is widely admired for his politeness and modesty.

And Mr Mancini’s aggressiveness has led to problems in the past. A year after guiding Manchester City to an English Premier League title in 2012, he was sacked over concerns about his habit of harshly criticising his players in public and being “aloof and icy” with backroom staff. One player texted a journalist “Can we put the champagne on ice yet?” on rumours of the manager’s departure. After leaving City, he had three unsuccessful stints in club management before taking the Italian job in 2018.

In the corporate world, the fashion has moved more towards the Southgate style of management. In football as in business, aggressive management can work for a while. But it only succeeds if it is accompanied by other qualities.

What unites Messrs Mancini and Southgate is their meticulous attention to detail. And any manager, in football or business, is only as good as the team at their disposal. If either Mr Mancini or Mr Southgate had been in charge of a team from a smaller nation with fewer resources, they would not have made it to the final. As Warren Buffett wisely remarked, “When a management with a reputation for brilliance tackles a business with a reputation for bad economics, it is the reputation of the business that remains intact.”

▶ they needed just 6-9 months. The two firms’ combined market value, at \$25bn, now exceeds its pre-pandemic level.

So far the upturn is mainly from activities that bounce back first as economies recover. Demand for manual labour is usually stronger early on than for office-based jobs, helped this time by abundant work in logistics and e-commerce. And employers are initially more sanguine about taking on temporary staff, who cost more but whose numbers can be trimmed should the recovery stall. The agencies also hope to seize durably on working-life changes

induced by covid-19. Some habitual cubicle-dwellers enjoyed working remotely and may prefer employers that allow them to continue toiling from their sofas. Companies can now consider far-flung candidates for jobs that would once have been tied to a city. Recruiting firms, which maintain vast databases of potential staff, can help widen their horizons.

The post-pandemic world may give a fresh lease of life to a business model that was in the midst of being roiled by online offerings. Some platforms have been taken over by the hiring majors: Monster now be-

longs to Randstad, for example, and Hired, a tech specialist, to Adecco. Staffing groups say human recruiters still have an edge, for example guiding people looking to change fields altogether into new careers.

Economists disagree over whether the recent bout of wage inflation is a short-term blip or a lasting feature of the labour market. Unemployment remains high in some countries. Either way, lots of people think differently about pay cheques, and their relationship to work, than they did a year ago. That should keep those whose job it is to find other people jobs busy. ■

Schumpeter | Superpower surge

China's "dreamchild" is stealthily winning the battery race



IN AMERICA, IF YOU want to dominate an industry, you channel your inner Elon Musk and shout about it. But CATL, the Chinese company that makes batteries for some of Mr Musk's Tesla electric vehicles (EVs), is different. When your columnist first contacted it in 2017, the brush-off was swift. "We want to concentrate on our products only and do not accept any interviews at present." These days it is only marginally less blunt. "Unfortunately, we are sorry that it's hard for us to arrange [interviews] at the moment." The temptation is to give it a dose of its own medicine and ignore it.

And yet in 2017 the firm, founded only six years earlier as Contemporary Amperex Technology Ltd, vaulted from being the world's third-largest battery-maker to its biggest. It has since reached a market value of 1.3trn yuan (\$200bn), more than the second, third and fourth producers—South Korea's LG Chem, Japan's Panasonic, and China's BYD—combined. In recent days its rising share price has made its 53-year-old founder, Zeng Yuqun, richer than Jack Ma, a much-better-known Chinese tech baron. Given Mr Ma's blackballing by the Chinese government, for Mr Zeng to have kept his head down now looks shrewd.

The world will hear a lot more about CATL in the future. That is because one of the justifications for its high valuation is that it is about to move beyond the Chinese mainland, the world's biggest EV market where it accounts for about half of lithium-ion-battery sales, to Europe, Indonesia and possibly even America. Its profitability far exceeds that of its global peers. Its technology has become at least as good as theirs, giving it the clout to outcompete them and contribute meaningfully to a worldwide clean-energy revolution. And yet it is also what Sam Jaffe of Cairn ERA, a battery consultancy, calls the "dreamchild" of China's government-industrial complex. That makes it a potential flashpoint in the torrid world of technology geopolitics.

CATL's low profile starts with its provenance. Mr Zeng created it in the backwater of Ningde, a subtropical city better known for tea than tech, in Fujian province where he grew up in a hillside village. But he has long had high ambitions. In 1999 he founded Amperex Technology Ltd (ATL), a maker of lithium-ion batteries for portable devices, which he sold to TDK, a Japanese firm, in 2005. One of his big clients was Apple, maker of the iPhone.

Seeing the potential for EV batteries, which China was keen to turn into a strategic industry, Mr Zeng led a spin off from ATL in 2011, severing links with its Japanese parent company—possibly to please the Chinese authorities, says Mark Newman, a battery executive who formerly covered the company as an investment analyst. When it listed in 2018, CATL had a small percentage of direct and indirect state ownership. More important, the government had its back. For years China used subsidies to favour domestically produced batteries for electric cars and buses, kneecapping South Korean competitors such as LG Chem and Samsung SDI. CATL, one of two top-tier Chinese producers, benefited most. The other, BYD, made cars as well as batteries. For that reason, many rival carmakers in China—including foreigners such as Tesla and BMW—gave it a wide berth and turned to Mr Zeng instead.

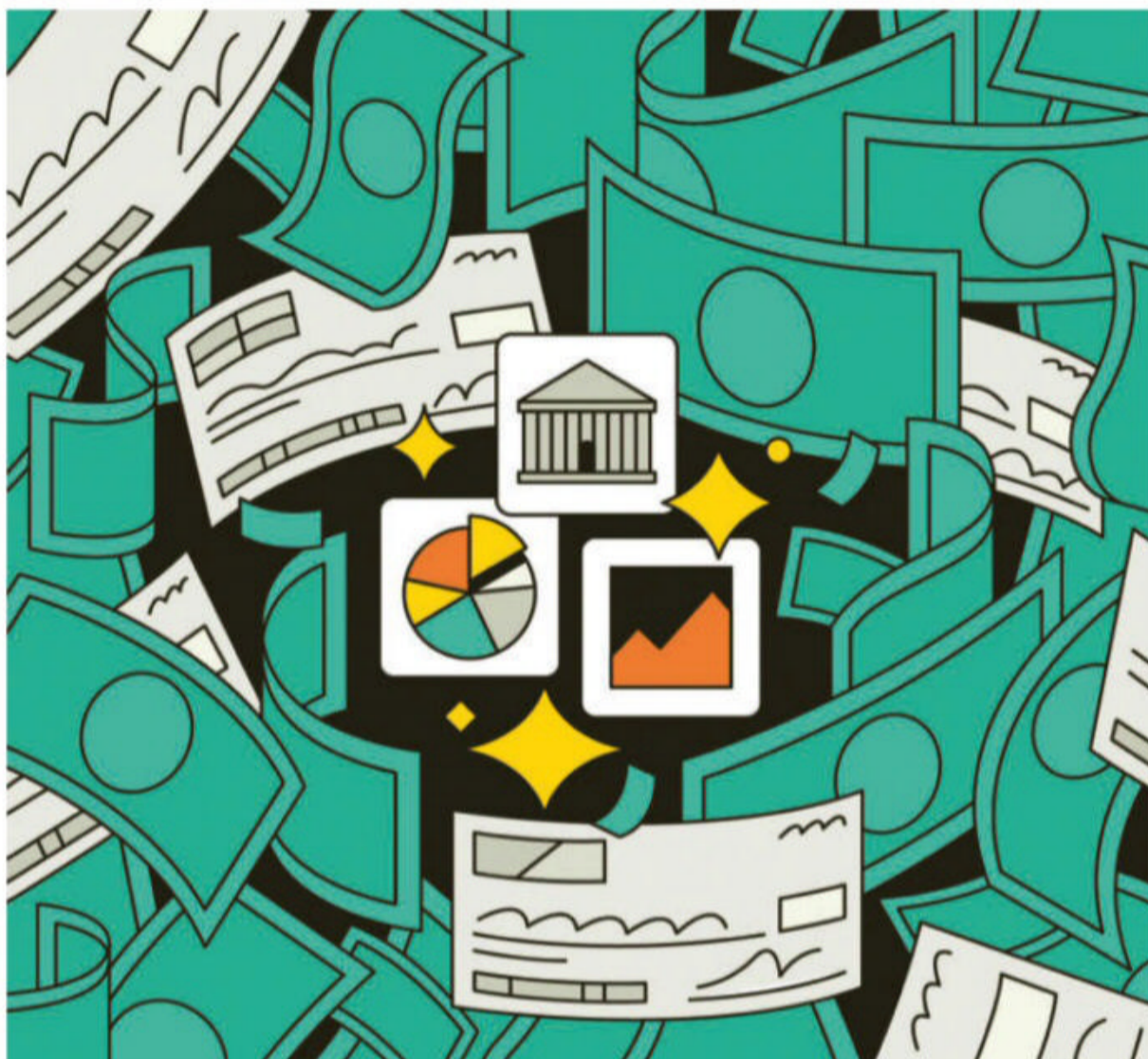
It is unfair, however, to ascribe CATL's success purely to economic nationalism. According to James Frith of BloombergNEF, a consultancy, when CATL was faced with the winding down of subsidies in 2019, it quickly leapfrogged its South Korean rivals to produce the latest high-nickel batteries, which run for longer than the cheaper lithium-iron-phosphate ones that had been China's staple. Chinese carmakers are bolder than their Western counterparts (apart from Tesla) in adopting innovative chemistry, he adds, which gives CATL more freedom to experiment. It also gets more for its investment in China than rivals do elsewhere and has a cheaper workforce, which makes its operating margins, just shy of 15%, the best in the business. Strong profits provide more cash to invest in expansion. Neil Beveridge of Bernstein, an investment firm, expects its capacity roughly to quadruple to 500 gigawatt-hours (GWh) of battery cells a year by 2025. That is an amount similar to what is promised from all of the world's gigafactories today. Only Mr Musk sets more outlandish targets.

Zeng and the art of market-share maintenance

Most of CATL's expansion will come in China, where it has a growing export business. But by the end of this year it is also expected to start production at its first offshore factory, with capacity of 14GWh in Erfurt, Germany, from where it will supply carmakers like BMW, Volkswagen and Daimler. Its move overseas appears to be motivated by a desire to retain its market leadership as EV sales outside China accelerate. Its South Korean and Japanese rivals have a bigger global presence. Simon Moores, a battery consultant, thinks a subsequent step will be into America.

Yet energy—even the clean stuff—is dirty business, muddied by geopolitical rivalries and economic jingoism. There are already fears in the West that CATL's profitability in China will enable it to offer cut-price products abroad, reopening wounds caused when China's subsidised solar panels swept the world in the 2010s. Moreover, advanced batteries, like semiconductors, are increasingly discussed in terms of an arms race. Europe and America are offering big inducements for locally made batteries and adjacent supply chains in order to catch up with China. They see a strategic vulnerability in being too reliant on a Chinese supplier.

As a result, CATL will have to be clever. Already it has more alliances with global carmakers than any other battery firm; jointly building factories close to their operations around the world would buy it political support. It will need to counter geopolitical paranoia by stressing the importance of cheap batteries, both for EVs and clean-electricity grids, in the fight against climate change. More transparency wouldn't go amiss, either. It is a fine line between being coy and acting as if it has something to hide. ■



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Fintech

The funding frenzy

Investment in fintech is booming as the upstarts join the financial establishment

AN AIR OF hype habitually surrounds the founders of startups and their venture-capital backers: everyone is an evangelist for their latest project. But even allowing for that zeal, something astonishing is going on in fintech. Much more money is pouring into it than usual. In the second quarter of the year alone it attracted \$34bn in venture-capital funding, a record, reckons CB Insights, a data provider (see chart 1). One in every five dollars invested by venture capital this year has gone into fintech.

Deals are also proceeding at a frenetic pace. PitchBook, another data provider, reckons that venture-capital firms have sold \$70bn in stakes in fintech startups so far this year, nearly twice as much as in all of 2020, itself a bumper year (see chart 2 on next page). That included 32 listings. Fintechs took part in 372 mergers in the first quarter, including 21 of \$1bn or more.

In the past few weeks alone Visa, a credit-card firm, has paid €1.8bn (\$2.1bn) for Tink, a Swedish payments platform. JPMorgan Chase, America's largest bank,

has said it will buy OpenInvest, which provides sustainable-investment tools—its third fintech acquisition in six months. Upstarts, such as Raisin and Deposit Solutions, two German platforms that link banks with savers, are merging. Some are going public. On July 7th a listing in Lon-

don valued Wise, a money-transfer firm, at nearly £9bn (\$12.2bn). Recent or planned multi-billion initial public offerings (IPOs) include that of Marqeta (a debit-card firm), Robinhood (a no-fee broker) and SoFi (an online lender).

This blizzard of activity reflects demand from investors as they hunt for returns and as the digital surge in finance takes off. But it also reveals something more profound. Once the insurgents of finance, fintech firms are becoming part of the establishment.

The current investment boom has several novel features beyond its scale. For a start, it is increasingly focused on the biggest firms, says Xavier Bindel of JPMorgan. Smaller me-toos and startups with business models that have struggled during the pandemic are no longer in favour. The first quarter of 2021 saw the most funding rounds ever for private fintech startups valued above \$100m; the median round raised \$10m, a quarter more than in the same period last year.

The location of activity has changed, too. Five years ago the fintech story centred on America and China. Today, Europe is catching up. A funding round in June valued Klarna, a Swedish “buy now, pay later” startup, at \$46bn, making it the second-most-valuable private fintech firm in the West. Only July 15th Revolut, a London-based neobank, said it had raised \$800m, valuing it at \$33bn. Firms in Latin America ▶▶

Swarming in

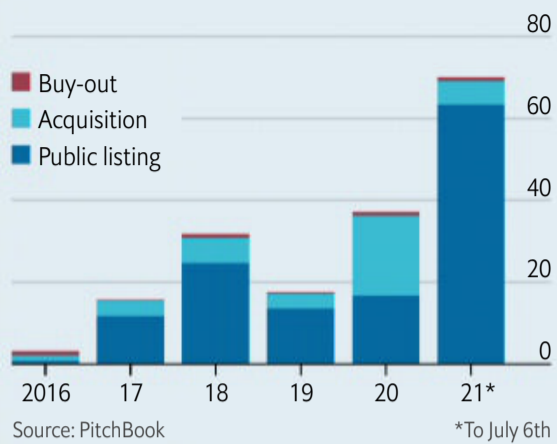
Fintech companies, venture-capital funding, \$bn



Source: CB Insights

Golden goodbye

Venture-capital exits from fintech companies
By type, \$bn



and Asia, and led by Stanford-educated or Silicon-Valley-trained founders in particular, have become magnets for investors. Nubank, Brazil's biggest digital-only bank, for instance, is worth \$30bn.

The craze also extends beyond payments. A surge in savings in rich countries in the past year has boosted "wealth-tech" startups, such as online brokers and investment advisers. Insurance-tech firms received \$1.8bn through 82 deals globally in the first quarter of this year. Lending has proved trickier to disrupt—perhaps owing to regulators' firmer grip on this area of finance—except when it crosses over into payments, as illustrated by the rise of Klarna and its rivals.

This broadening out points to one explanation for the explosion in funding: the huge growth in the market for fintech offerings during the pandemic. Consumers and companies adjusted with rapidity and ease to the closure of bank branches and shops and the resulting digitisation of commerce and finance. Many of their new habits are likely to stick.

Factors specific to fintech are also behind the big bang. Most of today's fintech stars are not overnight successes, but were set up in the early 2010s. Since then their user numbers have swollen to the many millions and they are approaching profitability. They have become big enough to appear on the radar screens of late-stage venture-capital and private-equity firms, such as America-based TCV (which has backed Trade Republic, a German variant of Robinhood), Japan's SoftBank (a recent investor in Klarna) and Sweden's EQT (which backed Mollie, a Dutch payments firm, last month).

Moreover, some institutional investors—such as asset managers (BlackRock), sovereign-wealth funds (Singapore's GIC) and pension funds (Canada's Pension Plan Investment Board)—have made a lot of money by snapping up shares in big tech firms in recent years. These are now trying to gain an edge by investing in promising startups before they go public.

The huge cheques from these investors come just as fintech firms are hoping to write the next chapter. Most startups were created to "unbundle" finance: to carve out niches where they could offer a better service than the banks. Now, however, most successful firms are rebundling, adding new products in a bid to become platforms. Acquisitions provide a handy shortcut; their high valuations mean the big firms can often snap up smaller ones on the cheap by swapping equity.

Stripe, the most valuable private fintech firm in the West, is a good example of the sector's coming of age. It was set up a decade ago to help firms accept payments online. Now worth \$95bn, it also offers services ranging from tax compliance to fraud prevention. That breadth was partly achieved through acquisitions; since October it has bought three other firms.

A similar logic animates credit-card giants, which are trying to hedge against innovations in online payments; and the banks, which see fintech as a way to plug gaps in their digital offerings, cut costs, and diversify away from lending. Goldman Sachs and JPMorgan are bringing lots of smaller acquisitions under the umbrella of new, versatile consumer apps. As a consequence, the distinction between fintech and traditional banking could eventually blur, predicts Nik Milanovic of Google Pay, the tech firm's payments arm.

Swipe right

All this splurging and merging also carries risks. One is that the hefty prices paid for fintechs prove unjustified. Visa is buying Tink at a price that is 60 times the startup's annual revenue; Wise is valued at around 20 times its revenues and 285 times its profits. Banks in particular may find out about promising fintech firms only once they are too expensive.

Another risk is that competition and innovation are stifled. Founders of startups that have been acquired often leave at the end of their "vesting" period—the minimum amount of time they must stick around before they can sell their shares, usually one to three years. The culture that allowed a firm to thrive could then wither. Fintechs bought by banks in particular could struggle: after a deal, cultures can clash; customers often leave. Most neobanks acquired by old ones, such as Simple (bought by BBVA, a Spanish bank), have been either shut down or sold.

Nevertheless, one thing seems clear. Fintechs are inexorably gaining critical mass: their value has risen to \$1.1trn, equivalent to 10% of the value of the global banking and payments industry, and up from 4% in 2018. Prices may be stretched today and some firms may flop, but in the long run it seems likely that this share will only rise further. ■

Wall Street

Fat and happy

NEW YORK

Bankers are confident their bumper profits will last. Investors are less sure

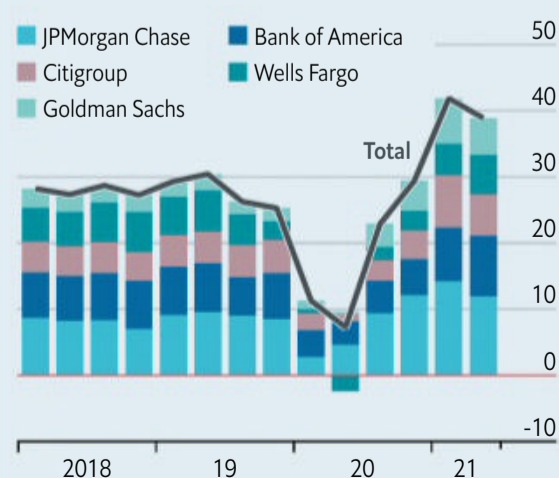
BANK BOSSES were full of good cheer as they reported their second-quarter earnings on July 13th and 14th. "The consumer...their house value is up, their stocks are up, their incomes are up, their savings are up...they're raring to go," said Jamie Dimon, the boss of JPMorgan Chase, when analysts asked about the risk that economic growth might slow in the coming months. David Solomon, the chief executive of Goldman Sachs, sounded upbeat when asked if an executive order from the White House seeking to increase competition among businesses might cool feverish dealmaking activity: "I'm encouraged by the fact that our backlog levels remain extremely high...A lot of that feels like it will be sustained." Jane Fraser, the boss of Citigroup, expressed a similar sentiment, telling analysts "we have a fabulous pipeline."

For an entire year now America's banks have enjoyed a profits bonanza. Investment banks, which issue equity and debt for companies and make markets in stocks and bonds, have reaped bumper profits as trading activity has boomed. Retail banks took an early hit as they wrote down loan values for expected losses in early 2020. But they have since been able to gradually revise loan values back up, first as stimulus helped customers stay afloat and then as the economy began to reopen.

Banks' earnings in the second quarter of this year fit the recent trend well. Total profits at five big firms—Bank of America, Citigroup, Goldman, JPMorgan and Wells Fargo—came to a meaty \$39bn, five times their level in the second quarter of last year, and around 40% higher than average ▶▶

All the way to the bank

US banks, quarterly net profit/loss, \$bn



▶ quarterly profits in 2018 and 2019 (see chart on previous page). JPMorgan released a handsome \$3bn of loan-loss provisions as profits, and Bank of America added back \$2.2bn. After a hectic first quarter, trading activity slowed at Citi, Goldman and JPMorgan. But frenetic dealmaking meant that investment-banking revenues grew robustly; fees at JPMorgan, for instance, rose by 25% on the year. (Morgan Stanley, another big bank, was due to report on July 15th after *The Economist* went to press.)

Early in the pandemic, bank bosses had downplayed their windfalls. Retail bankers emphasised the uncertainty around loan repayment. Most bosses were aware that any boon from bumper trading earnings was likely to be undone by loan losses as millions of workers were laid off. They also warned that their investment-banking revenues were certain to “normalise” soon, as unusually high trading, issuance and deal activity slowed down.

This quarter, however, bosses threw caution to the winds. The health of the American consumer is apparent in their credit-card habits, said Brian Moynihan, the boss of Bank of America. Repayments remain unusually high—customers are not accruing debt—even as they report mammoth growth in spending, up by 40% year-on-year and 22% on the first half of 2019. As for investment banking, Mr Solomon pointed to the pandemic-led acceleration in companies’ digital strategies as a potentially lasting driver of their lucrative mergers and acquisitions business.

Whether that rosy confidence is well-placed or not remains to be seen. High prices and supply bottlenecks could slow the economic recovery. Many banks said their own costs, especially wages, were creeping up. Several stimulus schemes, including generous unemployment benefits and moratoriums on evictions and foreclosures, are due to unwind in the second half of 2021; without them, Americans’ finances may start to look less solid.

Nor has the pandemic been all about tailwinds for banks’ profits. Lower interest rates, slashed to zero by the Federal Reserve to support the economy, are dragging down the income they make on interest. Bank of America’s net interest income, for example, fell from \$10.8bn in the second quarter of 2020 to \$10.2bn in the same period this year.

If moves in share prices are anything to go by, then investors are less bullish about banks’ futures than executives appear to be. Although profits at both JPMorgan and Goldman beat expectations, their share prices still closed nearly 2% lower on the day they reported results (they have since regained some of those losses). For the past year bankers have mostly been pleasantly surprised by the strength of their businesses. That may soon change. ■

The European Central Bank

Promises, promises

What the ECB’s new target means in practice

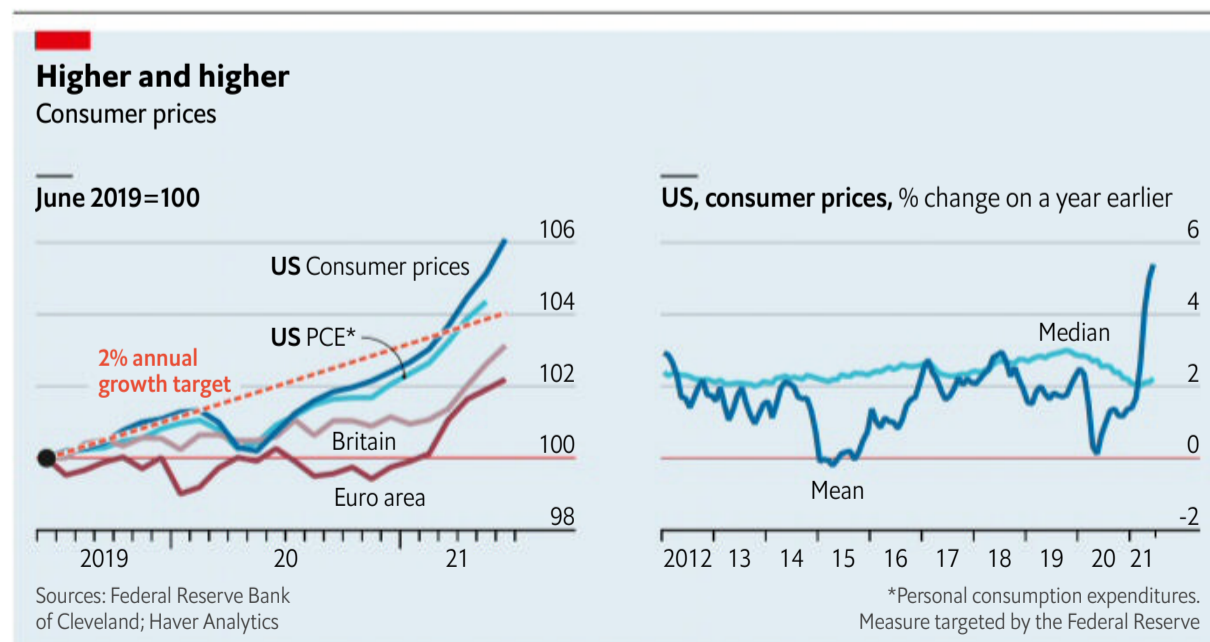
FOR MOST of its 23 years of life the European Central Bank (ECB) had the fuzzy inflation target of “below, but close to, 2%”. No one knew what precisely that meant, but the consensus among economists was that the bank was aiming for inflation in the region of 1.7-1.9%. In any case stubbornly low inflation rendered the question almost academic. Average annual inflation in the euro area since 2013 has been just 0.9% compared with 1.9% in America, even though interest rates are below zero and the ECB has hoovered up government and corporate bonds for years in an attempt to gin up the economy.

The bank’s struggle to attain its target has prompted some soul-searching. Last year Christine Lagarde, its president, launched a review of its strategy, which held “listening” events and pored over academic papers. Its conclusions were announced on July 8th. The bank plans eventually to incorporate the impact of climate change in its models and, potentially, to reflect climate considerations in its asset purchases. It also intends to pay attention to the cost of owning a house when it studies inflation (in contrast to practice in other rich countries, this is not included in the euro area’s measure of consumer prices). And it unveiled a new symmetric inflation target, of 2%.

The greater clarity around the target is welcome, and might ward off concerns that the ECB will raise interest rates before an economic recovery takes firm hold, as it did in 2008 and 2011. Ms Lagarde noted on July 8th that the change won unanimous support from the bank’s 25-strong governing council. But working out what it means for the ECB’s monetary policy may prove more contentious.

For a start, the strategy seems to mean different things to different ratesetters. Jens Weidmann, the hawkish head of the Bundesbank and a member of the ECB’s governing council, took pains to point out that although inflation might deviate from the target temporarily, the ECB would not aim to exceed it. That is in contrast to America’s Federal Reserve, which also recently revised its target. It plans to aim for inflation of 2% on average, tolerating a period of overshooting in order to make up for past shortfalls. But Olli Rehn, the doveish governor of Finland’s central bank, said on July 9th that he expected the ECB’s response to a shock to be quite similar to that of the Fed.

The different views might explain why, although Ms Lagarde promised that the bank’s next monetary-policy meeting on July 22nd would clarify what the new target means for policy, few analysts are expecting big changes. (The ECB is currently buying €80bn, or \$95bn, in government and corporate bonds a month.) Economists at Barclays, a bank, reckon that the review should have no effect on the near-term path for monetary policy, and that the ECB would continue to support the euro area by buying bonds. Analysts at Morgan Stanley, another bank, predict that the ECB might bring forward an announcement to phase ▶▶



Sticker shock

Consumer prices rose by 5.4% in the year to June in America, and by 2.5% in Britain—both well above economists’ expectations. Speaking to Congress on July 14th Jerome Powell, chairman of the Federal Reserve, argued that America’s inflation surge is temporary. A small number of huge price rises, such as those for used cars, are dragging up the headline average rate. By contrast, the median price change is far lower.

▶ out its pandemic-related asset-purchase scheme, but beef up an older purchase programme instead.

Without big changes, it is hard to see how the ECB can do a better job of hitting its target. In June a range of economic forecasters, including those at the central bank, projected inflation to be in the region of 1.4-1.5% in 2023. If it is to successfully convince investors and households that it means business, then the bank will have to explain why, when it does not expect even to meet its old target, it should suddenly be able to hit its new one. ■

Welfare and work

Make it pay

Cutting benefits might ease labour shortages. But only by a bit

AS AMERICA REOPENS for business, labour shortages continue to worsen. Firms are advertising over 9m vacancies, the highest on record. Bosses complain they are unable to find people to serve drinks, staff tills or drive trucks. So in an attempt to eliminate the shortages, half of states are ending a \$300 weekly top-up to unemployment insurance (UI), in place since January, as well as other pandemic-related UI programmes. Is this change having the desired effect?

It depends whom you ask. On June 27th the *Wall Street Journal* ran an article on Missouri, a state that abolished the supplement on June 12th, claiming that people were flying off the unemployment rolls. The very same day the *New York Times* ran an article also on Missouri, which drew almost exactly the opposite conclusion. The reality is somewhere in between these polarised extremes. Making benefits less generous may help America's jobs market a little—but other factors do more to explain labour shortages.

Removing the \$300 weekly top-up certainly makes living off welfare less comfortable. At that level 40% of people are earning more than they were in their previous jobs. It is hard to say right now, however, whether imposing tougher conditions translates into more vigorous job searches. The first four states to abolish the supplement did so too late for the effect, if any, to show up in the latest jobs report, released on July 2nd. In the meantime economists must use high-frequency data, such as online job postings and weekly figures on claims for UI, which are less reliable.

These suggest that a stingier UI makes a difference. Both analysts at Morgan Stanley, a bank, and economists at the St Louis

Federal Reserve find that continuous claims for UI have fallen the most in “early-ending” states. Other research finds similar trends in new claims for UI. But there is enough going on to muddy the picture: Daniel Zhao of Glassdoor, a job-search website, adds a note of caution, pointing out that new claims were already dropping faster in reforming states.

It will not be until the August jobs report, released in September, that wonks will have a better idea of what is really going on at the state level. It seems likely, though, that overall employment in America will by then be somewhat higher than it would have been without the cut to UI. A survey from Indeed, a job-search website, suggests that a tenth of unemployed people “not urgently” looking for work feel this way because of UI payments.

What is clear, however, is that there are other important reasons why so many workers seem job-shy. Across America the growth in the number of vacancies continued to rise in June and early July, according to Indeed. That suggests that workers are unlikely to be battering down the door to get an interview just because their benefit top-ups have ended.

People's care responsibilities are one big impediment to returning to work (in-person schooling is only set to resume in the autumn). A pile of “excess” household savings accumulated during the pandemic, amounting to more than \$2trn in total, has made it easier for many Americans to withstand a spell of unemployment, say until they find the perfect job. Others are depending on the salary of a spouse or partner. Moreover, fear of catching covid-19 is still apparently holding many people back. Who would choose to be a chef, when research suggests that practically no other occupation poses a higher risk of dying from covid-19? Until that threat abates, expect labour shortages to continue. ■



Going job-hunting

The IMF

Every little helps

WASHINGTON, DC

Will doling out more special drawing rights help poor countries?

THE IMF has not exactly stood on the sidelines during the covid-19 pandemic. Since the onset of the crisis, it has extended loans worth about \$130bn to 85 countries and provided debt-service relief to some poor economies. Yet given the severity of the pandemic and the IMF's ample balance-sheet—its lending capacity was boosted to a cool \$1trn after the global financial crisis—you might have expected more. On July 8th the fund took what looks like a big step in the right direction, by deciding to create \$650bn in new foreign-exchange reserves. How generous is it really?

The plan does not involve direct lending to countries, nor draw on the IMF's balance-sheet. It instead entails the creation and allocation of “special drawing rights” (SDRs), a quasi-currency created in the 1960s in an effort to boost the supply of high-quality reserve assets such as dollars and gold. SDRs are valued against a basket of several major currencies and can be swapped for those currencies if the need arises. There are no conditions attached to the use of such funds, and the associated interest rate is minimal. Governments pay 0.05% on the SDRs they use, with no deadline by which the funds must be repaid.

Such allocations are a familiar crisis-fighting tool; in 2009 the IMF agreed on a distribution of \$250bn. An allocation during the pandemic might have come sooner were it not for early opposition from America, which wields sufficient voting power to block such measures. President Joe Biden's administration, however, now backs an allocation. (The \$650bn, conveniently, is just shy of the amount that requires approval from America's fractious legislature.) The fund's board of governors will vote on the disbursement on August 2nd. If, as expected, it is approved, the SDRs will be doled out later that month.

Whether countries draw on it or not, the extra reserve cushion should lift market confidence and reduce the risk that a draining away of foreign exchange leads to balance-of-payments crises. (The fund estimates that over the next five years, the global economy is likely to face a shortage of reserve assets of \$1.1trn-1.9trn.) Additional reserves may come in especially handy if a rip-roaring economic recovery leads to higher interest rates in America. That could precipitate an outflow of money and weaken currencies across poor countries, leading to straitened financial

► circumstances and higher import prices. The new allocation will give governments more room to use their hard-currency reserves to import food or vaccines.

Yet the huge headline figure sounds more generous than it really is. The new SDRs will be distributed broadly in proportion to the funding countries provide to the IMF—meaning that the rich world will receive more than half the allotment. Low-income countries will receive a mere 3.2% of the total, equivalent to \$21bn, or roughly 4% of their combined output before the pandemic. That does not seem enough,

considering that these places face new variants without ample vaccines and cannot borrow as easily as richer ones.

In order to redress the imbalance between allocation and need, rich countries with little use for more reserves are working out ways to donate some of their new SDRs. Contributions of about \$15bn in existing SDR holdings have already helped expand an IMF facility offering no-interest loans to poor countries over the past year. A larger facility, funded by SDR donations of as much as \$100bn, may be announced in August. This is intended to boost poor

countries' health systems, support economic recovery and help them prepare for climate change.

The financial contortions behind SDRs invite criticism. Republicans in America's Congress, for instance, fret that the allocation offers little help to poor nations while giving a windfall to rivals like China and Russia. In fact such places are unlikely to make much use of their SDRs. More targeted aid would probably face political hurdles of its own. A roundabout, opaque means of support may not be ideal; but it is probably the best the fund can do. ■

Buttonwood Margin call

Why investors are anxious about a profits squeeze in 2022

IT IS MID-JULY, so the football season in England will start soon. You probably hadn't noticed it had ended. The earnings season, when listed companies in America reveal their quarterly results, comes round with similarly tedious frequency and also never seems to stop. The second-quarter season that kicks off this week ought to stand out, though. Public companies in aggregate are expected to reveal the largest increase in profits since the bounce-back from the Great Recession of 2008-09.

Optimism about earnings has driven share prices higher in the past year. But financial markets are relentlessly forward-looking. And with bumper earnings already in the bag, they now have less to look forward to. A rally in bond prices since March and a sell-off in some cyclical stocks point to concerns about slower GDP growth. A plausible case can be made that the earnings outlook might worsen as quickly as it improved.

Start with the bottom-up forecasts for profits by company analysts. They expect earnings per share for the MSCI world index of stocks to rise by 40% in 2021, according to FactSet, a data provider. That is a good deal higher than at the start of the year, when the forecast was around 25%. A slowdown to a growth rate of 10% is expected in 2022. Then again forecasts tend to start out at 10%, a nice round number, before being revised upwards (as in, say, 2017) or downwards (as in 2019) as news comes in.

Profits swing around a lot. For big businesses, a lot of costs are either fixed or do not vary much with production. Firms could in principle fire workers in a recession and hire them back in a boom so that costs go up and down with revenues. But this is not a great way to run a business. A consequence of a mostly

stable cost base is that, when sales rise or fall, profits rise and fall by a lot more. This "operating leverage" is especially powerful for companies in cyclical businesses, such as oil, mining and heavy industry. Indeed, changes in earnings forecasts are largely driven by cyclical stocks.

If global GDP growth falls, then profits will fall faster. There is already some evidence of a slowdown. The output and orders readings in the global manufacturing purchasing managers' index (PMI), a closely watched marker of activity, fell in June. Global retail sales surged in March, but have gone sideways since. The evident slowdown in China's economy may be a portent, writes Michael Hartnett of Bank of America. China emerged from lockdown sooner; its PMI peaked earlier; and its bond yields started falling four months before Treasury yields did.

Slower economic growth is one part of a classic profit squeeze. The other is rising costs. A variety of bottlenecks have pushed up the prices of key inputs, such as semiconductors. Too much is made of this, says Robert Buckland of Citigroup, a



bank. Input prices typically go up a lot in the early stages of a global recovery. Big listed companies usually absorb them without much damage to profits. Rapid sales growth trumps the input-cost effect. The real swing factor is wages, which are the bulk of firms' costs. The recovery is barely a year old, but there is already evidence of a tight labour market.

In America the ratio of vacancies to new hires, a measure of the difficulty firms have in filling jobs, reached a record in May. Businesses that were forced to close during lockdowns have lost some workers to other industries. Others are dropping out of the labour force altogether. Thanks to the recent surge in the prices of assets, including homes, some people are choosing to retire early, says Michael Wilson of Morgan Stanley.

An obvious remedy for rising costs would be to raise prices. Though inflation is surging in America, that reflects price rises for a small number of items. Many businesses tend not to raise prices straight away. They are mindful of losing customers to rivals who don't raise prices. And there are administrative costs to changing prices frequently. A study published in 2008 by Emi Nakamura and Jon Steinsson, two academics, found that the median duration of prices is between eight and 11 months. Prices of food and petrol change monthly but those of a lot of services only change once a year.

A profits squeeze is not certain. Any number of influences could give fresh impetus to global GDP growth: a bumper infrastructure bill in America; more policy stimulus in China; or some concrete signs that supply bottlenecks are easing. Still, while the earnings season now under way ought to be a sunny one, margins look vulnerable.

Free exchange | At the coalface of climate policy

Could the EU's proposed carbon tariff on imports prove an example to others?



WHEN THE European Union established its cap-and-trade scheme for pricing carbon emissions in 2005 it faced a tricky design problem. Making polluting firms buy permits puts them at a disadvantage in global markets. Companies might respond to the scheme by moving their dirty activities offshore, causing “carbon leakage”. And if producers in places with lax environmental standards outcompeted European firms, global emissions would go up. The EU solved the problem by offering subsidies and free pollution permits to some dirty industries exposed to trade.

Those handouts, however, have always had a target on their back. On July 14th EU officials set out a plan to phase them out and replace them with a “carbon border-adjustment mechanism” (CBAM). Between 2025 and 2035, producers of aluminium, cement, fertilisers and steel will gradually lose their subsidies. But importers of these goods will have to buy a new category of pollution permit. How many they need will depend on the amount of carbon estimated to have been emitted during the production of the goods. The policy is in effect a tariff, intended to compensate for the fact that foreign firms may face no carbon price, or one that is lower than Europe’s.

The switch will please those who suspect that subsidies have blunted the impact of carbon prices. In theory free permits do not affect the incentive to reduce emissions, because at the margin the financial reward for doing so is the same: firms that get greener can sell their surplus entitlements. In practice the freebies have sapped ambition. Michael Grubb of University College London points out that companies know that if they sell their permits today, they might receive fewer handouts in future. Compared with the industries that have received support, the power sector, which has not, has decarbonised more quickly. Victoria Irving of Morgan Stanley, a bank, says that some subsidised polluters have made green investments, but “they have a long way to go”. Withdrawing the subsidies without a new scheme would bring back the danger of leakage.

Officials estimate that by 2030 the CBAM and the suite of environmental policies announced alongside it will reduce emissions in the affected sectors by 14%, compared with a scenario in which nothing changes. However, imports would be 12% lower, because

tariffs depress trade. Though totemic, the scheme’s scope is relatively small. It would raise about €9bn in revenues in 2030 (although that figure may nearly double once the policy is fully phased in). The carbon embodied in trade flows is typically less than 10% of countries’ total emissions, according to the IMF, and the proposal covers only a handful of sectors. In 2019 the imports in question were worth only €29bn (\$33bn, or 1.5% of total trade in goods for the bloc).

Tariffs do not have to be large, however, to provoke a response. Perhaps it will be a good one: with the CBAM in place, foreign countries might as well price carbon at home and keep the revenue for themselves (the EU will grant discounts for carbon taxes already paid). As the scope of the CBAM increases, so will other governments feel a greater pull towards pricing emissions. A more likely consequence, however, is a brawl over whether the policy is protectionist. Australia and India, both exporters to the EU, are already grumbling that the tariff could be discriminatory and regressive. In March America warned the EU that border levies should be a “last resort”. It has also said it is considering one of its own despite not pricing carbon itself, other than through an incomplete patchwork of state schemes in which prices are too low.

There is also a danger of unintended consequences. Foreign companies could redirect their greenest exports to Europe and send their dirtiest output elsewhere, rather than cutting overall emissions. This phenomenon, dubbed “resource shuffling”, has troubled California, which has a CBAM for its electricity market—the only existing comparable scheme. Firms could also adjust their supply chains to exploit the limited scope of the policy. A carmaker that would have to buy permits to import steel may prefer to buy a car chassis made with steel overseas, to which the CBAM would not apply.

The risk of such carbon leakage rises in tandem with the carbon price. A study published in January by DIW Berlin, a think-tank, found that a price of €75 per tonne would leave as much as 15% of the EU’s manufacturing vulnerable to being undercut in this way. (European carbon prices are hovering between €50-60 per tonne, and projected to increase.)

Steel yourself

These problems, however, will be reduced to the extent that carbon prices are adopted everywhere. The power of incentives means carbon-intensive production will always try to find its way to where emissions are cheap, but that does not mean it is futile to try to plug all the holes. The best argument for the CBAM is that it is a first step towards a world in which emissions cannot escape carbon prices. Were they sufficiently widespread, the CBAM would be rendered unnecessary.

Long before that happens, though, the EU must overcome opposition to the CBAM at home. One problem is that trade will be adjusted on the way in but not on the way out. Exporters, having lost their subsidies, will still find themselves competing in markets outside Europe’s borders against firms that can ignore the cost of carbon. (Around 8% of the EU’s cement production, and 18% of steel, is exported.) Already some lawmakers in the European Parliament, which must approve the proposal, are calling for border adjustment to exist alongside free permits, punishing foreigners while continuing to shield those at home. Bowing to them would turn a potentially useful policy for fighting climate change into naked protectionism—and an instructive example for other countries into a cautionary tale. ■



Sport and drugs

Still doped up?

Thousands of athletes at the Tokyo Olympics are likely to be doping. How many will get caught remains to be seen

AS OLYMPICS GO, the 2020 games, scheduled to start in Tokyo on July 23rd, are shaping up to be among the strangest in the competition's history. Because of covid-19, even their name is out of date, for they are taking place a year late. And contagion-prevention means most stadiums will be empty of spectators, so events will take place in funereal silence.

The 2020 games will be unusual in another way, too. They will be the first summer games since 1984's—which were boycotted by the Soviet Union—at which Russia will not be present, at least officially. Though some of its athletes will participate as individuals, under the flag of the Russian Olympic Committee, the national team has been banned in the aftermath of one of the biggest doping scandals in the history of sport. Between 2011 and 2015, and possibly for longer, Russia systematically doped hundreds of athletes. It roped in its spy agencies to subvert the anti-doping tests overseen by the World Anti-Doping Agency (WADA), then fabricated data as part of an attempt to get back into the authorities' good books. A controversial court ruling last year reduced Russia's initial four-

year ban to two, which will expire in 2022.

Stung by a scandal that took place under their noses, officials insist this year's games will be the best-policed ever. The International Olympic Committee says testing in the run-up to them will be the most extensive yet conducted. Sebastian Coe, president of World Athletics, the international governing body of athletes, has warned that it will be harder than ever to get away with doping.

"Harder than ever" is, however, a long way from "impossible". Though new technology and increasingly strict rules have indeed made doping trickier than in the past, thousands of the 11,000-odd athletes at the Tokyo games could nonetheless be cheating. Steroids, erythropoietin (EPO) and newer, less familiar performance-enhancing drugs (PEDS) will have bulked their muscles, enriched their blood and allowed them to train harder than unenhanced humans would find possible. New

drugs, clever tactics and institutional indifference or corruption could meanwhile help them outwit testers.

Covid-19 may have made things worse, says Ross Tucker, a South African sports scientist. Since the effects of PEDS last much longer than the drugs stay in an athlete's body, elite competitors are subject to testing even when they are not competing. But travel bans and lockdowns have disrupted that system. Between covid-19, the fallout from Russia and a steady drip of other doping cases, every performance in Tokyo—even those by clean athletes—will take place under a faint but ineradicable cloud of suspicion. As Kyle Chalmers, an Australian swimmer who won the 100 metres freestyle at the 2016 summer Olympics in Brazil, put it last year, "I can probably not trust half the guys I'm competing against."

Breakfast of champions

No one knows how many athletes still dope. But a glance at the headlines suggests it is far from rare. In 2019 Nike, a sportswear company, closed down its much-publicised Oregon Project, a training camp for elite runners, after Alberto Salazar, the head coach there, was given a four-year ban for doping. (Mr Salazar is appealing.) Kenya is famous for the dominance of its middle- and long-distance runners. These days that reputation is looking tarnished. The Athletics Integrity Unit, which polices anti-doping in athletics, lists 68 Kenyan runners currently banned from competing, including Wilson Kipsang, a former Olympic medallist and ▶▶

→ Also in this section

70 Record-breaking running shoes

▶ world-record holder. Several other Olympic champions will miss the Tokyo games for drugs violations, including Sun Yang, a Chinese swimmer, and Brianna Rollins-McNeal, an American hurdler. Nor is it just athletes who are punished. In March Richard Freeman, a former doctor to Britain's all-conquering 2012 Olympic cycling team, was struck off by regulators for obtaining steroids in 2011 (Dr Freeman is appealing).

When it comes to hard numbers, official statistics provide a lower bound to what is happening. In 2018, the most recent year for which there are data, 0.6% of the 263,519 blood and urine samples analysed by WADA-affiliated laboratories led to sanctions. Doping was more common in some sports—and some countries—than others (see chart 1). But WADA's numbers reflect only those who get caught. David Howman, once WADA's chief operating officer, says he thinks the real figure in elite sports might be more than one in ten—which would imply that over 90% of dopers were getting away with it. By and large, he says, only the “dopey dopers” get caught.

Other estimates suggest even higher numbers. A paper published in 2011 examined the prevalence of “blood doping”, a catch-all term for ways to increase the capacity of blood to ferry oxygen to muscles. The researchers analysed samples from more than 2,700 athletes and concluded that 14% were probably guilty (though the tests fell short of explicit proof). That average concealed wide variations. Some countries had prevalence rates as high as 48%, though the researchers diplomatically refused to name the alleged offenders.

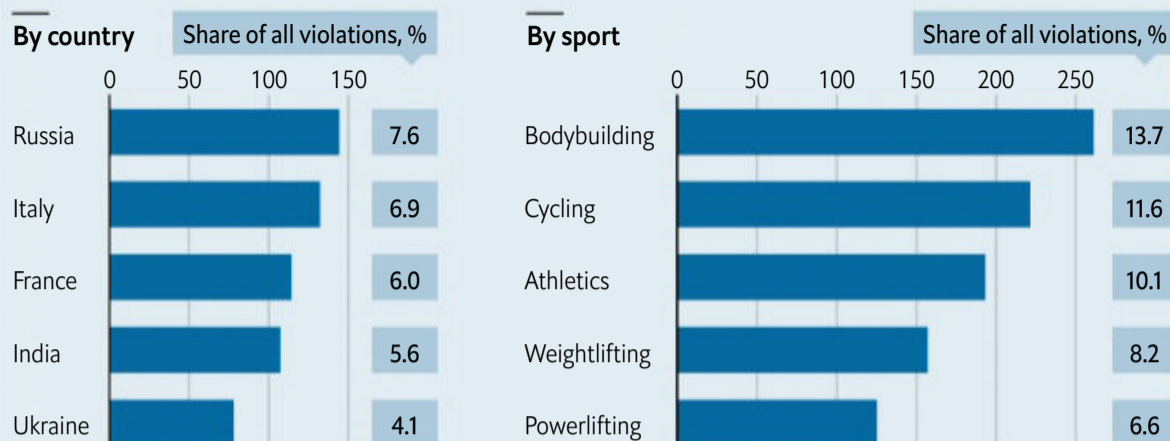
Another study, published in 2018, simply asked more than 2,000 athletes whether they were doping. The data were collected in 2011 at two big competitions—the World Championships in Athletics and the Pan-Arab Games. To encourage honest responses, the researchers used what is called the randomised-response technique. This guarantees individual answers will remain anonymous and untraceable. They concluded that 43.6% of the athletes surveyed had doped in the past year. Translated to Tokyo, that would imply around 4,800 drug-boosted competitors—roughly in line with Mr Chalmers' fears.

But all these estimates are just that: estimates. “My gut feeling, from having worked with many Olympic-level athletes, is that the randomised-response numbers are too high,” says Yorck Olaf Schumacher, who helped develop the Athlete Biological Passport (ABP), a widely used anti-doping test that tracks blood readings, looking for suspicious changes. Some athletes may not have understood the question properly, he says, or may have confused legitimate dietary supplements with doping.

Athletes dope because drugs offer big advantages—potentially so big that un-

The ones they caught

Number of anti-doping rule violations, top five, 2018



Source: World Anti-Doping Agency

doped rivals have no hope of matching them. WADA, the rules of which bind many sports, maintains a list of hundreds of banned substances. They range from obscure chemicals with names like IGF-1 LR3 and AOD-9604 to insulin (to boost muscle size), amphetamines (for their stimulating effects) and even diuretics (used to mask the presence of other drugs). The clandestine nature of doping means that, for most drugs, there is little hard evidence for their effect on performance. Athletes are forced to rely instead on locker-room rumours and “street knowledge”, says Chris Cooper, a sports scientist at the University of Essex, much of which will probably be exaggerated. But for some of the best-known drugs, science—and history—can give a sense of the advantages on offer.

Better gaming through chemistry

The best-known PEDs are anabolic androgenic steroids (AAS), which are close chemical cousins of testosterone, the chief male sex hormone. Athletes take them to increase the size and strength of their muscles, and for their purported ability to enhance recovery after exercise, which allows people to train harder than would

otherwise be possible. Though ethical issues make studies tricky to do, steroids' strength-enhancing effects have been confirmed by several research projects.

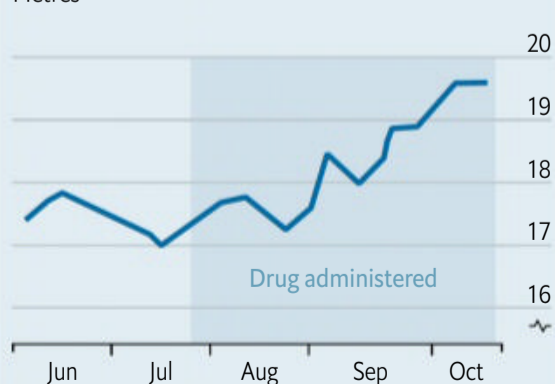
The most thorough trials on their effects on sport were conducted in East Germany, which ran a state-sponsored doping programme that began in the 1960s. After the fall of the Berlin Wall, data collected by this project became available to independent scientists, and were written up in 1997 in a paper published in *Clinical Chemistry*. One early test subject, a female shot-putter known only as “1/68”, improved her best performance from 18 metres to almost 20 metres—close to the world record at the time—within 11 weeks of beginning a cycle of Turinabol, a synthetic AAS developed in 1961 (see chart 2). AAS proved particularly potent in women, presumably because they start with lower levels of testosterone than men and therefore have more scope for enhancement. A report delivered in 1977 to the Stasi, East Germany's secret police, reported improvements in female athletes' performances of up to five metres in the shot put, 20 metres in the discus, five seconds in the 400-metre sprint and ten seconds in the 1,500 metres.

After anabolic steroids, the best-known doping drug is probably EPO, a natural substance which stimulates production of red blood cells. An artificial version was developed in the late 1980s to treat anaemia. It (and its chemical cousins) quickly became rampant in endurance sports such as running and cycling. Red blood cells transport oxygen around the body, and the supply of oxygen to an athlete's muscles is an important limiting factor in endurance exercise. So boosting red-blood-cell counts can allow superhuman efforts.

Like steroids, EPO's effects can be striking. Studies on it are less comprehensive, but one (albeit not conducted on elite athletes) suggested improvements in maximum rate of oxygen consumption of 12%, and a 54% increase in the time it took participants to be exhausted by hard exercise. ▶

Putting on muscle

Effect of an anabolic androgenic steroid* on shot-put performance of a female athlete, 1968



*10mg of Oral-Turinabol daily

Source: “Hormonal doping and androgenization of athletes: a secret program of the German Democratic Republic government”, by W.W. Franke and B. Berendonk, 1997

Dr Schumacher reckons improvements of the performances of top-flight athletes on a bike or a running track are more likely to be in the single digits. But if that sounds modest, it should not. A 5% improvement would be enough to knock more than six minutes off a top marathon-runner's time.

History offers another lens. The "heroic age" of doping, when testing was poor and abuse often blatant, lasted from the 1970s to the early 2000s. Sprinters competed with eyes yellowed from steroid abuse. Female athletes sported strikingly masculine physiques. Cyclists made seemingly rocket-assisted climbs up steep Alpine passes. Sport is littered with "fossil" records from that era. Of 16 pertinent women's track-and-field events, for example, the world records in eight have stood since the 1980s.

Eye-popping performance alone does not prove records were set by doped athletes. But it does cast doubt. Florence Griffith Joyner's 100-metre-sprint time of 10.49 seconds was set in 1988. In three decades no other woman has matched it—leading some observers to think it may have been helped by steroids. The current fastest woman in the world, Shelly-Ann Fraser-Pryce, from Jamaica, has managed just 10.63 seconds—and that with assistance from special, high-tech shoes (see box).

A list of the ten fastest climbs up Alpe d'Huez, a mountain often part of the Tour de France (see chart 3), includes only one rider, Miguel Indurain, who has had a clean career. The others have all, at some stage, been convicted of, or admitted to, doping.

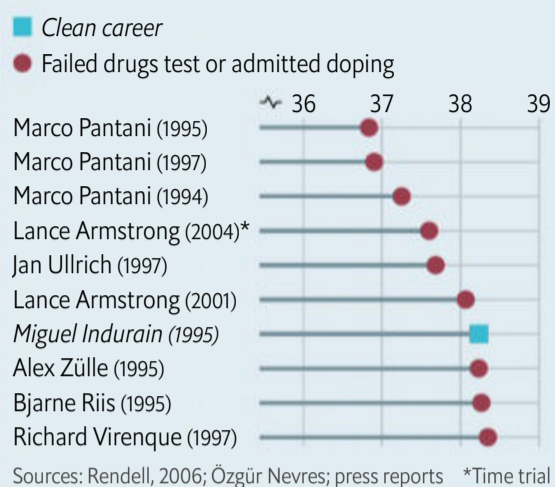
The hundred-metre arms race

Better technology and stricter rules have made egregious doping harder. In Tokyo, samples will be analysed by sophisticated chromatography to look for drugs or their metabolites. Biological passports will be scrutinised for indirect evidence of blood doping, which may reveal itself as suspicious changes in any of a dozen variables, including levels of haemoglobin (the oxygen-carrying molecule that gives blood its red colour), red-blood-cell count, and the proportion of those cells which are immature. Outside competitions, "whereabouts" rules mean elite athletes must keep anti-doping authorities apprised of their movements, to permit unannounced tests.

But record performances are not necessary for victory. Simply being better than your opponents on the day is enough. For that reason, subtler chemical assistance is still worth pursuing. One option is to experiment with new drugs. Sometimes, these are created deliberately to dodge the tests. In 2003 a syringe was posted anonymously to American anti-doping officials. It contained a new AAS nicknamed "The Clear", for which no test existed. This had been developed by a chemist called Patrick Arnold and supplied to athletes including

One good apple

Tour de France, ten fastest climbs on the Alpe d'Huez, minutes



Marion Jones, an American sprinter with a string of Olympic medals to her name, who admitted using it.

Most new drugs, though, are created by the pharmaceutical industry. Selective androgen receptor modulators (SARMs) are experimental drugs intended to provide similar benefits to AAS, but with fewer side-effects. Researchers hope they will help treat muscle-wasting diseases. But SARMs have attracted sporting interest too. Oliver Catlin runs the Banned Substances Control Group, an American firm which tests sports supplements for forbidden drugs. He points out that although more than a dozen SARMs are in development, tests exist for only a few of them, and only at the most advanced laboratories.

The pipeline of new drugs is unlikely to run dry, says Dr Cooper, for the human body contains hundreds of processes and chemical targets that might be tweaked to boost sporting performance. There is often more than one biochemical way to achieve the desired effect. Rather than beefing up an athlete's muscles, another new class of drugs, myostatin inhibitors, slow the routine breakdown of muscle tissue, offering an alternative way of increasing strength. Cyclists, meanwhile, are rumoured to have been experimenting with a drug called AICAR, hoping it will help them lose weight while holding on to muscle mass. As with EPO, says Dr Tucker, the idea is to improve the all-important power-to-weight ratio—but by tinkering with the "weight" side of the equation instead of the "power" side.

Those who prefer to stick with the old favourites can simply try using less. "Micro-dosing"—taking regular small doses instead of occasional big ones—ensures a drug will clear the body faster, making an athlete less likely to fail a test. New ways of administering old drugs help too. In a book published last year Grigory Rodchenkov, a chemist who ran the laboratory in Moscow that was at the centre of the Russian doping scandal, recounts how he developed "Duchess", a whisky-based cocktail that in-

cluded the steroids trenbolone, oxyandrolone and methenolone. The idea was that absorption directly through the tissues of the mouth would produce fewer telltale metabolites than injections or pills, and thus cut the risk of detection.

Lower-tech strategies can work, too. One is to get a therapeutic use exemption (TUE)—a doctor's note saying you need a drug for medical reasons. WADA insists that TUEs are granted only after rigorous checks. A paper from 2020 found no evidence that athletes with TUEs were more likely to win than others. But doubts persist. In 2018 Britain's Parliament accused Team Sky, a cycling team, of using TUEs to help supply PEDs to riders. (They deny it.)

Living at high altitude is popular, since lower oxygen levels there boost red-blood-cell counts in a natural way—which, in contradistinction to chemical means, is permitted. It also makes it harder to interpret ABP results, leaving room for chemical enhancement as well. Remote places, moreover, are harder for out-of-competition testers to reach.

Another option is to get advanced warning of out-of-competition testing from corrupt or sympathetic officials. Asbel Kiprop is a Kenyan runner banned in 2019 for failing an EPO test. He told the AIU he had often been warned of supposedly unannounced tests. Tip-offs give athletes time to dilute their blood, or to wait for micro-dosed drugs to clear their bodies. If all else fails, they can simply hide in a cupboard when the testers come knocking. If elite athletes go AWOL too often, they can be sanctioned. But as a fail-safe, it can be a useful tactic. "The principle", says Dr Tucker, "is never take a test you won't pass."

Team America: world police

WADA's task, meanwhile, is made harder by the fact that, unlike dopers, it must operate in the open, leaving its methods vulnerable to attack. One way to interpret official limits for some substances, says an observer, is as a sanctioned value up to which athletes can push. Natural variation between people means the allowable limits for some substances must be reasonably generous, leaving room for athletes to boost them artificially.

Such variations, says Dr Tucker, are one reason why the ABP, which tracks changes in an athlete's physiology over time, is difficult to apply to steroid doping. Natural levels of steroid hormones vary widely between people. Even within an individual they can fluctuate sharply, depending on stress, sleep deprivation and the like. And because a doping ban can be fatal to an athlete's career, anti-dopers must err on the side of caution. WADA's processes are tuned to minimise the number of false positives, in which innocent athletes are wrongly accused. That means they will

▶ generate plenty of false negatives, in which the guilty are incorrectly cleared.

Money and national pride complicate things further. Though WADA oversees the anti-doping system for many sports, it relies on national authorities to do most of the legwork. “Many countries have really improved their approach to anti-doping over the past few years,” says Dr Catlin. “But not everyone has the resources to do that.” In 2013 Renee Anne Shirley, a former boss of the Jamaica Anti-Doping Commission, said a lack of resources meant her organisation had conducted only a single out-of-competition test in the months before the 2012 London Olympics, at which Jamaican athletes won a dozen medals. WADA itself is not exactly flush with cash. Its budget for 2021 is \$40m—less than some individual athletes earn in a year.

Lack of will is also a problem. Sport brings national glory, which can make questioning success risky. After her admission, Ms Shirley was branded a “traitor”. State-sponsored doping programmes in East Germany, China and Russia were all aimed at winning political prestige. Sport brings in a great deal of cash, too. WARC, an advertising firm, reckons the worldwide sports-sponsorship market was worth \$48bn in 2020. All that money makes it possible to buy off officials. Last year Lamine Diack, Lord Coe’s predecessor as the head of World Athletics (then known as the International Association of Athletics Federations) was given a four-year prison sentence for taking bribes to hush up positive doping tests, as were five other officials. (Mr Diack is appealing.)

Ultimately, countries and companies pay both for top-level sport and for the anti-doping system which polices it. This means that, even when they are not actively working to subvert the system, as Russia or Mr Diack did, they do not always have

strong incentives to ask hard questions. Mr Salazar had been a divisive figure in athletics long before Nike eventually closed the Oregon Project. WADA itself gets half of its money from governments and half from sporting bodies, raising questions about how truly independent it can ever be.

That is a view shared by America’s government. Fed up with what it sees as a limp response to the Russian scandal, in December it passed a law known as the Rodchenkov Act. This tries to assert American criminal jurisdiction over any sports event involving American athletes or companies, anywhere in the world. It gives American prosecutors the ability to impose ten-year prison sentences and \$1m fines on those found to have aided doping (though it does not apply to individual athletes).

Travis Tygart, head of the United States

Anti-Doping Agency, described the Rodchenkov Act as a “game-changer”. That is hard to argue with. It will drive a coach and horses through existing arrangements. WADA worries the act’s extraterritorial ambitions mean two sets of rules could apply to doping cases, and that confusion and resistance from other countries might “shatter” the international anti-doping system. (It also notes, pointedly, that the act’s penalties do not apply to parochial American sports such as baseball, which have had their own share of doping scandals.) The Tokyo games are one of the first big international competitions to be held with the act in force. Lord Coe may or may not be right to say, in the wake of the Russian scandal, that getting away with doping will be harder than ever. But the fight against it has rarely been so bad-tempered. ■

Sports equipment

Getting a leg up

New running shoes could help smash a string of Olympic records

PLATFORM SHOES are back in fashion, at least in athletics. Many of the long-distance runners at the Tokyo Olympics, which begin on July 23rd, will arrive at the starting line sporting footwear with a distinctive chunky-looking heel. It will be more than just a fashion statement. The new shoes offer such a big performance advantage that critics have described them as “technological doping”.

Running-shoe makers have long tried to boost athletic performance, observes Geoff Burns, a biomechanics expert at the University of Michigan. In olden days, a 1% improvement in “running economy”—the energy taken to travel a given distance—would have impressed. But in 2016 Nike released the first version of its “Vaporfly” model, which improved running economy by 4%.

If that percentage were to translate directly into performance, it would knock about five minutes off an elite male’s marathon time. In practice, as Dr Burns observes, it wouldn’t quite do that. A marathon improvement of around 90 seconds would be a more realistic expectation. But Vaporfly and its successors have helped athletes smash a string of records. On June 6th Sifan Hassan, a Dutch runner, completed a women’s 10,000 metres race in 29 minutes and 6.82 seconds, beating a record set in 2016. Two days later she was overtaken by Letesenbet Gidey, an Ethiopian, who clocked 29 minutes and 1.03 seconds. In 2019 Eliud Kipchoge, a Kenyan, became the first to run, albeit in an unofficial event, a marathon’s distance of 42.195km

in under two hours. The same weekend Brigid Kosgei, another Kenyan, broke a women’s marathon record that had stood for 16 years.

Scientists are still puzzling over exactly how the shoes work. The soles are made of a new type of foam that offers an unprecedented mix of resilience and squidginess, according to Dr Burns. This returns around 80% of the energy from each strike of a runner’s foot. The carbon-fibre plate may help by stiffening the midsole, and possibly by altering a runner’s gait. By cushioning a runner’s bones, muscles and ligaments from repetitive impacts, the shoes may even help athletes train harder than they otherwise could.

All that is great news for Nike, which sells the Vaporfly and its successors for around \$250 each. (Rival manufacturers now offer similar shoes of their own.) Whether it is good for the sport is another question. Different sports have different tolerances for technological assistance. Running tends towards the conservative end of the spectrum.

In January 2020 World Athletics, the governing body of international athletics, passed new rules limiting the thickness of a road shoe’s sole to 40mm. Meanwhile, Nike appears to have shelved plans to deploy high tech shoes designed for sprinters at the Tokyo games, possibly because they did not comply with regulations either. But if they, or a rival manufacturer, have worked out a way around that problem, there could be fireworks in the sprints, too.





Communism in China

Party on

What happens in China after Xi Jinping's rule will shape the world's future

“THE WORLD cannot be safe until China changes.” In many ways, China has changed beyond recognition since Richard Nixon wrote those words in 1967. The country was then in the grip of Maoist madness, desperately poor and cut off from the Western world. But to many leaders in the West today, the warning rings as true as it did for Nixon, who was then preparing to launch a successful campaign to become America's president. Their only quibble might be with his next assertion: “The way to do this is to persuade China that it must change.” The West has tried that, and failed. All it can do now is try to guess whether, and how, China might eventually change itself.

For many observers, the omens seem inauspicious. On July 1st China's leader, Xi Jinping, gave a speech at Tiananmen Square to mark the Chinese Communist Party's 100th birthday. It was tinged with resentment of the West and defensive about Chinese communism (“a new model for human advancement”). It looked forward to 2049 when the party will hold its

The Party and the People. By Bruce Dickson. Princeton University Press; 328 pages; \$29.95 and £25

Rethinking Chinese Politics. By Joseph Fewsmith. Cambridge University Press; 230 pages; \$25.99 and £19.99

China Coup. By Roger Garside. University of California Press; 256 pages; \$23.95 and £20

From Rebel to Ruler. By Tony Saich. Belknap Press; 560 pages; \$39.95 and £31.95

China's Leaders. By David Shambaugh. Polity; 416 pages; \$29.95 and £25

next centenary celebration—that of 100 years of Communist rule. By then, he promised, China will be a “great modern socialist country”, under the party's “firm leadership”. How modern it will be in comparison with the rich world is debatable; its GDP per person may still lag far behind. But unlike 30 years ago, when, in the wake of the Soviet Union's collapse, the crumbling of China's party within a generation seemed plausible, even likely, few would bet much on that now.

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Some cling to hope. Roger Garside is a former British diplomat whose first book on China, “Coming Alive: China After Mao”, published 40 years ago, remains one of the best eyewitness accounts of the start of China's era of “reform and opening”. His new one, “China Coup”, begins and ends with a fictional account of a political struggle that topples Mr Xi and launches China on a path to multiparty democracy and rapprochement with the West. The central chapters analyse tensions that may induce such change. Mr Garside points to dissatisfaction among the elite with Mr Xi's autocratic, West-baiting style of rule, as well as “broad and deep currents” of support among ordinary people for reform.

A coup is not an outlandish idea. Chinese politics has a long record of intraparty struggle, including the arrest of Mao Zedong's widow, Jiang Qing, and other members of the “Gang of Four” shortly after the chairman's death. Two years later a power grab by Deng Xiaoping toppled Mao's anointed successor, Hua Guofeng. But then there were obvious divisions in the party over whether to persist with Maoist radicalism. Public contempt for it was clear even before Mao's death. In April 1976 the authorities had crushed large displays of mourning that erupted in Beijing and other major cities for the late prime minister, Zhou Enlai. Many ordinary Chinese saw him as a pragmatist who had been unfairly attacked by Gang of Four dogmatists.

There may now be leaders who want to ►►

oust Mr Xi—he is sure to have angered some, not least with his sweeping anti-corruption campaign. But it is far from evident that anyone at the top of the party would support a push for real democracy, or even whether most Chinese would back such a potentially destabilising move.

Bending the rules

Before Mr Xi took power in 2012, there had been occasional signals that some in the leadership believed the party should loosen its controls. In “China’s Leaders”, David Shambaugh of George Washington University describes the role played by one senior official, Zeng Qinghong, in promoting political reform under Mr Xi’s two immediate predecessors, Jiang Zemin and Hu Jintao. Mr Shambaugh says reformers of that era believed the chief problem with Mikhail Gorbachev’s policies in the Soviet Union of the 1980s was that they had been introduced too late and were implemented too fast. As Mr Jiang’s right-hand man, Mr Zeng set about promoting a modicum of openness and even a smidgen of democracy in the party’s inner workings. But, as Mr Shambaugh notes, such efforts came to an end after Mr Zeng retired in 2008. Conservatism reasserted itself.

Influential people like Mr Zeng may be waiting, unseen, for a chance to restart such limited reforms. But it is probable that, under Mr Xi, the party’s more conservative wing has grown stronger—bolstered by a sense that many Chinese approve of how he is running the country, in contrast to what they see as Western feebleness. In “The Party and the People”, Bruce Dickson, also of George Washington University, argues that China’s retreat from liberalisation “has not triggered pushback from large segments of society, at least not yet”.

Mr Dickson does envisage potential threats to the party, from an economic crisis or split in the leadership to a nationalist backlash against a perceived failure to defend the country’s interests. But what would follow regime change? As he observes, the most common pattern around the world in the past 25 years has been the replacement of one authoritarian regime with another. “We should not assume the outcome will be different for China,” he warns. Tony Saich of Harvard University makes a similar point in his book about the party’s past 100 years, “From Rebel to Ruler”. He suggests that “some within the party might be able to enable the shift back to a softer form of authoritarianism”. But there is, he considers, “no reason to expect China to follow its East Asian neighbours in South Korea and Taiwan and develop into a robust democracy”.

Optimists might have hoped for a return to softer authoritarianism as early as 2022, when, if he were to follow precedent, Mr Xi would step down as party leader at a

five-yearly party congress. But he has plainly signalled that he plans to keep his jobs, including the presidency and, most crucially, the post of commander-in-chief of the armed forces, for at least another five years beyond that meeting. To many, Mr Xi’s efforts to stay in power have suggested an unravelling of what had been widely regarded as the “institutionalisation” of Chinese politics in recent decades: the gradual introduction of rules ensuring a predictable, regular turnover at the top.

Joseph Fewsmith of Boston University disagrees with this analysis. In “Rethinking Chinese Politics”, he argues that the system never really became more institutionalised. On the contrary, the party’s longevity “has occurred through manipulation and violation of the rules, not through the creation of binding institutions”. Mr Xi has proved a keen rule-bender; but, says Mr Fewsmith, he is also trying to strengthen party mechanisms. His aim is not to restrain his own power, but to magnify it by turning the party into a far more disciplined force, which is utterly subservient to his will.

His accumulation of so much power may create a dangerous vacuum when he leaves the political scene. It should be noted, though, that the party has survived several stormy transitions since Mao’s death. The one that led to Mr Xi’s own accession involved fierce political struggles.

Different and the same

Nixon’s warning reflected the worries of another time and a different world. In America the perceived threat from China was its support for global communism, particularly in Asia; Chinese troops were pouring into communist North Vietnam to help its fight against the American-backed South. Today China no longer wages such proxy wars or backs insurgencies. But America is fearful again—these days of a China that is a wealthy global power, capable of bending others to its will without resort to arms, yet also posing a far more serious challenge to the United States militarily. Nixon’s words have taken on “a new urgency”, as Mr Garside puts it.

He wrote them at the height of the vicious conflict of the Cultural Revolution—a horror hard to imagine in Mr Xi’s stability-obsessed era. But a key feature endures: commitment to communism. The spectacle on July 1st of tens of thousands of people singing “socialism is good, socialism is good” in Tiananmen Square was Mao-style pageantry. The centenary celebrations in China have been a reminder of how, for all its weaknesses, the party is not only a remarkable survivor, but unabashed about its illiberal ideology. The West can draw little comfort from predictions of how China might change when the regime eventually falls. ■

Deep seas

Beyond blue

The Brilliant Abyss. By Helen Scales. *Atlantic Monthly Press*; 304 pages; \$27. *Bloomsbury Sigma*; £16.99

MANY VISITORS only skim the surface of the ocean—swimming from the beach or slicing through whitecaps on a sailing boat. In “The Brilliant Abyss”, Helen Scales, a marine biologist whose previous books explored the shallower reaches of the sea, dives deep and revealingly into the realm below 660 feet where sunlit blue begins to give way to black.

As Ms Scales notes, it is often said that more is known of the Moon’s surface, exposed to anyone with a telescope, than about the geography of the deep-sea floor, which a dark cloak of water obscures. It is a rugged, complex and shifting terrain—subject to earthquakes precipitated by the movement of tectonic plates, and punctuated by seamounts (mountains formed by volcanic activity) and hydrothermal vents that emit sulphurous, scalding fluids.

In these underwater extremes of dark and cold, and the boiling waters disgorged by vents, life survives and even thrives. It includes sea cucumbers that slough off their illuminated skin to distract predators, yeti crabs as hairy as their name suggests, fish masked in ultra-black skin that makes them all but invisible, and a sponge that looks like a glass of milk frozen in mid-spill. As well as its role as a climate regulator and carbon sink, the deep, in its vibrant profusion, prompts reflections on the possibility of life on other planets.

Less beguiling things lurk down there ►►



There were dragons

► too. Plastic bags and packaging have been spotted by submersibles in the seven-mile-deep Mariana Trench. Nuclear waste, chemicals and oil spills, such as the one from the Deepwater Horizon rig in 2010, have turned sections of sea floor into poisonous dumps. Exploitation adds to the blight. The orange roughy, a white-fleshed fish that congregates around seamounts (also known, less appetisingly, as a slime-head) has been dangerously overfished.

An experimental push to harvest sea-floor nodules laced with manganese, nickel, cobalt and other metals is another

threat. The potential damage to the seabed from remotely operated machines is analogous, Ms Scales argues, to the most toxic mining on dry land. But the revenues could be huge. An analysis by the Massachusetts Institute of Technology calculated that a single seabed mine could net \$1bn a year.

And an ecological case for the initiative can be made. “I get very uncomfortable when people describe us as deep-sea miners,” says Gerard Barron of DeepGreen Metals, a deep-sea mining company targeting the metals used in electric-car batteries. “We want to help the world transition away

from fossil fuels.” Because the long-term impact is unknown, Ms Scales is sceptical; her argument is compelling, even if her explanation of car batteries is a slog. Yet another marine biologist doubts that mining would be forestalled “even if we found unicorns on the sea floor”.

Early European cartographers often used sea serpents to mark uncharted depths. *Hic sunt dracones*—Here be dragons—reads the inscription flagging an unfathomable stretch of water on a globe made in 1510. But the most threatening sea monster of all may be man. ■

Johnson Death nails and foul swoops



Sometimes solecisms can reveal linguistic ingenuity

ON JUNE 12TH *The Economist's* pages featured an activist investor “honing in on the dearth of energy experience” on a company’s board. A few readers honed in on a solecism: the original phrase is to “home in” on something, like the creatures that find their way back to their nests—that is, they “home”—with surprising precision.

Yet according to Google Books, “honed in on” is about three-quarters as common in published works as “homed in on”. Merriam-Webster, a dictionary publisher, considers “hone in” an established variant, even if “home in” is better (by virtue of being older, and so less likely to attract censure). What makes “hone in” so tempting?

In 2003 the linguists behind the Language Log blog coined the term “eggcorn” for a particular kind of mishearing of a word or phrase. There are other varieties of mishearings, but they are not eggcorns. A “mondegreen” is a nonsensical one, often of a song lyric. An elegiac tune with the line “and laid him on the green” was heard as “and Lady Mondegreen”, giving the phenomenon its name. A website called KissThisGuy.com (from a mishearing of “excuse me while I kiss the sky”) collects others.

A malapropism is another kind of misunderstanding—attempting to use a posh word but choosing a similar-sounding term instead. It was named after Mrs Malaprop, a character in Richard Brinsley Sheridan’s play “The Rivals” of 1775; she reached for refined words and inevitably found the wrong one, saying things like “the very pineapple of politeness” for “pinnacle”. The song “A Word a Day” from “Top Banana”, a musical, features malapropisms in reverse. The singer, quizzed on the meaning of “amphibious”, defines it as “someone who can use either hand”.



The eggcorn, though, is more venerable. The word began as a misconstrual of “acorn”. Unlike a malapropism or mondegreen, the eggcorn has a logic that makes it alluring. Acorns and eggs have similar shapes, and both produce new life. Indeed, “acorn” may itself be an eggcorn; its original form, *aecern*, may have been gradually adapted by speakers who thought it was a kind of “corn”.

Hence the popularity of “hone in”. To “home in on” something is to gradually approach a target. To “hone” a blade is to gradually make it more suitable to your purpose. The overlapping meanings make “hone in” a tempting swap. There are so many sensible-seeming alterations of this sort that Chris Waigl, a geophysicist in Alaska, has collected 648 of them in her online Eggcorn Database.

Some eggcorns are especially enticing because they make more sense than the phrases they replace. Consider “death nail”, which is more plausible on its face than “death knell”. Nails go along with death (as in “nail in the coffin”), and some people may not know of any other kind of

knell (originally the sound of a bell).

The substitution of a rarely used word with an everyday equivalent is the hallmark of many eggcorns. For instance, linguists invented “code-switching” to describe the practice of moving back and forth between two languages or dialects, often in one conversation or even sentence. It is a fascinating phenomenon with a clumsy name. When a reviewer for the *Toronto Star*, writing about the black characters in the film “Moonlight”, described their “coat-switching”, he arguably improved it.

So if you chuckle when you read “the point is mute”, “in one foul swoop” or “to change tact”, ask yourself whether you could give precise definitions of “moot”, “fell” or “tack”. The speakers replacing them with more common words are in a way the opposite of Mrs Malaprop; rather than trying to show off, they are often making opaque expressions simpler.

George Orwell once mocked “tow the line” for “toe the line” in a passage about people who use metaphors without thinking about them. He was criticising those who write automatically, stitching platitudes together without reflection. His advice to avoid clichés is always salutary; his injunction to think about what the words you use really mean is an even better one. But his judgment here was a little too harsh.

“Tow the line” was an eggcorn *avant la lettre*: if you obediently do your political party’s bidding, you might just as easily pull a rope at their command as you would stand on a mark they have made on the ground. The people who reach for this seemingly jumbled phrase are thinking—and coming up with an expression that is clearer to them than the original. Eggcorns are often a sign not of idiocy but of ingenuity.

South African fiction

The family plot

The Promise. By Damon Galgut. *Europa Editions*; 256 pages; \$25. *Chatto & Windus*; £16.99

THE PULL of a house and an inheritance is an enduring preoccupation of fiction in English. Think, for example, of Evelyn Waugh's "Brideshead Revisited" or "Howards End" by E.M. Forster. In his ninth novel, "The Promise", Damon Galgut, whose previous book was about Forster, reworks this venerable theme in the gripping, profound tale of an unhappy white South African family.

The Swarts live on a small farm on the outskirts of Pretoria—"useless ground, full of stones, you can do nothing with it. But it belongs to our family, nobody else, and there's power in that." The story opens in 1986 on the day of Ma's funeral. The three Swart children, Anton, Astrid and Amor, are all there. Pa, the dead woman's husband, is resentful that his wife of decades wanted to lie for all eternity in the Jewish cemetery of her birth family rather than alongside him. Meanwhile Amor is insisting that she overheard her dying mother extract a promise from Pa that the Swarts' black maid, Salome, would be given the deeds to her cottage (actually more of a shack) and the land on which it sits.

This promise, which most of the family try to ignore despite Amor's best efforts, hangs over the rest of the book. "Sometimes a chance is just a waste of time," Anton tells her, complaining that Salome's son has squandered the education that their father paid for. "Yes, she says. But a promise is a promise."

The four sections each focus on one member of the Swart family as they approach death. Pa is buried on the inspiring day in 1995 when South Africa won the rugby World Cup and Nelson Mandela presented the trophy to the team's white captain. By the last part it is 2018; Jacob Zuma is resigning from office and South Africans are increasingly dismayed by the direction their country is taking. If, at the beginning, apartheid-era laws meant Salome was not allowed to own the land on which her cottage stands, by the end the country has been transformed, and new threats to her claim have emerged.

Mr Galgut's arresting style makes this tale of tragedy and betrayal more than the dirge it might have become in other hands. The story is told in the third person but skips to other voices, and from present

tense to past, often in the same paragraph, with the occasional aside addressed directly to the reader. Writing of Astrid, the Swarts' bulimic elder daughter, a social climber who is having an affair with her husband's black business partner, the author says: "Her new [Catholic] faith, which she experiences as a kind of waterproof garment she's buttoned down over herself, doesn't stop her acting on her fears and desires, but it provides a way of washing them off afterwards."

The novel evolves into a damning commentary on South Africa's many broken promises; the denouement will make readers feel desolate. Yet Mr Galgut's wry, waspish prose will make them laugh, too, even as it leaves them hooked. ■

Odd couples

The love song of J. Maynard Keynes

FIRLE, SUSSEX

An intense, improbable romance comes thrillingly to life

HE WAS A renowned English economist with a history of affairs with men. She was a Russian ballerina whose former paramours included a Polish count and Igor Stravinsky. Yet when John Maynard Keynes went, night after night, to watch Lydia Lopokova perform with the Ballets Russes in London in 1921, they fell ecstatically in love. It was, Keynes wrote, "a dreadful business"; he was "almost beyond rescue".

Extracts from the letters in which their *pas de deux* played out were performed on July 9th by Helena Bonham Carter and Tobias Menzies, both recently of "The Crown". The venue was Charleston, the farmhouse in Sussex that was home to the painters Vanessa Bell and Duncan Grant, which they turned into a floor-to-ceiling



The supply and demand of desire

work of art. It became a retreat for other members of the Bloomsbury Group, including Keynes (once Grant's lover). Now a museum, Charleston is hosting a season of outdoor events; it asked Holly Dawson, an in-house researcher, to shape the letters into a collage of the couple's life together.

Lopokova's writing, reckons Ms Dawson, "comes straight from her bones" and today "goes straight to our bones". But a century ago, the Bloomsbury set were frightfully snobbish about her. Bell advised Keynes that she would make "a very expensive wife" and was "altogether to be preferred as a mistress". Virginia Woolf thought she had "the soul of a squirrel". Their disapproval was useless. "I kiss you and re-kiss you and pro-kiss you," Keynes declared, conjugating his desire. "I gobble you", Lopokova wrote, "I re-gobble you" and "gobble you from head to foot".

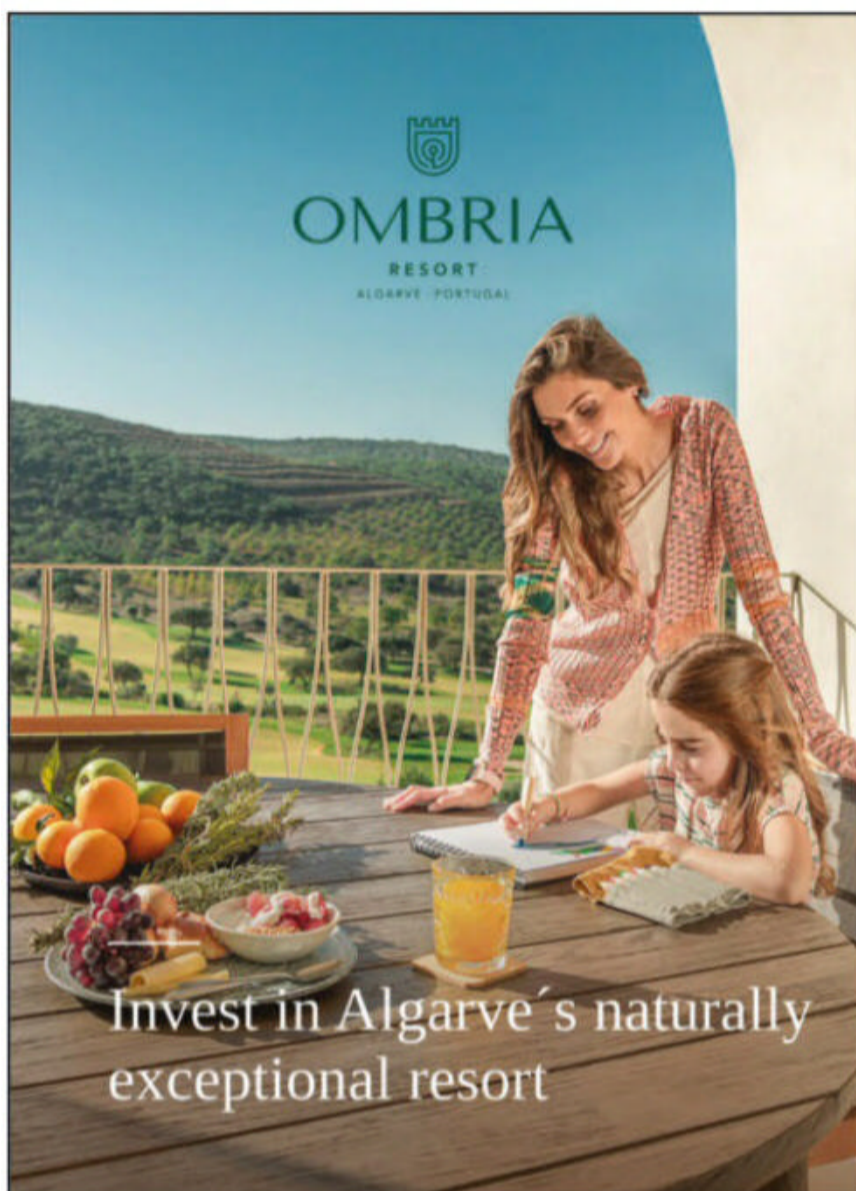
It wasn't all "foxy licks", though. The piece charts the relationship from infatuation to dependence, around private obstacles (she was already married), across separations (she away on tour, he at summits) and through the national trauma of the second world war (and, in 1941, Woolf's suicide). Lopokova dreamed "that you and I were soldiers and when the bullet went through me I did not die". She accompanied Keynes to the Bretton Woods conference and swam naked in a fishpond.

Intimacy and power-broking are interwoven in Ms Dawson's artful arrangement. Power also ebbs and swirls between the couple, as it can in long marriages. Keynes was eminent and brilliant; Lopokova spoke what he called "Lydian English", sprinkled with malapropisms. Yet he needed her, not only to support his work and later his infirmity, but for her creativity and capacity for joy. "Try to forget shares markets fortunes", she told him in 1937, "because it must crumple the muscles of your heart."

A former ballerina and student at the London School of Economics, Ms Dawson was an ideal person to craft their story. In clipped upper-crust diction, Mr Menzies impersonated Keynes as halting wooer and weary statesman. Ms Bonham Carter's Russian accent and comic timing were delicious. On a bright, blustery evening the courtyard at Charleston, close to its statue-strewn walled garden, was the perfect spot for their funny, moving recital (a one-off, but you can stream it online).

Across the fields lies Tilton, the house that became Keynes's and Lopokova's own country home. There, after he died in 1946, she lived out the grief that is the last phase of love's cycle. "Peoples of today do not know how great many things were lovely yesterday," she lamented. "But today is today and yesterday is history." ■

.....
"Lydia & Maynard: Love Letters" is available to stream at Charleston.org.uk until the end of 2021



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Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units			
	% change on year ago latest	quarter*	2021†	% change on year ago latest	2021†	%		% of GDP, 2021†	% of GDP, 2021†	10-yr gov't bonds latest,%	change on year ago, bp	per \$ Jul 14th	% change on year ago				
United States	0.4	Q1	6.4	6.0	5.4	Jun	3.1	5.9	Jun	-3.0		-13.5	1.4	74.0	-		
China	7.9	Q2	5.3	8.5	1.1	Jun	1.6	5.0	Jun [§]	2.8		-4.7	2.8	§§	-8.0	6.47	8.5
Japan	-1.6	Q1	-3.9	2.2	-0.1	May	-0.2	3.0	May	3.5		-8.9	nil	-8.0	110	-2.6	
Britain	-6.1	Q1	-6.2	5.7	2.5	Jun	3.1	4.7	Mar ^{††}	-4.5		-10.8	0.7	51.0	0.72	11.1	
Canada	0.3	Q1	5.6	5.4	3.6	May	2.3	7.8	Jun	-2.0		-8.8	1.3	75.0	1.25	8.8	
Euro area	-1.3	Q1	-1.3	4.4	1.9	Jun	1.8	7.9	May	3.3		-6.6	-0.3	12.0	0.85	3.5	
Austria	-5.5	Q1	-12.6	3.4	2.7	Jun	2.2	6.9	May	3.0		-7.6	-0.1	12.0	0.85	3.5	
Belgium	-0.5	Q1	4.5	4.3	1.6	Jun	1.5	6.5	May	-0.7		-6.6	nil	10.0	0.85	3.5	
France	1.2	Q1	-0.4	5.5	1.5	Jun	1.6	7.5	May	-1.3		-8.7	0.1	20.0	0.85	3.5	
Germany	-3.1	Q1	-7.0	3.5	2.3	Jun	2.5	3.7	May	6.8		-5.4	-0.3	12.0	0.85	3.5	
Greece	-1.4	Q1	18.9	5.4	1.0	Jun	nil	15.4	May	-3.7		-5.8	0.7	-56.0	0.85	3.5	
Italy	-0.8	Q1	0.6	4.6	1.3	Jun	1.3	10.5	May	3.2		-11.8	0.7	-56.0	0.85	3.5	
Netherlands	-2.4	Q1	-3.1	3.4	2.0	Jun	2.1	3.3	May	10.3		-1.7	-0.3	-2.0	0.85	3.5	
Spain	-4.2	Q1	-1.7	5.9	2.7	Jun	2.0	15.3	May	1.5		-8.6	0.3	-4.0	0.85	3.5	
Czech Republic	-2.6	Q1	-1.4	3.6	2.8	Jun	2.6	3.4	May [‡]	2.6		-5.6	1.8	95.0	21.7	8.0	
Denmark	-0.9	Q1	-3.9	3.0	1.7	Jun	0.7	4.0	May	7.4		-1.3	nil	31.0	6.29	3.8	
Norway	-1.4	Q1	-2.5	2.6	2.9	Jun	2.9	4.9	Apr ^{††}	2.5		-1.0	1.4	76.0	8.73	7.7	
Poland	-1.3	Q1	4.5	4.6	4.4	Jun	4.1	6.0	Jun [§]	2.2		-6.9	1.7	34.0	3.87	1.6	
Russia	-0.7	Q1	na	3.4	6.5	Jun	5.7	4.9	May [§]	3.8		-1.8	7.2	129	74.1	-4.0	
Sweden	-0.1	Q1	3.4	3.9	1.3	Jun	1.9	9.8	May [§]	4.8		-2.2	0.2	27.0	8.62	5.6	
Switzerland	-0.5	Q1	-2.0	3.0	0.6	Jun	0.3	3.1	Jun	7.4		-4.0	-0.3	17.0	0.92	2.2	
Turkey	7.0	Q1	na	3.9	17.5	Jun	14.5	12.4	May [§]	-2.2		-2.8	16.7	437	8.60	-20.1	
Australia	1.1	Q1	7.3	4.4	1.1	Q1	2.1	4.9	Jun	1.6		-5.9	1.3	39.0	1.34	7.5	
Hong Kong	7.9	Q1	23.5	4.9	0.9	May	1.6	6.0	May ^{††}	3.6		-4.1	1.1	63.0	7.77	-0.3	
India	1.6	Q1	6.0	10.4	6.3	Jun	5.2	9.2	Jun	-0.9		-7.2	6.1	28.0	74.6	1.1	
Indonesia	-0.7	Q1	na	3.9	1.3	Jun	2.4	6.3	Q1 [§]	-0.1		-5.7	6.4	-63.0	14,480	-0.2	
Malaysia	-0.5	Q1	na	4.4	4.4	May	2.4	4.5	May [§]	4.4		-5.8	3.3	47.0	4.20	1.7	
Pakistan	4.7	2021**	na	3.8	9.7	Jun	9.0	5.8	2018	-2.0		-7.1	9.9	†††	121	159	4.8
Philippines	-4.2	Q1	1.2	5.1	4.1	Jun	4.2	8.7	Q2 [§]	-1.1		-7.5	3.9	123	50.3	-1.5	
Singapore	14.3	Q2	-7.7	4.6	2.4	May	1.8	2.9	Q1	17.8		-4.4	1.5	61.0	1.35	3.0	
South Korea	1.9	Q1	7.1	3.8	2.4	Jun	2.0	3.8	Jun [§]	4.6		-3.2	2.0	59.0	1,149	5.0	
Taiwan	8.9	Q1	12.8	5.9	1.9	Jun	1.7	4.2	May	15.6		-0.7	0.4	-6.0	28.0	5.3	
Thailand	-2.6	Q1	0.7	2.9	1.2	Jun	2.1	1.5	Dec [§]	3.7		-6.5	1.4	40.0	32.7	-3.4	
Argentina	2.5	Q1	11.0	7.0	48.8	May	47.3	10.2	Q1 [§]	1.6		-5.9	na	na	96.2	-25.9	
Brazil	1.0	Q1	4.9	5.5	8.3	Jun	7.1	14.7	Apr ^{§††}	-0.2		-2.0	9.3	275	5.08	7.3	
Chile	0.3	Q1	13.4	6.7	3.8	Jun	3.4	10.0	May ^{§††}	-0.2		-7.1	4.5	198	749	5.2	
Colombia	2.0	Q1	11.9	7.8	3.6	Jun	3.1	15.6	May [§]	-3.6		-8.9	6.9	146	3,804	-4.3	
Mexico	-3.6	Q1	3.1	5.9	5.9	Jun	4.5	4.1	May	1.4		-2.8	6.9	128	19.9	13.8	
Peru	3.8	Q1	8.3	10.1	3.3	Jun	2.9	9.7	May [§]	-0.2		-5.8	5.8	209	3.97	-11.8	
Egypt	2.9	Q1	na	3.3	4.9	Jun	5.6	7.4	Q1 [§]	-3.8		-8.0	na	na	15.7	1.7	
Israel	-1.1	Q1	-6.2	4.2	1.5	May	1.5	5.5	May	3.8		-7.7	1.1	49.0	3.26	5.5	
Saudi Arabia	-4.1	2020	na	2.2	6.2	Jun	2.9	6.5	Q1	3.4		-2.1	na	na	3.75	nil	
South Africa	-3.2	Q1	4.6	3.0	5.2	May	4.0	32.6	Q1 [§]	1.5		-9.4	9.0	-45.0	14.6	15.2	

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

Markets

In local currency	Index Jul 14th	% change on:	
		one week	Dec 31st 2020
United States S&P 500	4,374.3	0.4	16.5
United States NAScomp	14,645.0	-0.1	13.6
China Shanghai Comp	3,528.5	-0.7	1.6
China Shenzhen Comp	2,470.1	0.9	6.0
Japan Nikkei 225	28,608.5	0.9	4.2
Japan Topix	1,963.2	1.3	8.8
Britain FTSE 100	7,091.2	-0.8	9.8
Canada S&P TSX	20,147.2	-0.7	15.6
Euro area EURO STOXX 50	4,099.5	0.5	15.4
France CAC 40	6,558.4	0.5	18.1
Germany DAX*	15,789.0	0.6	15.1
Italy FTSE/MIB	25,194.3	-0.4	13.3
Netherlands AEX	745.0	1.0	19.3
Spain IBEX 35	8,658.3	-2.2	7.2
Poland WIG	67,631.6	-0.4	18.6
Russia RTS, \$ terms	1,625.8	-1.0	17.2
Switzerland SMI	12,043.4	-0.3	12.5
Turkey BIST	1,367.3	-1.7	-7.4
Australia All Ord.	7,631.8	0.4	11.4
Hong Kong Hang Seng	27,787.5	-0.6	2.0
India BSE	52,904.1	-0.3	10.8
Indonesia IDX	5,979.2	-1.1	nil
Malaysia KLSE	1,512.3	-1.2	-7.1

	index Jul 14th	% change on:	
		one week	Dec 31st 2020
Pakistan KSE	47,491.5	0.5	8.5
Singapore STI	3,153.2	0.4	10.9
South Korea KOSPI	3,264.8	-0.6	13.6
Taiwan TWI	17,845.8	nil	21.1
Thailand SET	1,569.7	-0.4	8.3
Argentina MERV	63,959.3	0.9	24.9
Brazil BVSP	128,406.5	1.1	7.9
Mexico IPC	49,435.9	-1.2	12.2
Egypt EGX 30	10,602.4	3.2	-2.2
Israel TA-125	1,750.6	-1.3	11.6
Saudi Arabia Tadawul	10,778.1	-1.6	24.0
South Africa JSE AS	67,897.6	1.6	14.3
World, dev'd MSCI	3,058.6	0.3	13.7
Emerging markets MSCI	1,338.1	-0.2	3.6

US corporate bonds, spread over Treasuries

Basis points	Dec 31st 2020	
	latest	
Investment grade	114	136
High-yield	328	429

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

Commodities

The Economist commodity-price index 2015=100	% change on			
	Jul 6th	Jul 13th*	month	year
Dollar Index				
All Items	185.4	184.3	-2.4	59.9
Food	128.0	130.8	-1.4	44.7
Industrials				
All	239.0	234.1	-2.8	69.1
Non-food agriculturals	153.1	146.7	-6.3	51.5
Metals	264.5	260.1	-2.2	72.4
Sterling Index				
All items	204.9	203.1	-0.7	44.7
Euro Index				
All items	173.8	172.8	0.1	54.1
Gold				
\$ per oz	1,803.0	1,812.6	-2.6	0.2
Brent				
\$ per barrel	74.7	76.6	3.4	78.2

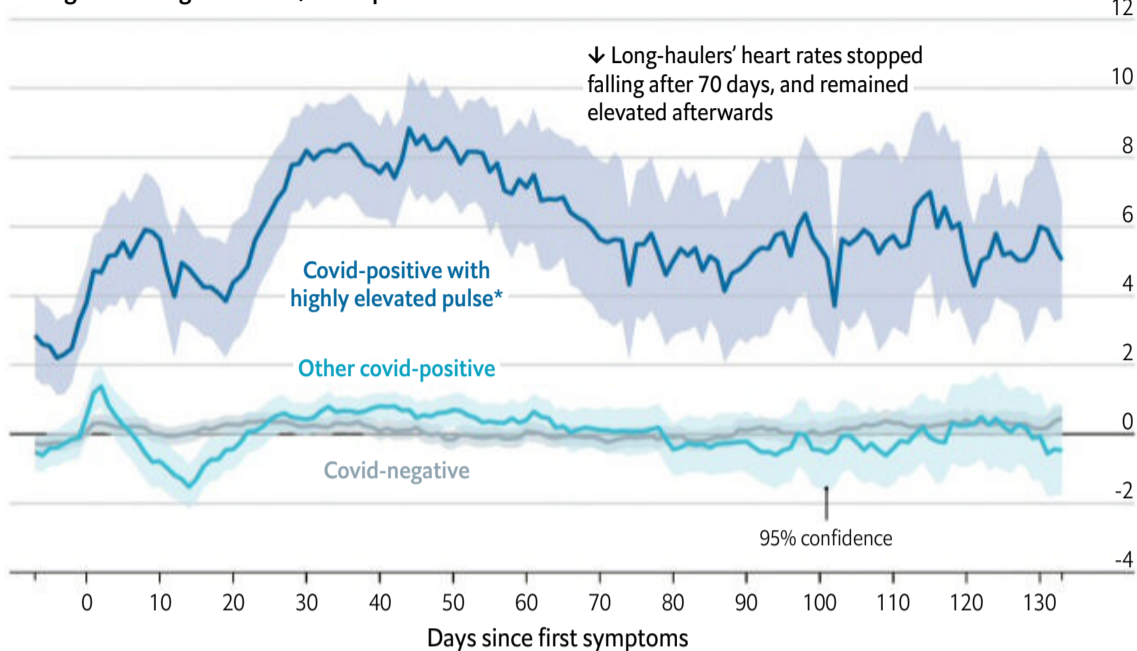
Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For more countries and additional data, visit [Economist.com/indicators](https://www.economist.com/indicators)

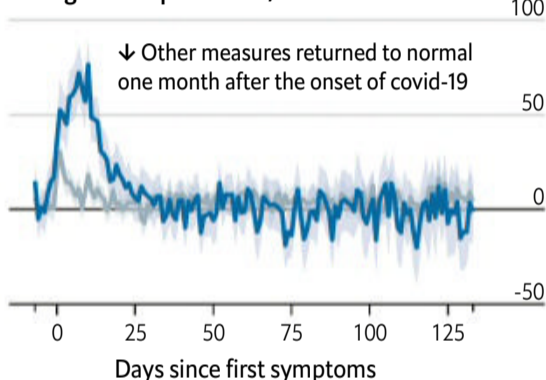
→ Changes in resting heart rates could provide a firm basis for diagnosing a common form of long covid

875 people who reported a respiratory illness and were tested for covid-19
United States, March 25th 2020-January 24th 2021

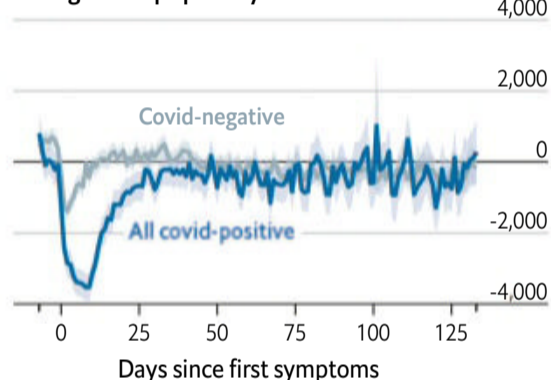
Change in resting heart rate, beats per minute



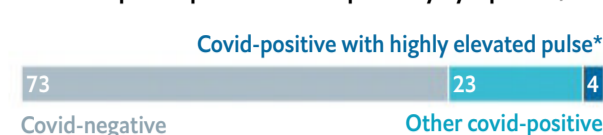
Change in sleep duration, minutes



Change in steps per day



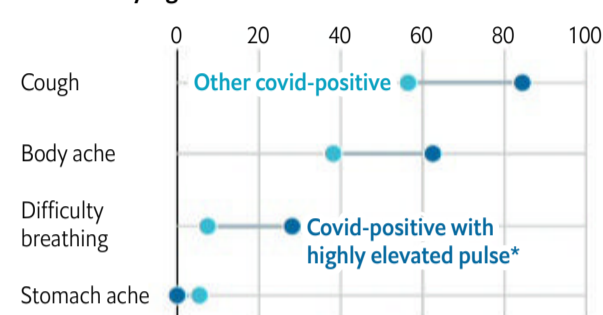
Share of participants with respiratory symptoms, %



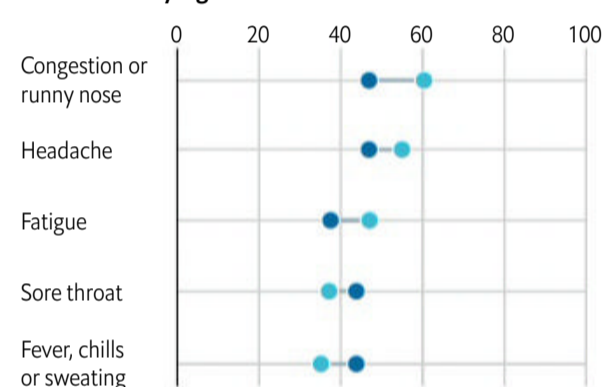
Symptoms during early, acute phase of covid-19

By change in heart rate 4-8 weeks into illness, % of group

Statistically significant differences



No statistically significant difference



*Average resting heart rate 4-8 weeks after onset of symptoms at least 5 beats per minute above pre-covid level Source: "Assessment of prolonged physiological & behavioral changes associated with covid-19 infection", by J. M. Radin et al., JAMA Network Open, 2021

Fitbit for purpose

A new study using wearable devices could help to define long covid

THE GRAVEST costs of the covid-19 pandemic, in lives lost and economies paralysed, have been plain to see. But one of its most durable consequences is also among the hardest to measure: the plight of "long-haulers" with chronic symptoms.

Doctors have not yet agreed on a definition of long covid. Some use it to describe symptoms lasting at least four weeks; others for six months or more. Nor is there consensus on which symptoms qualify. Most accounts cite exercise intolerance or shortness of breath; changes to involuntary functions like heart rates; or cognitive impairment ("brain fog"). But the severity needed for a diagnosis is open to debate.

Covid-19 is too new for long-run studies of its impact to be complete. However, a new paper by researchers at Scripps Research Translational Institute and CareE-

volution, a health-care firm, suggests that heart rates can distinguish some long-haulers from patients who recover fully.

In March 2020 Scripps began obtaining data from users of wearable fitness trackers. So far, 38,000 people have enrolled. The study covers 875 participants who had symptoms of respiratory illness and were tested for covid-19, of whom 234 were positive. The rest tested negative and probably had other ailments, letting the researchers compare covid-19 with different diseases.

Covid-19 was distinctively disruptive. Although patients with symptoms who tested negative did increase hours of sleep and reduce the number of steps they took, these changes were modest and brief. In the covid-positive group, the effects were 2.5 times larger, and lasted for a month.

The most striking differences involved heart rates. An elevated pulse can leave tissue short of oxygen, causing lightheadedness or shortness of breath. Whereas the resting heart rates of people with non-covid ailments rose only slightly, those of covid-19 patients oscillated. In most cases—86% of people testing positive—pulses rose on average by 1.4 beats per minute (BPM), and then fell by 2.9BPM. As patients

recovered, their hearts sped up again, to 0.5BPM above the starting point. They returned to normal after about 65 days.

However, the remaining 14% of people with covid-19—a share similar to the incidence of long covid found in some other studies—faced graver changes. Their pulses followed the same rise-fall-rise-fall pattern, over a similar time period. However, the impact was larger, with an average peak increase of 8.8BPM. Moreover, after 70 days their heart rates levelled out at 5.4BPM above the pre-covid pace. Their pulses stayed in that range until the study ended.

Long-haulers often bemoan unending symptoms. Although the study did not track symptoms after the acute phase of covid-19, it confirms that the disease can affect vital signs for months. It also identifies risk factors for long covid: participants with highly elevated pulses were unusually likely to suffer coughs, body aches and trouble breathing early in their illnesses.

Many young people think they do not need covid-19 vaccines because their risk is low. However, youth did not reduce participants' chances of having elevated pulses. Greater awareness of long covid might relieve such sceptics of this fallacy. ■



Songs against hate

Esther Bejarano, member of the Auschwitz Girls' Orchestra and anti-racism campaigner, died on July 10th, aged 96

THE THOUGHT of an orchestra in Auschwitz chills the blood. The idea that at the end of those railway tracks, through those high iron gates, amid the pall and ash from the ever-burning crematoriums, light music was playing, is an obscenity. But Auschwitz had several orchestras, playing or rehearsing for up to ten hours a day. And for 18-year-old Esther Loewy, as she then was, the just-formed Girls' Orchestra was a piece of luck. If she could get into it she would not be hauling rocks all day, which might kill her. She would be given more food. So before her audition she sat in a corner of her barracks, a tiny, drab figure with her chafed hands and shaved head, practising.

The piece she had been set was easy, the hit song from the film "Bel Ami", which was also all about luck. "You have luck with the women, Bel Ami!" it ran: *Du hast Glück bei den Frau'n, Bel Ami!* Everyone knew that jaunty tune. What she did not know was how to play the heavy accordion that rested on her knees. She had lied that she did, just to get in. As a pianist she could work out the right-hand keys, but all those left-hand buttons foxed her. What did they mean? This was urgent; without music, she was finished. Then she chanced on a chord of C major, like an old friend, and all was well. Her luck was in.

It was hardly a rest cure. Her morning task now was to stand in all weathers at the camp gate, playing German marching songs as the prisoners went off to forced labour and, in the evening, trudged back. The same old tunes, over and over. In the evenings there were classical concerts, tailored to the few instruments they had and whatever sheet music they could get. That was more her kind of thing, like the Bach, Mozart and Schubert she sang on request for the barrack leaders: the music of her childhood in Saarbrücken, where their house rang with family recitals and the rich operatic voice of her father, a cantor in the synagogue. But that was in another world. In this one she played with a rifle aimed at her

back; the power of music was used as a lure and a lie, a promise of comfort where there was none. The worst was when they performed at the railway station as the fetid cattle cars arrived. The dazed new arrivals would smile and wave, with no idea what was waiting for them. She would cry, then, as she played.

Yet even through such scenes, luck glinted sometimes. When she caught typhoid, her role as the only accordionist got her proper care. After less than a year in Auschwitz her status as *mischling*, mixed-race, with a Christian grandmother, saw her moved to Ravensbrück, a women's camp that was slightly less harsh. When, in 1945, the prisoners were marched west to escape Soviet forces, she and six other girls ran away into the forest. There they fell in with American troops; safe now, she slowly made her way to France and, eventually, Palestine. She had survived.

The war was over. Her own fight, though, was just beginning, against racism and anti-Semitism everywhere. The young Esther, singing and playing timorously in Auschwitz, might have been astonished to see herself seven decades later in a pixie haircut and long scarf, dancing on a stage with rappers. But so she did, this time making music vigorous and defiant enough to avenge those hopeless faces at the railway station, and all who had died.

The post-war world had severely disappointed her. She settled and married in the new state of Israel, where she found success as a singer, but Israel's treatment of the Palestinians made her wild with anger. It struck her as racism pure and simple, a forced displacement and oppression of people as unjust as the persecution of Europe's Jews. She attacked those policies all her life long, so furiously that she was later called an anti-Semite herself, and evidently Israel was not the place to stay.

She took the family to Germany. It was home, though full of awful memories. The day when, at 14, she had been kicked out of school; the time Hitler had visited Saarbrücken, with the crowds eerily saluting him; the beating of her sister Ruth on Kristallnacht in 1938, until she could hardly stand; Ruth's killing, and her parents' murder. She could hope, at least, that after Germany's defeat Nazism would disappear. When the Americans had rescued her, she had played the accordion while Hitler's portrait blazed fiercely in a fire. Surely his vile ideas were now as dead as he was.

They were still around, however. They lurked like bad seeds underground, or like her recurring nightmare of Nazi boots trampling her—just as, on the forced march from Ravensbrück, the soldiers had shot and stamped over the bodies of those too weak to go on. In 1986, at 61, she got into an argument with members of the fascist NPD and their police protectors, right outside her boutique in Hamburg. When both groups insulted her, it was time to write her memoirs of the camps and to co-found the Auschwitz Committee, which helped survivors tell their stories. It was time, too, to unleash her music against what she called the Great Silence.

Her father had collected Yiddish songs. Now she formed a band, called Coincidence, with her children Joram and Edna, to sing more recent melodies from the Jewish resistance. Her favourite was "Mir Lebn Eybik", "We'll live for ever", a song from the Vilnius ghetto: "We'll live for ever,/though worlds burn down,/We'll live for ever,/no cash around.../We will live on and on and on.../We'll live for ever,/We are here!"

That certainly seemed true of her, as she toured tirelessly round Germany. Every week she was in a different city, especially in schools, telling the children what had happened to the Jews, alerting them to racism in all its forms. To modernise the message she embraced the hip-hop of Microphone Mafia, two towering young men, one a Turkish immigrant, who rapped on the resistance songs (a bit loudly, she thought), while she, the tiny, lucky survivor with fists clenched, kept the old words flowing.

She also sang "Bel Ami". Usually it was a defiant, happy song without an accordion, which she did not play onstage. If anyone else played accordion for her, it became harder to sing, as though her voice waded through tears. ■

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