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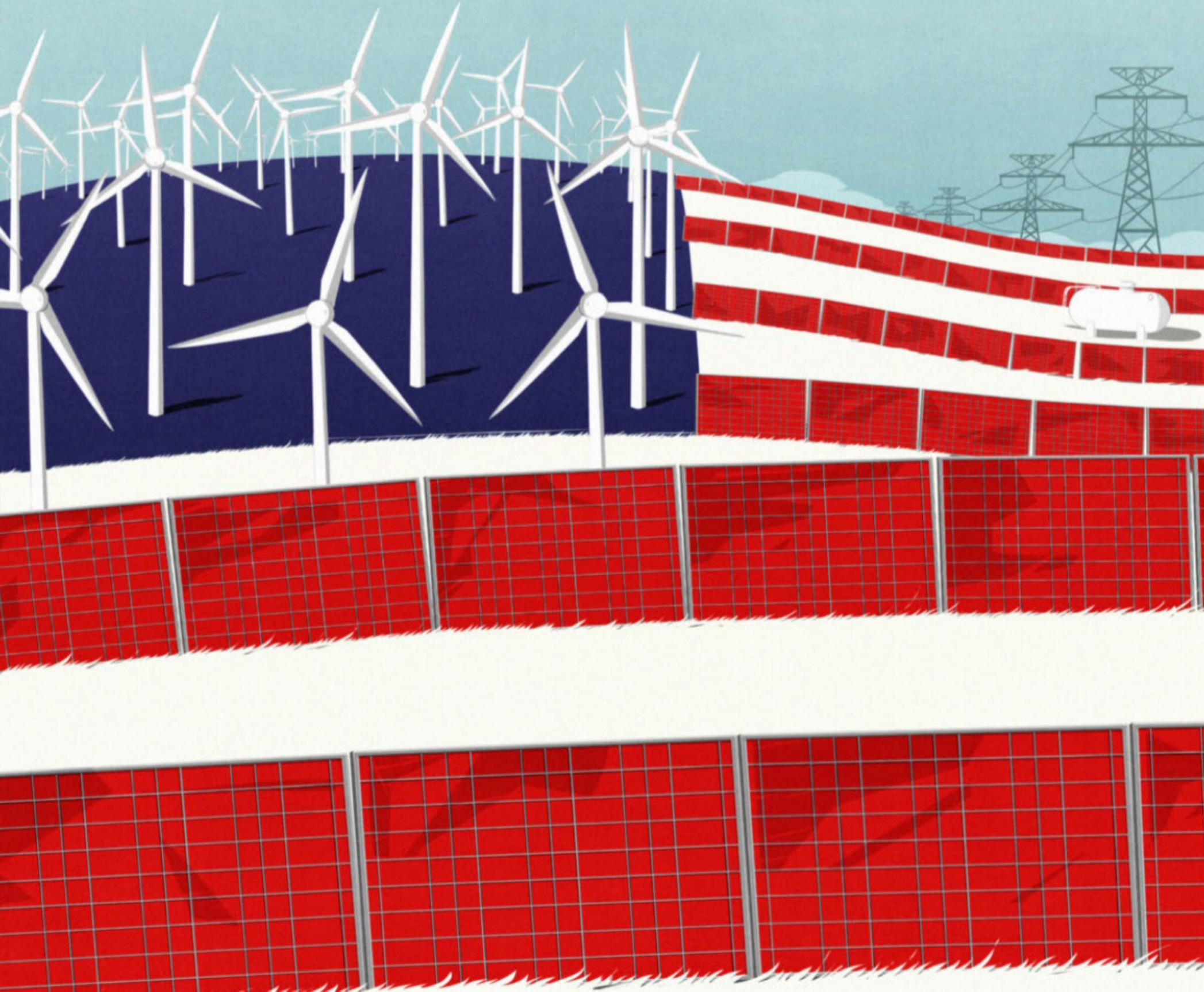
The problem with puberty blockers

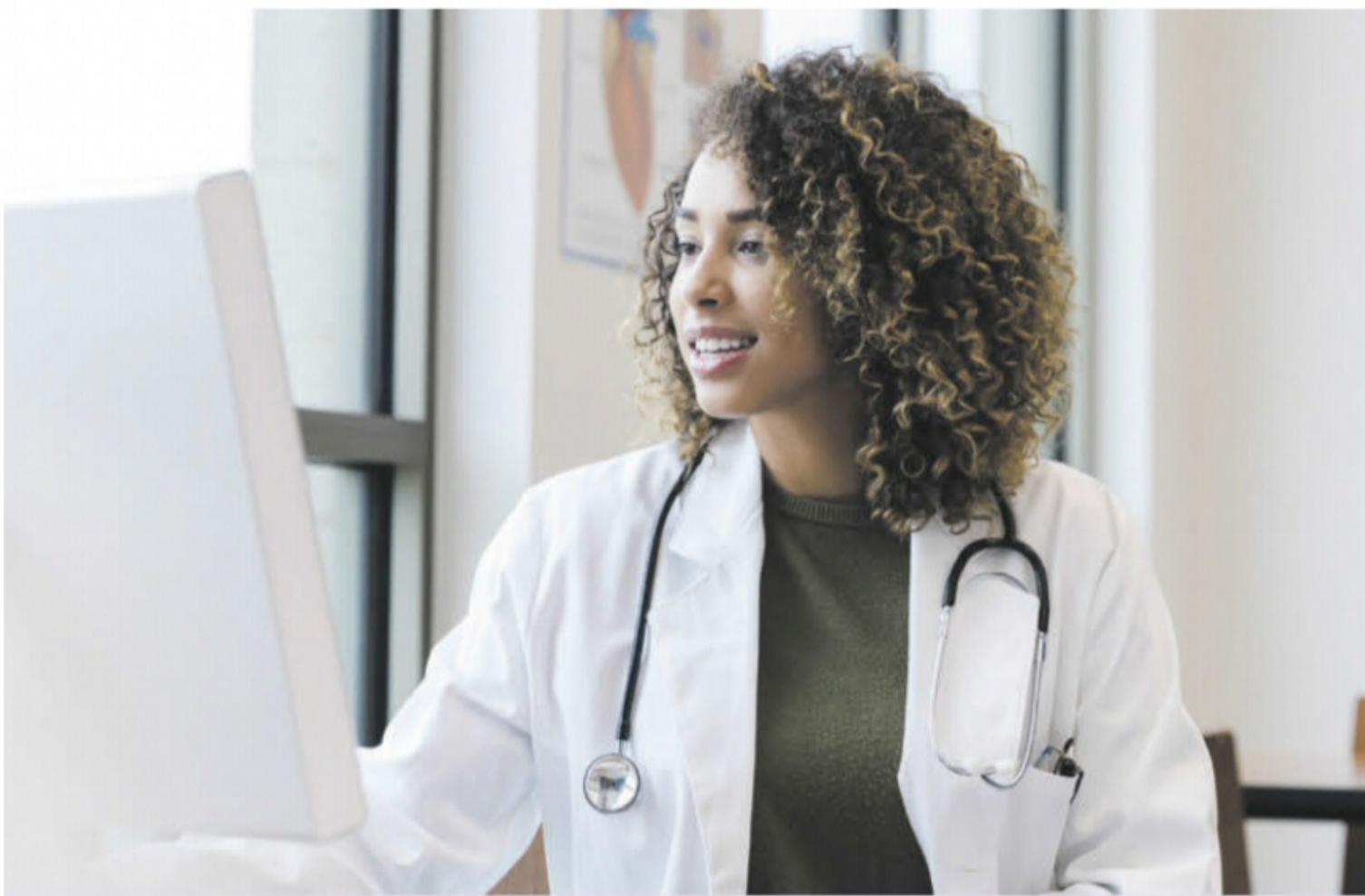
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FEBRUARY 20TH-26TH 2021

America's better future

No carbon and no blackouts





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

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We've listened. Now it's time for action.

We want to do more to support the fight for racial equality. That's why we've made an ambitious commitment to set ethnicity targets of '20 and 5 by 2025'.

Meaning 20% Black, Asian and Minority Ethnic representation. And 5% Black representation across our business in the UK and Ireland. That way, Sky will better reflect the communities we work in and serve. To make this happen, we'll work together on new ways to recruit, retain and progress our people.

Romel is helping to ensure we take action

Romel leads the Sky Unity Programme, a series of events and workshops designed to create greater cultural awareness and promote an inclusive culture at Sky.

Romel says, "I'm really passionate about creating a workplace where everyone can be their authentic selves. I want us to be a place where people don't feel like they need to assimilate. Our targets, along with other work we're doing, are a step towards that."

Romel isn't acting alone. We know that everyone who works for Sky can make a difference and together can make positive change happen.

There's always more to do

We're also taking advice and guidance from our new independent Diversity Advisory Council, seven external advisors on diversity and inclusion.

So, while we and businesses across the country have a long way to go, we're confident we can deliver.

Because in the end it's actions that count. Not words.

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Romel
Sky Unity Programme Lead



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A winter storm that covered three-quarters of America's Lower 48 with snow brought havoc to southern states. A federal emergency was declared in **Texas**; temperatures plummeted to -2°F (-19°C) in Dallas. Millions of Texans were left without power, as were tens of thousands of people in other states. Many blamed antiquated energy grids for not being able to cope with the surge in demand for electricity.

Donald Trump's impeachment trial for "incitement of insurrection" ended quickly. Fully 57 senators, including seven Republicans, agreed that he had whipped up the mob that stormed Congress on January 6th. But the vote fell short of the two-thirds majority required in the Senate to convict the former president.

Mario Draghi was sworn in as **Italy's** prime minister, having secured the support of almost all of the country's main political parties. The former head of the European Central Bank named a new cabinet in which many of the key positions are held by technocrats like himself. His task is to draw up a plan of reform that can unlock more than €200bn (\$240bn) in EU covid-recovery money.

England dished out its first £10,000 (\$13,900) fines to travellers who broke strict new **quarantine** rules after returning from a "red list" of 33 countries. Confusingly, the rules are different in Scotland, which now quarantines all international arrivals. One flight that was subject to Scottish rules had only a handful of passengers, despite having 60 seats booked. The others may have taken flights to England

and then travelled overland to Scotland, to avoid being cooped up in costly hotels.

Protests continued in **Myanmar** against a military coup. Many civil servants have stopped work. Public services and many financial transactions are hamstrung. The authorities have arrested democrats, threatened truant bureaucrats with prison and tried to disperse crowds with water cannons and rubber bullets.

A court in **India** acquitted a journalist, Priya Ramani, of libel, after she accused a former government minister of sexual harassment. The case is seen as a milestone for India's #MeToo movement. Separately, the police arrested Disha Ravi, a green activist, after she posted hints for environmental protesters on how to gain attention. They accused her of "spreading disaffection".

A trial began in **Hong Kong** of nine people for alleged offences related to protests in 2019. The accused include well-known veterans of the territory's pro-democracy movement, such as Martin Lee and Jimmy Lai. Mr Lee and Mr Lai, as well as five others, pleaded not guilty to charges involving illegal assembly.

Jake Sullivan, Joe Biden's national security adviser, expressed "deep concerns" about the reluctance of **China** to release data related to the outbreak of covid-19 in Wuhan. He reiterated that China should fully co-operate with an investigation by the World Health Organisation.

Carlos Menem, Argentina's president from 1989 to 1999, died aged 90. A Peronist by political lineage, he adopted some liberal economic policies, lowering trade barriers, cutting subsidies and privatising state firms. But he failed to protect ordinary Argentines' livelihoods, and allowed rent-seekers to flourish. With his mutton-chop sideburns and fast cars, Mr Menem was prob-

ably the most glamorous resident of the Casa Rosada since Evita Perón.

The Biden administration said that **asylum-seekers** could cross America's southern border to have their applications heard. Donald Trump had insisted they wait in Mexico.

Brazil's president, Jair Bolsonaro, signed four decrees to make it easier to pack heat. Ordinary Brazilians will be allowed to buy as many as six guns (up from four) and carry two at once.

America vowed to punish the perpetrators of a rocket attack in **Iraq's** Kurdistan region that killed a contractor with the American-led military coalition and wounded several others, including an American soldier. A pro-Iranian group claimed responsibility for the attack.

The UN called for an additional 3,700 peacekeepers to be sent to the **Central African Republic** to bolster a force that is already 15,000-strong. Rebels are advancing on the country's main cities.

Gunmen in **Nigeria** abducted 42 students and staff from a school, the latest such incident in a country plagued by kidnapping for ransom and political hostage-taking. In December 344 students were taken from another school, but later freed by security forces.

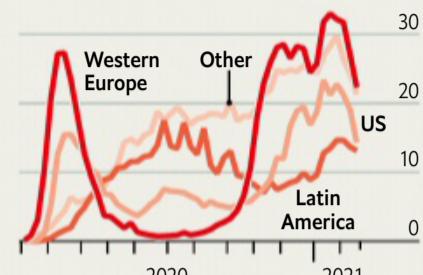
Guinea said that three people died after contracting **Ebola**, a virus that is usually fatal if not treated quickly. They are the first cases in west Africa since more than 11,000 people died in an outbreak in the region that raged from 2013 to 2016.

Seif Sharif Hamad, the vice-president of Zanzibar, died after catching covid-19. Zanzibar is a semi-autonomous part of **Tanzania**. John Magufuli, Tanzania's president, insists his country is free of the virus and that vaccinations against it are dangerous and do not work.

Coronavirus briefs

To 6am GMT February 18th 2021

Weekly confirmed deaths by area, '000



Vaccination doses

| | This week, '000 | Total '000 | Per 100 people |
|---------------|-----------------|------------|----------------|
| Israel | 802 | 6,759 | 78.1 |
| Seychelles | 11 | 56 | 56.9 |
| UAE | 833 | 5,199 | 52.6 |
| Britain | 3,049 | 16,122 | 23.8 |
| United States | 11,514 | 55,220 | 16.5 |
| Bahrain | 50 | 253 | 14.9 |
| Chile | 1,256 | 2,376 | 12.4 |
| Malta | 13 | 54 | 12.2 |
| Serbia | 165 | 817 | 12.0 |
| Denmark | 66 | 422 | 7.3 |

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

New recorded infections in **India** have tumbled from nearly 100,000 a day in September to under 10,000. In **England** a study found that infections have fallen by two-thirds since early January. **California** reported fewer than 5,000 new daily cases for the first time since November.

The world's first "human challenge" study of covid-19 got the go-ahead in Britain. Volunteers aged 18-30 will be exposed to the coronavirus to establish how much of it is needed to cause infection.

The hours needed to shut and disinfect **New York's** subway system at night have been reduced from four to two, a sign, said an official, that the city "is starting to return to normalcy".

North Korea reportedly tried to hack Pfizer's computers to find details of its vaccine. Strange for a country that officially claims not to have had any cases of covid-19.

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

In an unexpected move, **Facebook** blocked news content on its sites in Australia, and also stopped people outside the country from viewing Australian news publications on its platforms. The social-media giant took the action after the lower house of parliament passed a bill that would force it to pay for news content that has been shared by users; it says the law is unclear about what constitutes "news".

Facebook's defiant tone was a stark contrast to **Google's** global agreement to pay **News Corporation** for content from its publications, which include the *Wall Street Journal* and the *Sun* in Britain. Google was also under threat from the proposed law in Australia and had warned that it would shut its search engine there.

Bernard Arnault, the chairman of LVMH, a French luxury-goods group, is joining the growing list of business leaders who have set up a **special-purpose acquisition company**. A SPAC is a shell company that lists on a stock exchange with the intent of merging with an existing company, enabling the firm to raise capital without the slog of an IPO. They became popular in America in 2020, but are now taking off in Europe, too. Mr Arnault's investment company is launching its SPAC with other investors to look for deals in financial services.

Ngozi Okonjo-Iweala was appointed as the new director-general of the **World Trade Organisation**. She is the first African and the first woman to hold the job. The Trump administration had opposed the nomination of Ms Okonjo-Iweala, a former Nigerian finance minister, claiming that she lacks experience. But her only rival, Yoo Myung-hee, South Korea's trade minister, withdrew her candidacy in early February, soon after Joe Biden took office.

China displaced America as the European Union's **biggest trading partner** last year,

according to official data, with both exports and imports growing. America remains the EU's biggest export market (followed by Britain), but overall trade slumped between the two after their economies tanked during the pandemic.

Official statistics confirmed that **Britain's GDP** contracted by 9.9% in 2020, the worst performance in the G7. The economic recovery that began mid-year stalled when the second wave of the pandemic took hold. The Treasury's average of forecasts suggests that the economy will grow by 4.4% this year and 5.7% in 2022, depending on what happens with covid-19.

Japan's economy shrank by 4.8% in 2020. The country's economic output picked up towards the end of the year, helped by a surge in exports.

An expensive error

An American judge ruled that a group of creditors that mistakenly received \$500m from **Citigroup** did not have to repay the money to the bank. The creditors are in dispute with Revlon, a cosmetics company and a client of Citi's. The bank sent \$900m to creditors last August, though it had meant to

recompense them with only a small interest payment. Some \$400m has been returned, but the judge found that the creditors had grounds to think the payment was intentional, as the idea that Citi could make such a blunder was "borderline irrational". The bank is appealing against the decision.

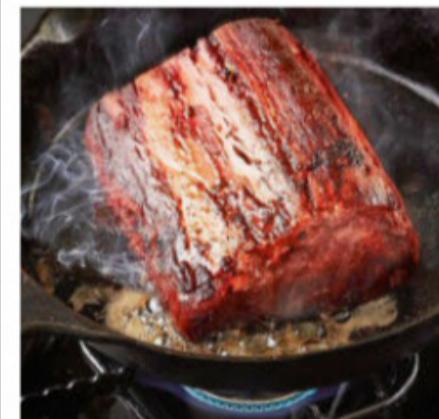
Jaguar Land Rover laid out an ambitious plan to rebrand its Jaguar cars as all-electric by 2025. Under its new chief executive, Thierry Bolloré, the company plans to offer battery-powered versions of all its models by 2030. All three of its British factories will stay open.

The state of New York filed a lawsuit against **Amazon**, claiming it had been "deficient" in ensuring the safety of its warehouse workers during the pandemic and had not adequately disinfected its facilities. The online retailer had tried to stop the suit, arguing that workers' safety is covered by federal, not state, law. It says it has spent \$11.5bn on covid measures. New York's suit is the latest in a series of state challenges to the way Amazon conducts its business.

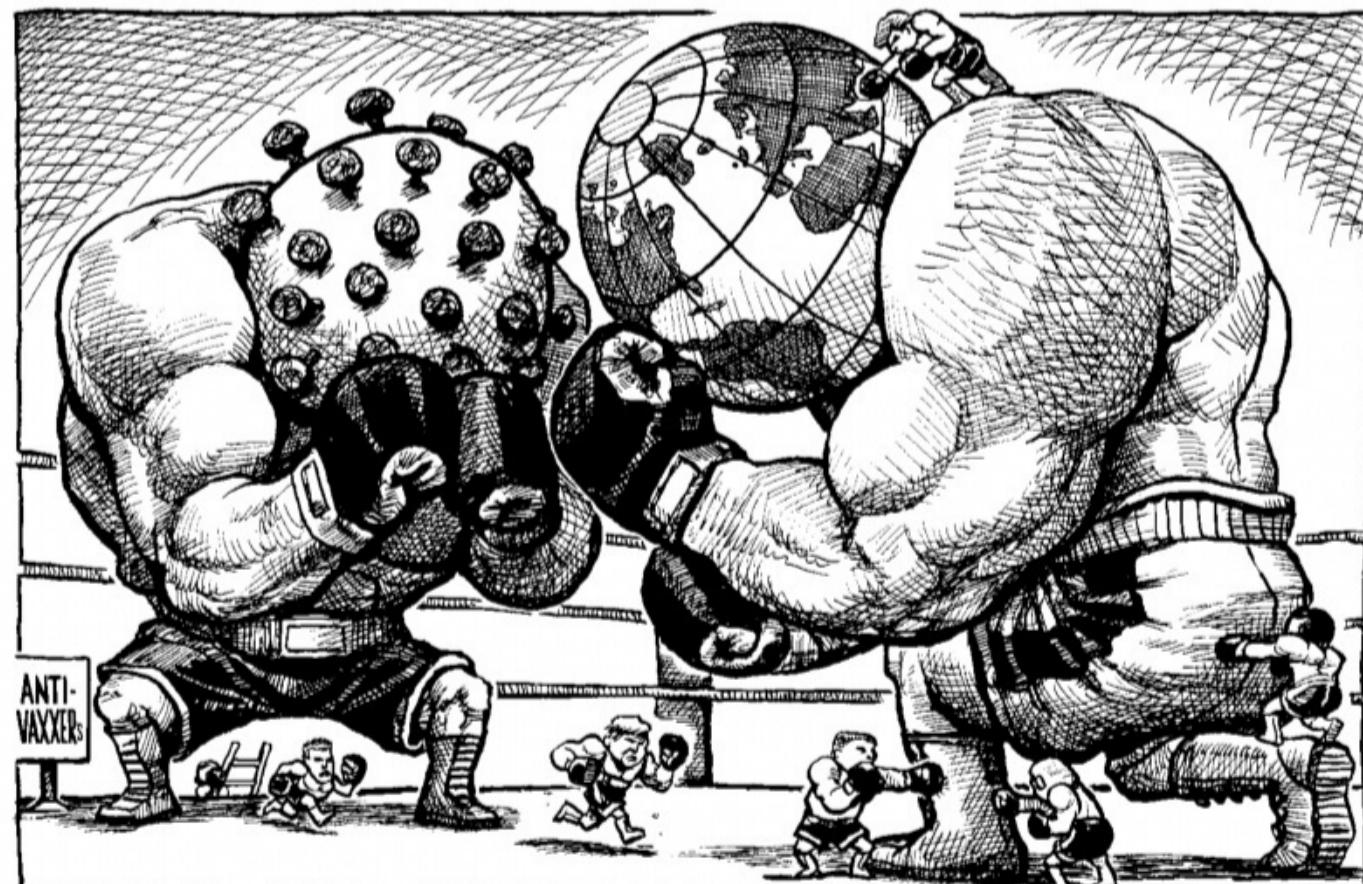
Air France-KLM reported an annual net loss of €7.1bn (\$8.1bn). The French-Dutch

airline group said the current tightening of travel restrictions in some European countries because of covid-19 made for a challenging start to this year.

What's on the menu?



An Israeli startup that is developing **3D printers for meat** undertook a successful fundraising round that will allow it to distribute its products to restaurants this year. Redefine Meat combines 3D meat modelling, food formulations and food printing to build complex-matrix "meat" on its machines, made from proteins found in legumes and grains and fat from plants. The steaks resemble the texture and taste of choice cuts of beef, but with no cholesterol. Bill Gates this week called on rich countries to switch to "100% synthetic beef" in order to lower greenhouse-gas emissions from the cattle industry.



America's better future

This is the moment for an ambitious attempt to deal with climate change

TEXAS PRIDES itself on being different. Yet it is in the grip of a winter storm that typifies the Snowmageddon-size problems facing energy in America. Although nobody can be sure if this particular freeze is a sign of climate change, the growing frequency of extreme weather across the country is. Texan infrastructure has buckled. The problem is not, as some argue, that Texas has too many renewables. Gas-fired plants and a nuclear reactor were hit, as well as wind turbines. Worse, Texas had too little capacity and its poorly connected grid was unable to import power from elsewhere (see United States section). Texas shows that America needs both a cleaner grid and a more reliable one.

Plans to overhaul American energy will come before Congress in the next few months. President Joe Biden has said that he wants fossil-fuel emissions from power generation to end by 2035 and the economy to be carbon-neutral by 2050. America is not just the world's second-largest emitter, but also a source of climate-related policy, technology and, potentially, leadership. What is about to unfold in Washington will set the course in America for the next decade—and quite possibly beyond.

Time is pressing. Neither Mr Biden nor his successors may get a second chance to recast policy on such a scale. Global emissions from fossil fuels and cement production in 2019 were 16% higher than in 2009. It will be even harder to limit climate change to less than 2°C above the pre-industrial level, the global threshold from which America's target for 2050 comes. To be carbon neutral, the world must curb emissions by 7.6% a year for a decade, a steeper decline than in 2020, when covid-19 cut demand for oil and coal. For America, delaying action to 2030 would nearly double the cost of reaching net zero or, more likely, mean it overshoots its targets.

Yet there are grounds for hope. Although the Republican Party is against almost all action, voters are increasingly alarmed by climate change. Two-thirds of them think the federal government is doing too little about it, and that share includes plenty of younger Republicans. Although the fossil-fuel lobby remains powerful, many Republican business donors want more action—partly because asset managers are urging firms to align their strategies with the net-zero world Mr Biden envisions.

Most encouraging of all, the costs of power from wind and solar have plunged by 70% and 90% over the past decade. Along with cheap gas, this has already helped America decarbonise at an impressive rate, despite Donald Trump's rolling back of fossil-fuel regulations. Price has not been the only factor; more than half of the states have some sort of clean-energy mandate, a device that Mr Biden wants to introduce on a national scale.

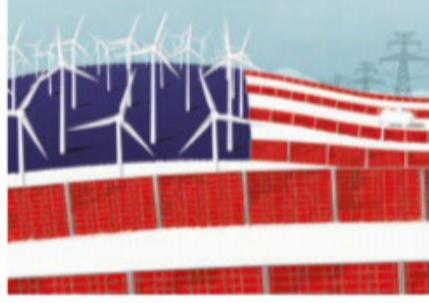
This involves a regulatory framework that favours renewable-energy developments and grid connections to hook them up. It will take a lot of extra investment—about \$2.5trn in the coming decade, say researchers at Princeton (see Briefing). In a new book, Bill Gates, a billionaire philanthropist, argues that research is needed into a host of areas such as energy storage, advanced nuclear reactors to complement renewables and technologies for clean concrete-making and other activities that are

hard to decarbonise (see Books & arts section). Without these, even if a clean grid is powering electric cars and light trucks, it will displace only around half of emissions.

America is good at innovation, but new ideas need to be deployed at scale, not languish in the lab. One tool is a carbon price which, if it were high enough and if investors believed it would last, would signal what improvements were needed where. But for all its attractions, carbon pricing failed in Congress in 2009. Although many economists and opinion-makers on the right favour it, Republican politicians do not. And even if a carbon price were in place, public-private co-operation would still be needed for America to act as fast as Mr Biden proposes.

For all those reasons, an ambitious climate-oriented infrastructure bill looks like Mr Biden's best chance of getting new policy on climate through the Senate. Unfortunately such a plan will be lucky to attract any Republican votes. Yet, if mustering the 60 needed to see off a Senate filibuster is improbable, a plan could be stripped of some measures, including a clean-energy standard, and passed with a simple majority through the parliamentary manoeuvre known as reconciliation. The bill must still be of a scale and ambition that matches America's challenge.

Failure to act would bring big risks. For a start, it would make America less competitive in the new clean-energy economy.

China is the dominant producer of solar panels and batteries; it has also invested in foreign mines to secure minerals needed for them. Europe has its own "green deal" to boost its clean-energy industries. It plans to tax imports from countries that do not pledge to lower their emissions.

America would also be deprived of global influence over climate. It has direct control over only about 10% of the world's greenhouse-gas

effluvia. If it wants the benefit of a stabler climate—and with it a stabler world economy, stabler geopolitics and much avoided suffering—it needs to influence the other 90%, too. Mr Biden has appointed John Kerry, a former secretary of state, to spearhead that effort (see Lexington). America is to rejoin the Paris agreement on February 19th, making it a full participant in the UN conference to be held in Glasgow, in Scotland, in November, when countries will be able to lodge new and more ambitious pledges to cut emissions. If America tables goals and gives evidence that it will back them with domestic policy, it will gain influence. China's two big development banks have doled out \$51bn for foreign coal plants since 2008. America should be part of a push against such subsidies.

Enough drifting

Unfortunately, America brings little credibility to action on climate. Mr Trump took pleasure in subverting it, but his country's poor record precedes him. George W. Bush declined to implement the Kyoto protocol. Congress has not considered serious climate legislation since 2009. Today must be different. There will never be a better chance for Mr Biden to show real ambition. If the blackouts in Texas are any guide, it would not just be the world that would thank him, but Americans, too. ■

Italy

Another chance

Mario Draghi's appointment as prime minister is good for Italy and good for Europe

ITALY IS BIG enough to break Europe. Some countries, such as Greece or Portugal, are highly indebted but their fellow Europeans can bail them out, if necessary. Others, like France, Spain or indeed Germany, have large debts in absolute terms, but thanks to the size of their economies and a decent record of growth they can cope without spooking the markets. Only Italy has the triple whammy: a big debt stock in both relative and absolute terms, plus an economy that was stagnant even before covid-19 struck. The arrival of Mario Draghi, sworn in as Italy's prime minister on February 13th (see Europe section), offers some hope that Europe's sick man may get a vital healing shot.

Mr Draghi, an ex-boss of the European Central Bank, is the latest in a long line of technocrats to be installed in the prime minister's office. That is hardly ideal. Unelected heads of government are in principle a snub to democracy. They are often bad at communicating with the public. Their elevation can play into the hands of populists, who will always claim that the elites are conspiring to do down the masses. When the prime minister in question is a former international banker, the demagogic slogans practically write themselves.

Still, Mr Draghi commands the support of all Italy's main parties, with the sole exception of the Brothers of Italy, an outfit with neo-fascist origins, which will no doubt snipe dangerously from the sidelines. Mr Draghi is more than just a technocrat; he also has considerable political and diplomatic skills, as he showed when shepherding the euro through its crisis a decade ago. He will need them.

Previous governments have often broadly agreed about what has to be done to rescue Italy from its chronic malaise. It is one of the worst places in the European Union in which to do business, owing to a sluggish and erratic judicial system, a weakness for red tape and a tax system that discourages job creation. Government subsidies have failed to correct the deep structural imbal-

ance between the prosperous north and the mezzogiorno, Italy's south, one of Europe's least prosperous regions. All these things need fixing, but a series of weak, cash-strapped coalition governments have made little progress. Mr Draghi has a chance to do better. For now, at least, he has a huge majority in parliament.

He will also have plenty of sugar to help the unpleasant medicine go down. Thanks to a €750bn (\$900bn) recovery fund that the EU agreed to last summer, Italy is eligible for around €200bn in grants and loans over the next six years. The money comes with the right kind of conditions attached. Much of it must be spent on green projects or digital ones; and agreeing to a detailed programme of reforms is a key part of the mix. Italy's draft plan is better than some that other member states have submitted to

Brussels. Even so, Mr Draghi needs to beef it up. In a speech to parliament on February 17th he hit the right notes, promising to reform taxes, the courts and public administration, but also promising not to bail out unviable firms.

If Mr Draghi is a good bet for Italy, he looks a good one for the EU as well. The European Council could use another heavyweight. Angela Merkel is on her way out, having promised that her current term as Germany's chancellor is her last; an election is due on September 26th. Emmanuel Macron faces his own re-election battle early next year. Britain, in the past the swing vote in Europe's trio of dominant powers, has abandoned the stage.

A powerful and highly regarded Italian will also help shift the EU's ideological balance in the right direction. If it is to survive and thrive, the bloc needs to invest a good deal more money, raising it on the international markets and so allowing its weaker countries to benefit from the credit of the union as a whole. The recovery fund offers a good template that should be used again in the future; Mr Draghi will be well placed to press for that. This can happen, though, only if the existing plan is a success. If Super Mario cannot make it work for Italy, perhaps no one can. ■



Capital-raising on Wall Street

Spactacular

SPACs are a mania—and a useful way to take firms public

IT IS EASY to mock SPACs. For decades these "special purpose acquisition vehicles", publicly listed pots of capital raised by investors who seek out private firms to merge with, have ushered a small number of flaky and irrelevant companies onto public markets. The present SPAC boom on Wall Street began last year and, true to form, features celebrities-on-the-make, failed bosses looking for redemption and credulous investors keeping their eyes wide shut. Yet it is undeniable that something more serious is also now taking place. The amount of money raised by SPACs in the past 12 months has soared to over \$120bn, according to Bloomberg. In a few weeks this year as much has been raised as

in the first half of 2020. The boom is spreading to Europe, and Amsterdam is racing ahead of London as a favoured venue (see Finance section). Serious companies are getting involved, too. Two of Asia's leading digital firms, Gojek and Tokopedia, are said to be considering using a SPAC to list in New York, which would be an alternative to a conventional initial public offering (IPO).

In an IPO a firm hires bankers who help it sell shares at an agreed price to mainly institutional investors in an elaborate process set out by regulators. The SPAC approach turns that on its head. A group of investors float a shell company, giving it a pot of cash. It then hunts for an unlisted target firm and offers to merge ►

► with it, raising a second round of cash from investors as it does so. If you are a firm that wants to go public, a marriage with a SPAC is relatively quick and certain.

The SPAC boom partly reflects a rebellion among Silicon Valley types, who have long grumbled about having to go through an IPO. Banks charge fees of 5-7% of the capital raised. Bankers manage the IPO price, and stand accused of setting it artificially low in order to give a “pop” to the pals they deal with routinely in the public markets at the expense of founders and early backers. For over a decade many exciting firms have stayed sheltered in private markets, an option afforded them by well-funded venture-capital investors like Son Masayoshi of SoftBank. As a result, the value of cash raised by IPOS as a share of America’s overall stockmarket value had been in decline for years.

However, the pent-up demand to go public is being unleashed at last. As well as SPACs, some firms are trying a third technique to go public called a direct listing. Founders and employees sell shares on an exchange for whatever investors are willing to pay—an option made possible by high-frequency traders, like Citadel Securities, who helped Slack and Spotify, two tech stars, to debut in this way.

There are two big dangers. One is that the SPAC boom becomes a bubble. Financial markets show many other signs of froth, including the recent GameStop retail-investor frenzy and the surge in Bitcoin’s price. If interest rates were to rise suddenly as a result of inflation (see Buttonwood), and the music were to stop in markets, the SPAC boom might end abruptly. That is unlikely to pose a risk to the financial system, but some firms would be left stranded at the altar. And SPAC investors might be clobbered.



The second danger lies within SPACs’ design, which can range from being efficient to being a rip-off. The typical SPAC creator receives “promote” shares—the median stake is 8% of the post-merger equity—for a trivial cost, meaning they make decent returns even if the merged firm’s shares sink after it goes public. Warrants (the right to buy shares at a given price in the future) are given to early backers as an incentive, and can also dilute the returns of outside shareholders. The presence of a cohort of badly designed SPACs is one reason why, on average, SPACs have underperformed both firms that debut via IPO, and the broader market.

Fixing these problems will require investors to be vigilant.

They should demand that SPAC creators forgo their fat promote shares in favour of shares or warrants that pay out only once other investors have seen returns. The incentives doled out to early backers should be trimmed, and restricted to those who are prepared to hold on to their shares long after a target has been acquired. These changes would both improve the long-term returns for investors and also discourage

more dubious ventures from being set up. Some SPACs, such as the one launched by Bill Ackman, a hedge-fund manager, have already adopted more sensible terms.

The SPAC boom has a whiff of the bubble about it—and some projects will end in tears. But with the right design, SPACs can become a familiar and useful device for investors. They give firms more options for going public and will encourage regulators and bankers to improve the IPO process. Rational risk-taking by investors, capital-raising by exciting firms and the expansion of public markets are all things that should be welcomed. Even if some SPACs crash and burn, the idea behind them is a buy. ■

India's jobs market

Many hands, light work

A lower share of women are in work in India than in Saudi Arabia

INDIA WILL soon end China’s long run as the world’s most populous country. But by some projections its workforce will not exceed China’s until mid-century, even though Indians are much younger. One reason is that so few women in India are in paid work (see Asia section). The International Labour Organisation says that only a fifth of adult women had a job or sought one in 2019, compared with three-fifths in China. The Centre for Monitoring Indian Economy, a local research firm, put the share of urban women in or looking for work at just 7% in November.

During the pandemic, women have typically been the first in India to lose their jobs and the last to regain them. School shutdowns have forced some to drop out of the labour force to look after children who would normally be in class. Young women who have been unable to study, train or work during the pandemic are being married off instead. That is a worrying development. Whereas women in other countries often withdraw from the workforce when burdened with a child, women in India drop out when burdened with a husband.

Some would say that nothing should, or can, be done about this. If Indian women choose not to work outside the home, the argument runs, that is their business. Dropping out of the labour force is a status symbol for upwardly mobile households, show-

ing they are able to get by on the husband’s earnings alone.

But the dearth of working women in India is not simply a reflection of cultural preferences. Many women on the sidelines of the economy are not there by choice. They say they would like to work if they could. Were they all to get their wish, it would add over 100m women to the workforce, by one calculation. That is more than the total number of workers, male and female, in France, Germany and Italy combined.

Moreover, Indians are not as hostile to women in work as the employment numbers suggest. Their answers to questions like “Should men have more right to a job than women?” are more egalitarian than poll responses in Indonesia, where fully 53% of women pursue work outside the home. Despite that, the share of Indian women who actually find a perch in the workforce is a shade lower than in Saudi Arabia, where 22% do. And in so far as social attitudes do hold women back, they are not immutable. Indeed, employing women is often a catalyst for social enlightenment, rather than a consequence of it.

The best thing the government can do to increase the supply of female workers is to increase the demand for labour in general. If growth is quick, hiring strong and labour scarce, then employers will have a powerful incentive to attract more women ►

into the workforce by offering higher pay and safer, more convenient jobs. Alas, India's notorious red tape has restricted the growth of labour-intensive, female-friendly industries such as the garment trade, which has prospered next door in Bangladesh. To the extent that India's government does try to foster private employment, it coddles pet industries, especially IT, that are prestigious but unlikely to employ the masses. And the state is extremely sexist in its own hiring: only 11% of the central government's employees are women.

The government has adopted some helpful reforms. Factory rules that are soon to come into effect will ease restrictions on women's working hours, which should make them more appealing recruits. But it could do more. India's rural welfare scheme provides flexible employment to many women. But work is not

always available and pay often arrives late. The scheme should also pay wages directly to women rather than to households. A study by Erica Field of Duke University and her colleagues showed that giving women control over their wages increased their bargaining power with their husbands, which in turn won them more freedom to work. There is the potential to initiate a virtuous cycle. As more women in a district take jobs, their husbands feel less shame about their wives' departures from home and hearth.

Despite the many obstacles they face, Indian women already make striking contributions in many fields, including retail, management, media and politics. India's finance minister, Nirmala Sitharaman, has herself worked in all four. Her government should try harder to clear a path for more women like her. ■

Fighting jihadists

Macron's African mission

France wants to avoid a “forever war” in the Sahel. That will take patience, and allies

FOR THE past eight years France has been leading a counter-terrorism war in Africa. The fighting is mainly in three countries—Mali, Niger and Burkina Faso—and straddles an area four times the size of France itself, stretching from the great dunes on the southern edge of the Sahara down through the thorny acacia scrub of the Sahel.

It is brutal. Last year jihadist-related violence in the region claimed about 6,200 lives. Almost 2m people have fled their homes. The conflict is not just causing misery among the world's poorest and fastest-growing populations. It also threatens to spread chaos into coastal countries such as Ivory Coast, Ghana and Benin, whose stability is essential if this huge part of Africa is ever to grow rich.

A year ago, with the backing of leaders in the region, President Emmanuel Macron led a mini-surge to try to push back the jihadists, adding about 600 troops to take France's total force, known as Operation Barkhane, to 5,100. Working with local armies, French troops have won some big tactical successes, in particular against Islamic State in the Greater Sahara (isGS). By bombing its hideouts and chasing its convoys of motorbikes and pickup trucks, Barkhane has shaken this jihadist group.

Yet even as French troops have hammered militias linked to isGS, others mostly affiliated to a branch of al-Qaeda have continued their deadly business. The cruel truth is that France finds itself leading a war it will struggle to win, and for which nobody is particularly grateful. At home, Barkhane enjoys cross-party support, but a new poll suggests that a slim majority of French voters now oppose the war. In the region, where France has often propped up autocrats or turned a blind eye to coups in its former colonies, it faces ongoing protests. On February 16th, after a summit with Sahel leaders, Mr Macron promised that he would not immediately draw down troops, but said that this was not “a forever war” (see Middle East & Africa section).

The region's own armies have improved considerably since 2013, when rebels and jihadists overran all of northern Mali and were marching on Bamako, the capital. But they are nowhere near ready to hold the line without the support of French troops

and air power, American intelligence-gathering and training from other Western powers. Mali's government barely controls much of the country's north or centre beyond its largest cities, and that is only with the help of a 15,000-strong UN force.

There are also limits to what heavily armed outsiders can achieve, as Western armies have learned in Somalia and Afghanistan. This is a fight that will ultimately be won or lost by the region's own governments. That, in turn, will depend on whether they can regain the trust of long-neglected rural populations, who often see the jihadists as less predatory and corrupt than the state. The governments of Mali, Niger and Burkina Faso must do a better job of supplying services such as clean water, schools and clinics. They will also have to curb graft and human-rights abuses. Last year more civilians in the Sahel were killed by government soldiers than by jihadists. There is only so much that

France and its Western allies can do to improve Sahelian governance. But they can make their support for local leaders and armies more conditional on tangible changes, such as the prosecution of soldiers who have been accused of war crimes. An end to coups, such as the one in Mali last year, would also help.

If France wants the Sahel's governments to take more responsibility, it may have to accept that their leaders could enter into peace talks with some of the jihadists that it is fighting. Local ceasefires such as one struck in Djibo, a city in northern Burkina Faso, could be a useful starting-point and a way of allowing teachers and nurses to return.

As much as Mr Macron would like to find a way to bring France's troops home, many will be needed in the Sahel for years. However, it is unreasonable to expect France to carry the combat burden alone. The entire region would be damaged if the Sahel's already-weak states were to collapse. Countries with effective armies such as Ghana could do more to protect themselves by protecting their neighbours. A few of France's European allies have stepped forward with small commando forces. Others should make good on their promises to join them. Nobody wants to get stuck in a forever war. But repelling the jihadists will take troops, money, co-operation and, above all, patience. ■





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You are an experienced financial markets professional with a strong background in public policy, financial market regulation and possessing outstanding leadership, diplomatic, analytical and communication skills. You will need to be fluent in English and knowledge of one of the other IOSCO official languages (Arabic, Spanish, Portuguese or French) would be an asset.

Applications

For any queries please contact Jonathan Bravo and Tim Pinkowski at SG-Vacancy@iosco.org. Applications should be submitted to the Nominations Committee at SG-Vacancy@iosco.org by close of business on 5th March 2021 (CET).

Applications must be accompanied by:

- A full curriculum vitae;
- Any other information needed to adequately brief the Nominations Committee on the candidate's credentials for the role; and
- Where the nomination is by an IOSCO member, a written assurance that the person nominated is interested in being considered for the role of the Secretary General.

Disarming features

The dangers of nuclear proliferation and confrontation cannot be understated ("Who will go nuclear next?", January 30th). However, the Treaty on the Prohibition of Nuclear Weapons represents much more than a means of channelling "the frustration among nuclear have-nots." It may not magically eliminate the world's nuclear arsenal, but it does set a moral and legal starting point for long-term efforts towards disarmament, which nuclear powers have an obligation and special responsibility to take up.

The treaty outlaws the use, development, production, testing and stockpiling of nuclear weapons, formalises a strongly held taboo against their use and fills a legal gap. It provides a further disincentive against proliferation.

Given that the ultimate goal is to ensure that a nuclear detonation never takes place again, perhaps the treaty's most obvious effect is the further stigmatisation of nuclear weapons. This makes it less probable that one will be detonated in the future.

ROBERT MARDINI
Director-general
International Committee of
the Red Cross
Geneva

You noted that Japan's development of reprocessing will bring it closer to a nuclear-weapons capability. The situation is significantly worse than you describe. In fact, France has reprocessed 47 tonnes of Japanese reactor plutonium, separating out weapons-useable plutonium and returning 11 tonnes of it to Japan. It now has enough plutonium to produce well above 1,000 nuclear weapons.

To say that Japan is a latent nuclear power is perhaps an understatement. It is months, not years, from a weapon should it choose to build one. The stockpiling of commercially produced plutonium is a serious proliferation problem.

BRUCE GOODWIN
Pleasanton, California

Priestley's prejudice

Bagehot presented an idyllic view of J.B. Priestley's "English Journey" (January 23rd). A closer reading proffers a darker side to this "hero" of left-wing politics, in his description of the Irish in Liverpool:

A great many speeches have been made and books written on the subject of what England has done to Ireland. I should be interested to hear a speech and read a book or two about what Ireland has done to England. If we do have an Irish Republic as our neighbour, and it is found possible to return her exiled citizens, what a grand clearance there will be in all the western ports, from the Clyde to Cardiff, what a fine exit of ignorance and dirt and drunkenness and disease.

This message was not too dissimilar to that spewed by Enoch Powell some 30 years later, and Donald Trump much too recently.

A.D. PELLEGRINI
Bloomington, Minnesota

Chinese friends

I enjoyed your special report on Chinese youth (January 23rd). I lecture in English to Chinese undergraduates at Cambridge and across China. Their desire to learn about our culture is so impressive. It stands in stark contrast to the lack of interest in China by the West's young. In 2020 there were very few undergraduates studying Chinese at Cambridge University; there were more reading Anglo-Saxon. Youngsters must be encouraged to learn about China. Appreciation of its rich culture and the formation of friendships should not be inhibited by our political differences with its leadership.

NICHOLAS CHRIMES
Guest professor
Guangzhou University

Covid comparisons

One thesis of your article comparing California to Texas in the pandemic is that there is less difference than one might expect, despite their divergent

strategies ("Life, liberty", February 6th). Texas had 127 deaths per 100,000 people compared with 104 in California. That is a difference of one-fifth, quite significant given that the economic impacts of both strategies are similar. If two firms achieved that difference in profit in the same market we'd laud one over the other. If they swapped death rates it would amount to thousands of fewer deaths in Texas and thousands more deaths in California.

The pandemic perhaps reaffirms Stalin's maxim that one death is a tragedy, a million deaths a statistic.

AARON MCKENNA
Dublin

Intense minorities

"Into the lion's den" (January 23rd) mentioned that only 23% of the Russian public think political protests are possible, making a revolution unlikely. However, Erica Chenoweth, a political scientist at Harvard, has demonstrated that it takes only 3.5% of a population to protest to bring about change. The possibility of a Navalnyan revolution should not yet be written off in Russia. Revolutions are always impossible, until they are inevitable.

VIKTOR SUNDMAN
Stockholm

The extraordinary efforts of despots to prevent their citizens from voting "for the wrong people" ("The meaning of Myanmar's coup", February 6th), calls to mind a question posed by Bertolt Brecht after the East German uprising against Soviet rule: "Would it not in that case be simpler, for the government to dissolve the people and elect another?"

AUGUSTUS HANEY
New York

Moore's law for lasers

The Technology Quarterly on understanding light was excellent (January 9th). I agree with your assertion that there "is no grand sweep to laser development akin to Moore's law for chips...different types of laser

improve according to different measures and at different rates." However, the fundamental economics of semiconductor lasers have indeed been improving at a rate similar to Moore's law. Just as integrated circuits empowered a broad range of applications that improved at different rates, high-power semiconductor lasers have been getting better at an extraordinarily rapid rate (similar to Moore's law) and are similarly enabling other solid-state lasers in a wide range of applications.

As Paul Romer argues, "We consistently fail to grasp how many ideas remain to be discovered...possibilities do not merely add up; they multiply."

SCOTT KEENEY
Vancouver, Washington

A knack for shacks

Regarding the "Spread of the shed" (January 23rd) as more people work from home, my former hen house on our property in rural Ontario has been transformed into my Zen house, with recycled windows and scrap lumber. From its picture window I can spy on an immature bald eagle in a distant tree-top, I can read my international weekly news magazine and write in my notebook, enjoy the peace and luxury of device-free surroundings in a bug-free space and think non-covid thoughts.

JANE DE JONG
Chatsworth, Canada

George Bernard Shaw's garden shed, shown in a photograph in your article, was named "London". This meant that when someone came to his home, his housekeeper would be able truthfully to say, "Sorry, he's not here; he's in London," ensuring greater peace and quiet for his writing.

WILLIAM NEWSOM
Weston Bampfylde, Somerset



The switch

NEW YORK

America has done too little to fight rising temperatures. Joe Biden wants to change that

AMID THE dust and sagebrush of New Mexico there are 61 rigs at work. The south-eastern part of the state, which sits over the shales of the Permian basin that spans the border with Texas, has over the past decade attracted shale-oil specialists, oil majors like ExxonMobil and innumerable camp followers fixing pumps, selling pipe and hauling the sand used to fracture the underground strata. About 40,000 people in the state now work in the sector; the taxes it generates pay for a third of the state's budget; and it accounts for about 1% of America's greenhouse-gas emissions.

President Joe Biden's announcement in January of a temporary moratorium on new leases allowing drilling on federal land has not gone down well in this bit of the Permian; New Mexico accounts for more than half of such onshore oil production. The American Petroleum Institute (API), the industry's main lobby, contends that the moratorium could cost the state 62,000 jobs. But for all the importance oil has in its economy, even New Mexico is preparing for a new energy era.

The Democratic governor, Michelle Lu-

jan Grisham, wants her state's emissions in 2030 to be at least 45% below their level in 2005, which given the recent oil boom means about 60% less than what they were in 2018. Across the state solar farms are being set up to harness the abundant sunshine and charging points provided for electric cars—just the sort of initiatives Mr Biden is seeking to accelerate as he aims to turn the American economy away from fossil fuels once and for all.

In January the president signed an executive order calling for the country to reduce its net greenhouse-gas emissions to zero by 2050, and to that end he wants the electricity sector to be emissions-free by 2035. Angelica Rubio, a New Mexico state representative who has relatives working on oil and gas projects in the Permian basin, acknowledges local resistance to Mr Biden's decarbonisation goals. "It is drastic," she says. "But this is the road map we need to take." She is sponsoring a bill in the state legislature to ease the transition for oil workers.

Any encouragement from within the shale patch will be welcome to Mr Biden's

team, which needs all the help it can get. In Europe, as in China, politicians are using industrial policy, regulations, carbon prices and other tools to lessen the risks associated with climate change and secure their place in a global clean-energy economy; some have got a fair way already (see Britain). But despite having played a key role in the negotiations which produced the Paris agreement in 2015—an agreement that it is rejoining on February 19th—America has to date offered no comprehensive outline of the goals and strategies it will use to tackle greenhouse-gas emissions which, in 2018, were equivalent to 5.3bn tonnes of carbon dioxide (see chart 1 on next page). Those emissions declined in 2020 by a staggering 9%, according to estimates from BloombergNEF, a data provider. But as the economy recovers they will bounce back quickly.

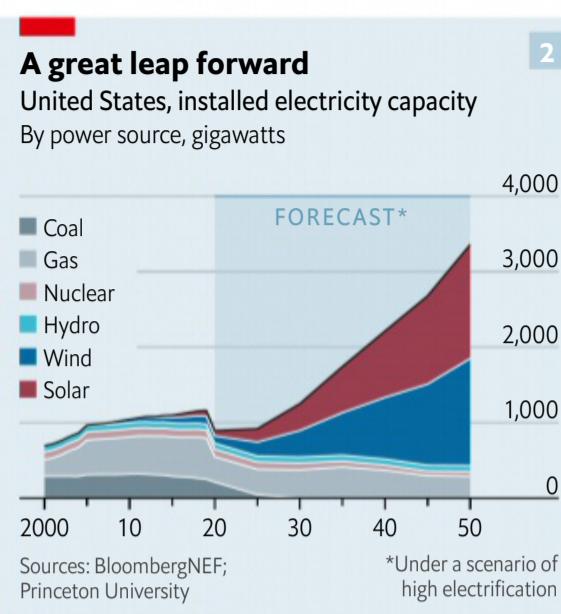
The lack of an ambitious national programme is largely down to the fact that America's Republican Party couples political power with a climate nihilism to an almost unparalleled extent. Donald Trump called climate change a hoax and withdrew from the Paris agreement; his administration put significant effort into trying to roll back the regulations with which his predecessor, Barack Obama, had tried to lower emissions. That they are subject to such reversals is one of the reasons that executive orders and regulatory stances are a poor substitute for thoroughgoing legislation. But Mr Obama had little choice. The vast majority of Republicans elected to federal ►

office reject policies to cut emissions, which is why Congress has not seriously confronted the issue for more than a decade. The power of Republicans in the Senate made it pointless.

The problem is made worse by the fact that some conservative Democrats have their own reservations. Joe Manchin, a Democrat from West Virginia, says that he supports climate action. But he rejects the idea that coal, the dirtiest fossil fuel, might be permanently removed from the world's energy portfolio: "Get into reality," he says. "It's not going to be eliminated." The fact that the Senate is split 50-50 between the parties means that, even with Vice-President Kamala Harris's casting vote, Mr Manchin in effect has a veto over legislation.

Should such obstacles lead to America punting for another decade, it will pay for the privilege. Delaying to 2030 would make the transition to a net-zero emissions economy almost twice as expensive as it would be if started today, with costs soaring to \$750bn a year by 2035 and more than \$900bn a year by the early 2040s, according to Energy Innovation, a policy group. But today's urgency comes from greater concerns than fiscal prudence. America's emissions are not only a problem for the climate in and of themselves. They are also a check on its opportunities to influence the rest of the world's emissions, which copiously outweigh its own.

A decisive American effort to reduce emissions would be a potent signal of solidarity and a great enabler of change. It is unlikely that poor- and middle-income countries, eager to lift their citizens out of poverty, will try hard to curb their emissions if the world's richest nation declines to limit its own, which are among the world's largest per person. A vibrant American programme would also guarantee levels of innovation devoted to the fight for a stable climate that easily exceed today's. America's wealth, national laboratories, universities, corporate giants and entrepreneurs, if properly harnessed to the task of decarbonisation, will undoubtedly pro-



duce novel approaches and technologies that would benefit other nations.

And it would be a licence to persuade, shame and, where appropriate, bully. Mr Biden has charged John Kerry, who when secretary of state was an important player in the Paris negotiations, with leading efforts on climate change abroad (see Lexington). If he cannot point to progress at home, Mr Kerry's job will be an unprofitable and thankless one.

Running down a dream

But providing Mr Kerry with compelling backup is a tall order. In December researchers at Princeton University published a sweeping report to show how American emissions might by 2050 be reduced to "net zero"—a state where the amount of greenhouse gas still being dumped into the atmosphere is no greater than the amount deliberately being taken out of it and sequestered in some form. Though the study outlined various paths to that goal, all of them shared the basic foundation of an electricity sector rapidly both decarbonised and enlarged.

Over the past decade America's electricity industry has become significantly less carbon-intensive despite meagre federal action. This has mainly been down to the replacement of coal by natural gas; coal,

which provided 45% of the electricity generated in 2010, provided just 19% in 2020. But truly clean energy has been on the rise too. Though no new nuclear-power plants have been built and brought online, annual installations of wind and solar have rocketed as states have imposed mandates which require a certain amount of renewable or emissions-free generating capacity—mandates which, with the capital costs of renewables tumbling and interest rates low, have not been irksome to meet. In 2010, according to BloombergNEF, America had 42.6GW of wind and solar capacity. Last year it had 213.2GW, about five times as much, with 33.6GW added in 2020 alone.

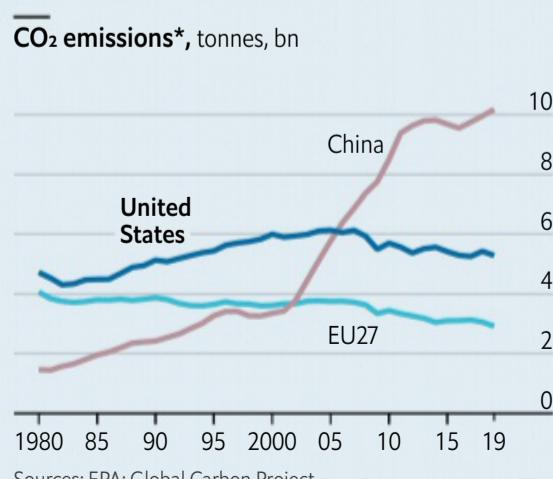
But this progress is mere prologue to what must come in the 2020s. "The pace we are talking about is much faster than what has been done historically," says Eric Larson, who led the Princeton study. In one scenario, wind and solar capacity would need to expand each year through 2025 by about 40GW before hitting 70-75 GW a year in 2026-30—more than double last year's record rate (see chart 2). If those targets are met, the Princeton researchers reckon, by 2030 wind and solar farms could be providing about half of America's electricity, up from 9% in 2019.

One of the reasons for dealing with electricity first is that it opens up possibilities in other sectors. A grid powered by abundant clean energy allows emissions from cars, light vans, trains and buildings to be slashed as they turn to electricity for more and more of their energy needs.

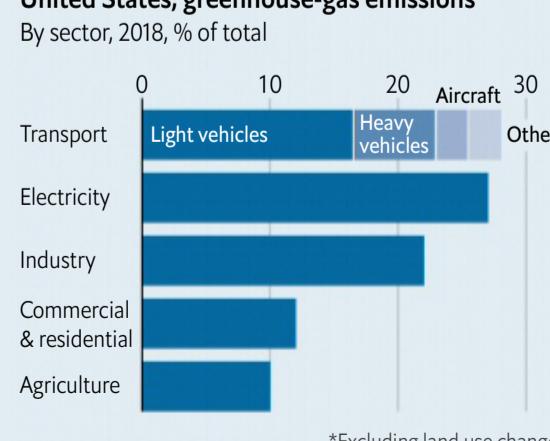
Turbines in America's endless skyways and panels across her diamond deserts are no use if the power cannot get to the people. Lots of clean power means lots of new transmission lines, too—in one scenario, Princeton estimates that high-voltage transmission capacity would need to jump by 60% over the course of the coming decade. It adds up to a big bill. Mr Larson and his colleagues estimate that setting America on a path to net zero will require at least \$2.5trn of additional capital investment over the present decade. And that spending requires careful planning, with enough spare power capacity to deal with extreme weather.

The blackouts which hit Texas in this week's catastrophic cold snap are a case in point (see United States). The problem was not primarily one of renewables failing in the freezing conditions, as some have suggested; many gas-fired plants failed, as did one nuclear reactor. But this does not mean that a grid dominated by renewables would necessarily have done better. Jesse Jenkins, one of the authors of the Princeton study, says the outages show both that America needs interconnections that can transmit large amounts of power over long distances and that "firm" generating capacity—be it in the form of thermal plants

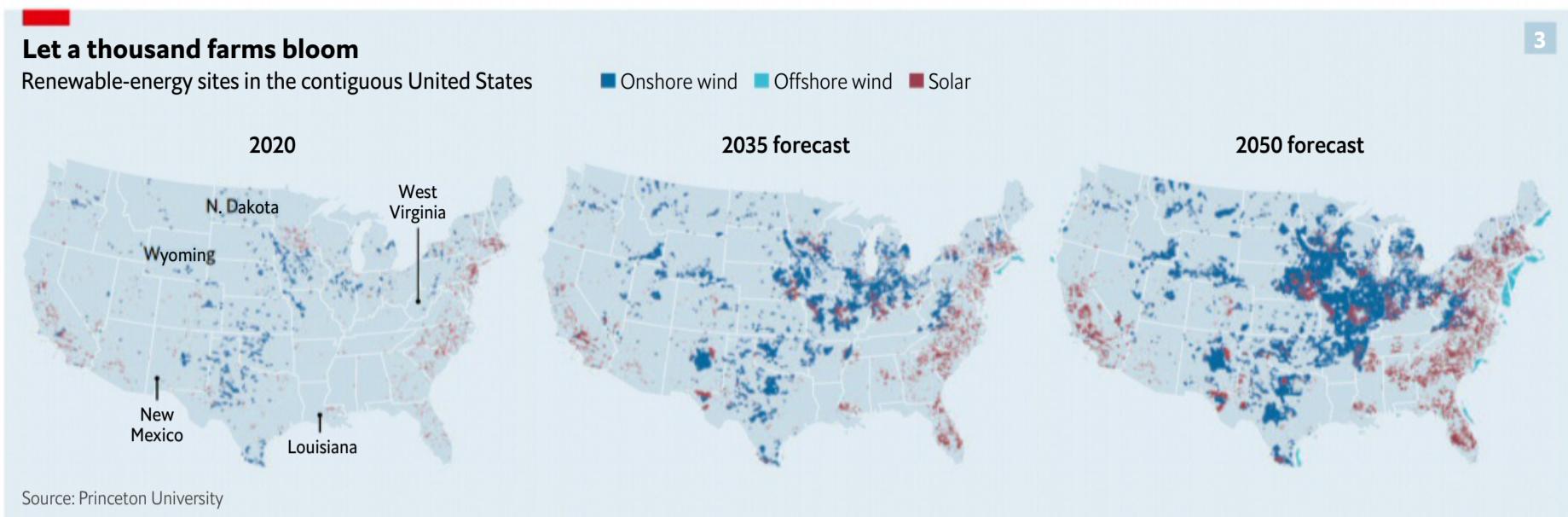
Where the gas comes from



United States, greenhouse-gas emissions



*Excluding land use change



▶ powered by biomass, natural-gas plants from which the carbon-dioxide emissions are sequestered, nuclear plants, hydrogen or even geothermal generation—needs to be really reliable.

By 2050 the expansion of transmission and renewables would be truly prodigious (see chart 3). At that point onshore wind and solar farms would span some 600,000 square kilometres, an expanse slightly smaller than two New Mexicos but slightly larger than Minnesota, Wisconsin and Illinois combined. And even that is not, in itself, enough. Research must ramp up, too, to explore the best mix of ways to provide the firm capacity such a grid will need.

E pluribus unum

And even if all electricity were carbon-free and all the country's cars, light-duty trucks, trains and buildings used nothing else, almost half of America's emissions would still need to be tackled. Dealing with aircraft, shipping and farms is much harder. Many firms have committed themselves to reducing or eliminating emissions; but it will be harder to do so in heavy industries such as cement or steel. In those areas change requires either entirely new technology or technologies not yet deployed at a remotely appropriate scale.

This is not the level of change states alone could bring about, even if all of them were trying their hardest. States cannot on their own drive the car industry and its customers away from internal-combustion engines, or deal with the requirement for emissions-free steel, cement, shipping and aircraft. They cannot foot the bill for the \$35bn a year on clean-energy research that Bill Gates, a philanthropist, calls for in a new book (see Books and arts). As revenues have plunged during the covid-19 pandemic, some states may struggle to supply even basic services; transforming whole swathes of industry is someone else's job.

Enter Mr Biden. His executive order setting the 2050 goal signalled his intentions to push hard on climate; his moratorium

on new leases and his revoking of the permit for the Keystone XL pipeline from Canada's oil sands showed he was willing to upset people doing so.

There is a lot he can do simply through forceful leadership and better management of various obscure agencies. The Federal Energy Regulatory Commission, which oversees wholesale power markets, can do a great deal to ease the endlessly fractious construction of transmission lines and support states' efforts to deploy clean electricity. New York's plans to develop a whopping 9GW of wind power off the southern shores of Long Island were held up by Mr Trump's Bureau of Ocean Energy Management. Mr Biden has hired Amanda Lefton, previously New York's assistant energy secretary, to run the bureau, so that will probably change.

Mr Biden can also try and use his powers under the Clean Air Act to accelerate the shift toward low- and zero-emission cars. GM, a giant carmaker, in January announced that it would offer only electric cars by 2035; the prospect for ever stricter regulations on carbon-emitting cars may lead its peers to follow suit. The Securities and Exchange Commission may push companies to disclose climate risks, thus making things easier for the increasing number of investors and asset managers who care about such things. The federal government's nearly \$600bn in annual procurement can be used to create a huge market for new clean technologies.

There are limits, however, to pursuing green policy through the executive branch. Mr Biden risks litigation and review before a conservative Supreme Court that is more sceptical of environmental rules. And even executive orders that avoid legal action remain vulnerable, as first Mr Obama and then Mr Trump have found. These are all strong reasons for Mr Biden to give his programme the buttress of legislation. But in truth, the fact that Congress controls spending is probably enough; a fair amount of the money needed is going to have to come from the public purse.

The most likely vehicle for action is an infrastructure bill which may come later this year. Such a bill might include charging stations for electric cars, support for transmission and investment infrastructure resilient to rising seas. It could also include money not just for basic energy innovation, but for large demonstration projects. Either as part of that bill or separately, Mr Biden would like to create a national clean-electricity standard that could provide zero-emissions power by 2035, mimicking states' preference for such targets over broader carbon-pricing approaches. Such a clean-electricity standard would force utilities to decarbonise more quickly.

The power to employ

Central to Mr Biden's pitch for such a package is the idea that a green transition will create employment. "Climate change at its heart is not a planetary problem," argues Gina McCarthy, his national climate adviser. "It's a people problem." Building new industries is always appealing to politicians who want voters to have good jobs; updating a great nation's ageing infrastructure could serve the same end. "If we can show that we are growing jobs and that those jobs are good union jobs," argues Ms McCarthy, "then we're going to be able to convince the middle of this country."

The size of any surge in American clean-energy manufacturing should not be overestimated. America is late to the game; industrial policy has already made China the world's dominant producer of solar panels and batteries, and that is unlikely to change. "The United States needs to be clear-eyed about where it will be very hard for us to gain a competitive advantage at this point," says Kelly Sims Gallagher a professor at Tufts University and a former adviser to Mr Obama.

However, she allows that still-nascent, complex technologies such as hydrogen fuel-cells or carbon capture might be possible areas for American differentiation. And the scale of the endeavour matters in itself. If America were to ramp up the de-

ployment of wind and solar as the Princeton team suggests, America's manufacturing jobs for wind would increase by five to tenfold to 2030 and for solar by about tenfold—even if the share of imported components remained the same. Workers would also set about installing wind farms, heat pumps and power lines, to name a few, as well as operating and maintaining them.

Jobs in mining and drilling would decline; those in construction would climb. Princeton estimates that energy's share of employment in 2050 would stay level or rise in most states, with Louisiana, North Dakota and Wyoming notable exceptions. In New Mexico, it would climb from 6% to 10%. In West Virginia, it would inch up from 5% to 6%, as jobs lost in coal were replaced by those in clean power.

Silly games

But that may not be enough to placate Mr Manchin. He is a staunch supporter of his home state's coal miners, who have a symbolic heft that outweighs their economic clout. "We need to innovate our way through this," he asserts, rather than close down industries. He has backed bills to support energy innovation but has so far declined to throw his weight behind a clean-energy standard, noting that renewables are being built quickly already so may not need such support. "Out west, people quit basically raising cows and started raising windmills," he quips.

With Mr Manchin crucial to any attempt to pass a bill purely on the basis of Democratic votes, this might seem to take sweeping legislation off the table. But Sheldon Whitehouse, a Democratic senator for Rhode Island and perhaps the chamber's most reliable climate advocate, says he is newly hopeful that eight or so Senate Republicans may emerge from their self-im-

posed exile from the cause. Two-thirds of Americans believe that Washington is doing too little to fight climate change. In January America's Chamber of Commerce—"probably our worst and most implacable adversary", Mr Whitehouse says—voiced support for "durable climate policy" from Congress that supports investment and includes "well designed market mechanisms". Larry Fink of BlackRock, the world's biggest asset manager, is urging businesses to align their strategies with a carbon-neutral economy by 2050. A growing number of companies are tired of climate rules that ping pong from one presidency to the next. "We prefer legislation over regulation," says Ben Fowke, the chief executive of Xcel Energy, a big utility. "It's not as subject to change."

Mr Whitehouse contends that the shift in corporate attitudes may give Republicans cover to support some kinds of climate policy, at least. The fossil-fuel lobby has not gone away. Mike Sommers, who leads API, says he and his colleagues speak with lawmakers daily to explain "what our energy needs are and what they are going to be." That includes a robust future for both American oil and gas, he argues. But Mr Whitehouse says that "there is a very significant chance that the blockade that the fossil-fuel industry perpetrated over the last decade can actually be broken by the rest of corporate America." Indeed in December Congress passed a bill that included an extension of clean-energy tax credits and \$35bn in support for energy research over the next decade—hardly an investment on Mr Gates's preferred scale, but at least a faint glimmer of bipartisanship.

In most 50-50 legislatures the prospect of even a few members of the other side coming over to your point of view would be enough. The Senate is different. Its filibus-

ter rules require 60 votes in order to bring a motion to the floor, meaning that just 41 of the 50 Republicans can block almost any piece of legislation. In principle, the 50 Democratic senators could, with the help of the vice-president's casting vote, end this filibuster rule. But Mr Manchin says it will be eliminated "over my dead body."

The eye of the needle

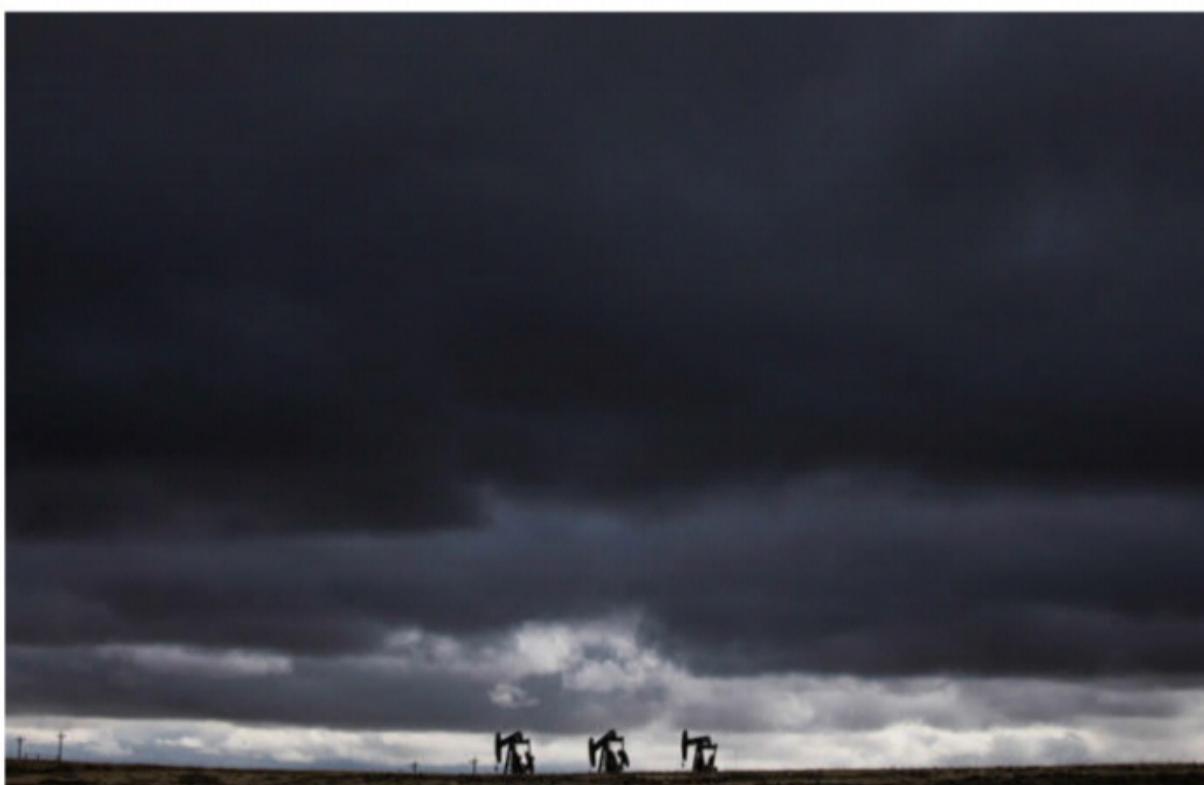
That leaves Mr Biden with limited options. Bernie Sanders and Alexandria Ocasio-Cortez, Democratic lawmakers who are favourites among the party's left, want to declare climate change a national emergency. That would allow Mr Biden to redirect military funds to boost clean energy; again, though, it would have to pass the Senate.

More likely, Democrats will use their 50 votes in the Senate in a process known as budget reconciliation that allows spending and tax measures to pass with a simple majority. Such a bill could approve investments and tax credits to deal with climate change. Some argue that a clean-energy standard might, if properly designed, squeak through too. Along with a White House that tightens emissions-standards for cars and streamlines permitting for new projects, that would count as progress. America would connect more clean power to better grids. Additional money could be funnelled towards research. More electric cars would take to the roads.

The question is whether Democrats are able to advance a bill that complies with Senate rules, satisfies both Mr Manchin and Mr Sanders, and is remotely commensurate with the problem at hand. "In the short run we can make a hell of a lot of progress through 2030," argues Fred Krupp of the Environmental Defence Fund, a non-profit. But emissions neutrality, he says, would eventually require Congress to pass an economy-wide carbon price, too.

Were it not for its politics, America would be as well positioned to decarbonise as any country in the world, argues Stephen Pacala, who led a climate study recently published by America's National Academies of Sciences, Engineering and Medicine. The country benefits from wide plains and long coasts for wind power, ample sunshine for solar farms across the South, rich forests to act as carbon sinks, expanses of land for producing new energy crops and well-understood reservoirs where emissions might be stored. It has magnificent human resources, too, and a history of rising to challenges, even if it sometimes needs a wake-up call to do so.

For now, Ms Rubio is trying to advance her bill to aid New Mexico's transition from oil and gas. A port in south Brooklyn awaits transformation into a hub for wind companies. Congress is consumed by debates over covid-19 relief. And still the world's emissions are set to rise. ■



Nodding off



Cutting carbon

Big on clean energy

Britain has decarbonised its grid faster than any other rich country. That was the easy bit

OVER THE summer of 2020, as coronavirus cases fell and life in Britain felt briefly normal, something very abnormal was happening to the country's electricity supply. No coal was burned to generate any portion of it for a period of more than two months, something that had not happened since 1882. Britain's four remaining coal-burning power plants are zombies, all but dead. Within a couple of years they will be closed and Britain will probably never burn coal for electricity again.

The elimination of power stations that burn coal has helped Britain cut its carbon emissions faster than any other rich country since 1990 (see charts on next page). They are down by 44%, according to data collected by the Department for Business, Energy and Industrial Strategy (BEIS) during a period when the economy grew by two-thirds. Germany's emissions, in contrast, are down by 29%; coal is still burned to generate some 24% of its electricity. Britain has made cuts to its emissions 1.8 times larger than the EU average since 1990. In America, emissions over the same period are up slightly.

Britain's success has given it prominence in the global debate on climate change. This year it will co-host COP26 in Glasgow, the world's largest and most important climate gathering. Boris Johnson, the prime minister, is attracted to the futuristic whizbangery of clean energy and is deploying "climate diplomacy" to help define post-Brexit Britain's place in the world. In November he presented a "ten-point plan for a green industrial revolution" that included spending £12bn (\$17bn) on clean-energy gubbins. But examining Britain's decarbonisation shows that much of its success was circumstantial, and that

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the country's hardest problems are ahead of it. After a decade of meeting its own legally binding decarbonisation targets, Britain is now veering off course.

Unusually for a right-wing politician, Margaret Thatcher was an early believer in the dangers of global warming. But the impetus she gave to decarbonisation was a by-product of policies with other aims. In crushing the coalminers' unions in the 1980s, she neutered a powerful industry dedicated to the emission of carbon. Privatising Britain's energy markets and opening up the North Sea for oil and gas exploitation weakened the coal industry further. Emissions declined gently after Thatcher left office, long before climate change was on the national agenda, simply because a growing proportion of Britain's electricity and heat was being generated by burning gas, which emits about half as much carbon dioxide as coal when burned.

But this century, decarbonisation has been the deliberate consequence of political choices. In passing the Climate Change Act in 2008, Britain became the first country in the world to commit to legally binding carbon-emission reduction. Labour was in power at the time, but there was a remarkable political consensus in its favour. Only three MPs voted against it. According to Phil MacDonald of Ember, a think-tank, David Cameron's Conservative Party was casting around for policies that might detoxify its image, and settled on climate change. "Cameron bought into [the act] very early," says Mr MacDonald.

The weak, dirty coal industry was an obvious target for a country newly united against the emission of carbon. In 2013 a Conservative-Lib Dem coalition government introduced a power-sector carbon tax which hit coal twice as hard as gas, making it uncompetitive. Coal plants which had been running continuously started being used only when electricity was in high demand. In 2015 coal produced about a quarter of Britain's electricity. Now it accounts for less than 2%.

As the cost of wind farms plummeted, gas started feeling the squeeze too. In its latest carbon budget, the Climate Change Committee (ccc), the independent body created by the Climate Change Act to steer Britain towards net zero, said that Britain should commit itself to phasing out gas power plants by 2035. This has changed the economics of new gas power stations. Drax, a power company which had been planning to build Europe's largest gas power station in Yorkshire, is now reconsidering. "The risk for investors in those utilities is that they are only going to get a decade out of it," says Mr MacDonald.

The grid is not yet even halfway to complete decarbonisation, but seems bound to get there as the price of electricity from renewable sources continues to fall. "The economics have just shifted so that wind is the default," says Mr MacDonald. Solar power has grown too, but a cloudy, crowded island is ill-suited to the technology. In 2020 solar provided just 4% of electricity. Wind provided almost a quarter. Old nuclear power stations must be replaced with new ones, Hinkley Point c and Sizewell c, or Britain's plans for a decarbonised grid will be in disarray.

Consumers have barely felt the costs of the transformation to date. Paying for low-carbon electricity accounted for about 9% of bills in 2016, but increases in the efficiency of light bulbs and appliances offset the rise in power costs. The ccc estimates that required efficiency increases will more than cover the increased cost of electricity in future.

The tricky bit

Zero-carbon electricity is an end in itself, but also a necessary first step to decarbonising other parts of the economy, such as heating and transport. Heat pumps must replace gas boilers; electric motors must replace internal combustion engines. But Britain's success in decarbonising its grid has not yet translated into progress in these areas. Where emissions related to electricity generation plunged by 66% between 1990 and 2019, the equivalent reduction for transport, which is now the largest source of emissions in Britain, was just 5%. Buildings generate the second-largest block of emissions, largely thanks to the burning of gas to heat water in radiators.

It is harder to decarbonise heat and transport than electricity. The only change consumers notice when dirty power sources are replaced with renewable ones is a slow price rise. But to clean up heat and transport, either policy or market mechanisms must reach right into people's homes and driveways. Incentivising them to rip out their combi boilers and switch to electric cars will be expensive at best, impossible at worst.

Heat is a particularly tricky issue in Britain, for its houses are higgledy-piggledy and badly insulated, and its people fond of

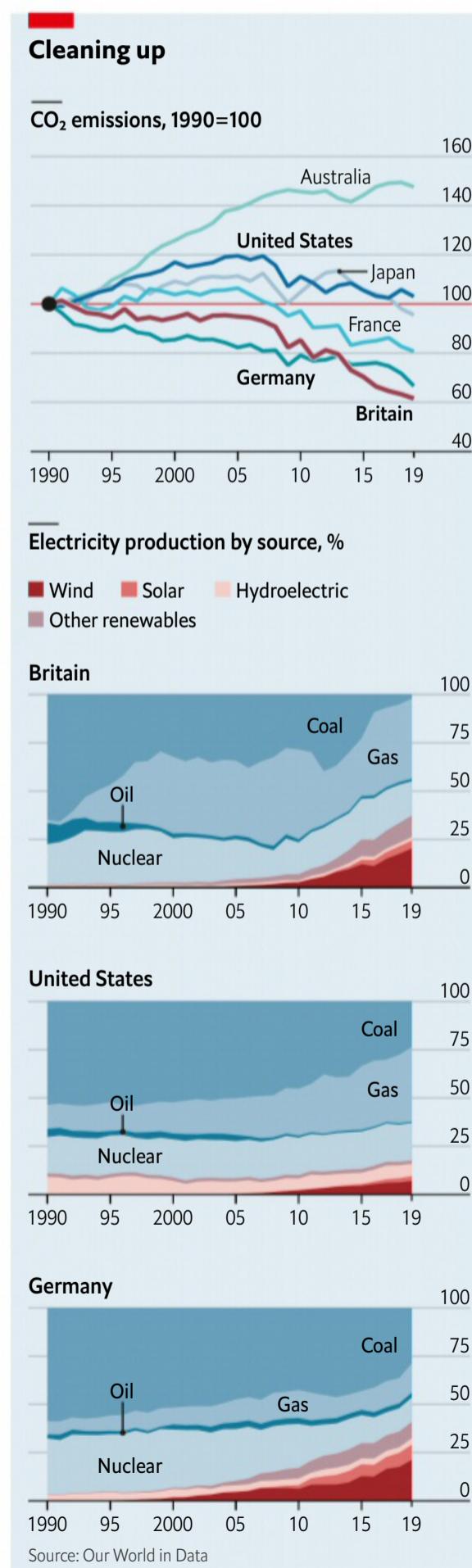
them. Keeping them warm is easier with gas, which has a high energy density, than with electricity, which tends to generate lower temperatures. Heat pumps and bigger radiators or underfloor heating are needed. That will cost tens of thousands of pounds per home. Similarly, installing charging points for electric cars in old, winding city streets will be tricky. Mr Johnson's commitment, as part of his ten-point plan, to end sales of petrol and diesel cars in Britain by 2030 will help a lot.

And although gas helped decarbonise Britain's grid, it is a hindrance when it comes to heating and transport. That is because Britain has one of the world's most robust and extensive infrastructures for moving gas around; 85% of its 29m homes are heated with gas boilers. In Germany 47% are. Decades of investment in the gas grid mean that Britain's electricity grid is not as robust as it needs to be in order to carry the extra power required to replace gas in the heating of Britain's homes. If it is to charge all the cars and run all the heat pumps, the grid will need to be upgraded at a cost of tens of billions of pounds.

The political consensus is fraying, too. In 2015 the Tory government scrapped a plan to make all new homes carbon-neutral, meaning that most houses built since then have gas boilers and low-quality insulation, so will need retrofitting. Fuel duty, which would incentivise car electrification, has been frozen since 2010. Rishi Sunak, the chancellor, plans to raise it in his forthcoming budget, but faces opposition from his party. And in early February, 24 hours after the right-wing *Daily Mail* called a proposed carbon tax that would have raised the price of consumer goods a "tax raid on your lifestyle!", the government dropped it like a hot potato.

The challenges of heat and transport are already showing up on Britain's carbon budget. The country is no longer on track to meet its own legally mandated targets for reducing emissions. In 2017 BEIS projected that Britain was set to miss its 2030 target by 8%. A year later that gap rose to 10%. The problems posed by transport and heating are largely responsible.

Mr Johnson's ten-point plan therefore reads more as an ode to successes past than as a sensible recipe for the future. But Britain's moment on the world stage of climate policy approaches, so its recent performance and future plans will be in the spotlight. The prime minister cannot rest on his predecessors' laurels. ■



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Solar power

Here comes the sun

The farms are getting bigger, and the objections louder

LAST AUTUMN, a woman in Freckenham, a pretty Suffolk village, accepted a bid for her house from a London couple who had looked around it. After researching Sunnica Energy Farm, a proposed solar farm of 2,700 acres—the size of over a thousand football pitches—the couple came down for another visit and stopped off at the pub, where the farm was the main topic of conversation. They backed out. The following week, as she was preparing for another viewing, the estate agent rang to say the prospective purchasers had arrived in Freckenham, but after seeing a high street plastered with “Say No to Sunnica” posters, had kept on driving.

A solar boom started in 2010 and came to an abrupt end in 2015 when subsidies were cut. Now solar is growing again. In 2020 there was 13.4GW in the development pipeline, the capacity installed in the past decade. The falling cost of solar technology—set to drop by another 27% by 2030, according to Aurora Energy Research—is one reason. Most councils have declared a climate emergency, and want to promote renewable energy. Some big energy consumers, such as Budweiser and Anglian Water, are building solar farms to prove their green credentials.

Economies of scale mean that massive farms make sense. Cleve Hill Solar Park, a 350MW site spread across 900 acres in Kent, was approved in May 2020. It is the first to be classified as a “nationally significant infrastructure project”. Three more applications for super-sized projects are pending—Sunnica’s, one for 1,000 acres in Essex and one for 558 acres in Lincolnshire.

Matt Hazell, co-founder of PS Renewables, an investor in Sunnica, reckons there could be another ten in England within the next decade.

England’s energetic NIMBYS have been out in force. Polling by No Sunnica, a protest group, found that 98% of Freckenham’s residents are against the plan. They do not deny that climate change is a problem, but dislike projects that will take up so much land. Their concerns range from biodiversity loss and worries about where they will walk their dogs to fears that batteries might go up in flames.

Developers say that solar farms, which produce no pollution and need little maintenance, are the perfect neighbours. But for Neil Beedie, who is protesting against a proposed 200-acre solar farm at Derry Hill in Wiltshire, that is part of the problem. He would prefer a nuclear power station, which would at least bring jobs to the area. Solar farms, once installed, create little work for locals. Damage is often monitored by drones, and engineers dispatched from miles away by distant office workers.

The government sees boosting solar power as one of the ways of meeting its commitment to carbon neutrality. Developers can bid for “contracts for difference”, that top up the earnings of renewable projects when power prices fall below a certain level. But some Tories are unhappy with the consequences of that commitment. Matt Hancock and Lucy Frazer, two ministers in whose constituencies Sunnica Energy Farms wants to build, have come out against the development. Meanwhile the government is getting support from unusual quarters. One of the few local supporters of the Derry Hill proposal is an Extinction Rebellion activist. ■

The politics of culture

Bonfire of the insanities

The government doubles down on culture wars

LONG BEFORE he or any of his readers had ever heard the term, Boris Johnson cast himself as the antithesis of all that is woke. His columns in the *Daily Telegraph*, the house journal of the Tory Party, took aim at assaults on common sense, real or imagined. “If political correctness is not resisted, it will go on and on, becoming more and more irrational,” he wrote. Even then, he had an eye on the culture war raging across the Atlantic. He praised the counter-revolutionaries opposing a ban on British fox-hunting, noting that their protest march “was organised by an American who

understands the weapons that must be used in the Kulturkampf”.

Mr Johnson has hardly changed his tune since becoming prime minister. He made clear his displeasure at the “absurd” form-filling initially required of volunteers helping with the rollout of the covid-19 vaccine and insisted last year that “Rule, Britannia!” be played at the Proms, an annual festival of music and pomp. This week, two more such sallies were enthusiastically trailed by his former employer as “a major government escalation of the ‘war on woke’”.

The first is an attempt by Gavin Williamson, the education secretary, to protect guest speakers at universities whose views cause offence. Mr Williamson plans to expand the scope of a legal duty to promote freedom of speech on campus to cover not just university authorities but also student unions, in the hope of preventing controversial talks being cancelled.

Such instances are rare—a study at King’s College London found freedom of expression had been infringed at only six of about 15,000 events over five years—but attract considerable publicity. And there is more evidence that students and academics censor their own views for fear of adverse reaction from peers. Polling for Policy Exchange, a right-leaning think-tank, found only four in ten Leave-supporting students would be comfortable expressing their views about Brexit in class.

The second concerns the past. Oliver Dowden, the culture secretary, has reportedly called a meeting to urge museum and charity bigwigs to “defend” Britain’s culture and history. The National Trust, a charity that tends historic houses and gardens, caused a fuss by highlighting the colonial ties of its properties and their original owners; other bodies are mulling the removal of statues of figures such as slave-traders who are now considered villains of the empire. Mr Dowden wants the statues to stay, arguing that confident countries do not “airbrush the history upon which they are founded”.

Such worries may seem rather small during a pandemic that has closed the museums Mr Dowden is fretting about and cancelled even the least controversial university events. Nor do most voters care about cultural issues as much as vocal lobbies on either side. In a poll for *The Economist* last year, more than twice as many Britons thought the empire a source of pride than one of shame. But just under half of those polled reckoned it was neither or had no opinion.

That will not prevent more skirmishes in the culture wars. Senior Tories argue that such fights help them unite two distinct types of Conservative voter: *Telegraph*-reading traditionalists in southern England and working-class voters in “red

► wall" seats in northern England and Wales who switched from Labour to the Tories in 2019. That is probably true. Paula Surridge of Bristol University has shown that Labour did particularly poorly among left-leaning voters with authoritarian views, a good proxy for cultural issues. Support for Labour among such voters dropped by 17% between 2017 and 2019, the biggest decline among any group of voters. Not all cultural issues resonate equally. Voters who did not

go to university themselves are unlikely to be concerned about campus politics, says one of the new breed of Tory MP, who represents an ex-mining constituency. But they are receptive to appeals to defend British history. "There's a huge sense of pride," he says.

There are two problems with the strategy. Sir Keir Starmer, who replaced Jeremy Corbyn as Labour leader last spring, does not share his predecessor's lack of enthusi-

asm for the national anthem and the queen. A greater danger for the Tories is that culture is just about the only topic on which their old and new voters agree. As the pandemic recedes, the government will have to make choices about the future role of the state and how to steady the nation's finances, which cannot please both camps. How much easier, then, to put off such thorny decisions and play a little more Elgar. ■

Growing cannabis

Pot luck

The smallest British islands hope to turn over a new leaf

THE ICE-CREAM parlours and music halls of the Isle of Man were once packed each summer with workers who travelled ten hours on a steamer to a Manx beach to escape the cotton mills of Lancashire for a week. "You see the best of the working class of the north away from their factories and workshops," *The Spectator* informed its readers in 1880. "Their loud provincial tones are heard in boisterous merriment."

Since the Costa del Sol destroyed the island's tourist trade, there is much less merriment, provincial or otherwise. But Man has reinvented itself, first as an offshore financial centre and most recently also as a hub for online gaming firms. Finance accounts for about a third of GDP; e-gaming 17%. Tourism makes up less than 1%.

Now Manxmen want a slice of another fast-growing industry: cannabis cultivation. And they need not beg permission from Whitehall. The island is a crown dependency, meaning that though the queen is head of state, it is self-governing. Last month its parliament approved a plan to sell licences to grow and export cannabis for medical use.

It is not the only outcrop to spot an opportunity. The channel island of Jersey, another crown dependency, also smells something in the air. It issued its first cannabis-production licence in December, to a firm that plans to grow the plant in a 75,000-sq-ft greenhouse. Its minister for economic development even flew to Canada to address a cannabis industry conference.

Why the sudden interest? Legal cultivation of cannabis was unheard of outside America until recently; it has leapt about 200-fold globally since 2000, according to the International Narcotics Control Board, an independent monitoring agency. And rules on its medical use are being relaxed across Europe. Britain followed suit in 2018, permitting limited prescription by registered specialists. Brightfield Group, a research firm, reckons the British medical-cannabis market will grow from a relatively paltry £9.6m in 2020 to £293m in 2025.

Britain is already a big player in the global market. It exports more medical cannabis than anywhere else, thanks to GW Pharmaceuticals, a company that uses the plant to make drugs for patients with multiple sclerosis and epilepsy. Yet new players grumble that the Home Office, which grants cultivation licences, is risk-averse. GW and its suppliers are the only firms permitted to grow cannabis potent enough for medical use. The department's "starting point is effectively to treat anyone making an application as a criminal", claims a lawyer who advises cannabis firms.

Both islands hope to outmanoeuvre the mainland. Laurence Skelly, the Isle of Man's enterprise minister, promises the sort of business-friendly regulation that helped lure gaming firms to the island. And the 0% standard rate of corporation tax in both places—compared with 19% on the mainland—will help ensure that the islands don't blow their chance.



Green gold

Covid-19

Here we go

Britain's jabs begin to deliver results

ON FEBRUARY 14TH, a day ahead of schedule, the government met its target: 15m people had been vaccinated by the middle of the month. Shortly after Boris Johnson hinted the vaccines were beginning to have an impact. "We don't today have all the hard facts we need," the prime minister cautioned. Nevertheless, he said, there are "interesting straws in the wind."

Deaths in England peaked on January 22nd, with a seven-day average of 1,163. They have since fallen by 57% across the population. But they have fallen fastest among the old, who were inoculated first: down by 59% among the over 80s, compared with 51% among the under 70s (see chart). A similar trend is visible in hospital admissions and across regions.

It is nearly two and a half months since the country started its vaccination programme. That may seem a long time for an effect to emerge, but it was not until January that things really got going. Since it takes three weeks or so for someone infected with covid-19 to die, and since vaccines do a better job of reducing deaths than cases, it is about now that officials had hoped to spot an impact.

Other data are similarly promising. Some 41% of over-80s in England assessed by the Office for National Statistics in January possessed antibodies, compared with 16% of those aged 50-69. Researchers at the University of Oxford have published results showing a good response to a single dose of the AstraZeneca vaccine in trials; data from Israel suggests the same is true of the Pfizer jab. Early evidence also suggests that both will reduce transmission, although it is not yet clear by how much—something which matters a great deal to the course of the pandemic.

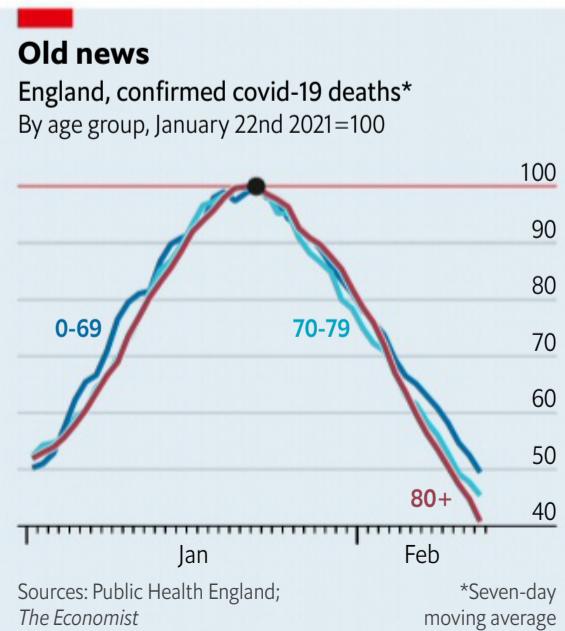
Higher-quality data will compare those who have received vaccines to those who have not, removing the need for the use of

proxies like age. The government is expected to publish them soon. Anticipating good results, Tory lockdown sceptics—a dwindling band—have urged Mr Johnson to accelerate the lifting of restrictions.

Instead, the government has delayed doing so. When the current lockdown was introduced in January, Mr Johnson suggested restrictions would be eased as deaths fell, with the aim of opening schools after the half-term break in February. Worried about the emergence of new variants and about the continued potential for a surge in illness that could overwhelm the health service, the prime minister has switched his focus to case numbers. Unlike deaths, cases are not concentrated among the elderly, so will take longer to fall. The government is due to lay out its plans on February 22nd. Schools are not expected to return until March 8th.

Research by Savanta ComRes suggests that, if public opinion determined policy, saying no to a jab would be illegal and vaccine passports would be checked on entry to a pub. The government does not plan to take up either option. It will, though, make much more use of lateral-flow tests. According to the *Times*, it is preparing to send up to 400,000 a day for people to administer themselves in areas which see an uptick in cases. It will provide a regular supply to schools, for use by pupils and teachers, and may employ them later in the year to allow entertainment venues to reopen.

These tests, which provide results in less than half an hour, are controversial. Opponents argue that they miss lots of infected people, and so should not be used to lift restrictions. But that risk can be cut by frequent testing. In situations where people are going about their normal business—in schools, for instance, once they are open again—they can be useful. Their great advantage is that they offer a rare way to catch asymptomatic cases. That is why they have been embraced by a government which is desperate to make this lockdown the last. ■



Financial technology

Silicon wallet

A new fintech wave is coming. Can Britain ride it, as it did the last one?

LESS THAN a decade ago Michael Kent and his fellow entrepreneurs were regulars in Downing Street. David Cameron, then prime minister, and George Osborne, his chancellor, were big cheerleaders of the tech wizards that power financial services, to whom they offered tax incentives, a friendly legislative agenda and a sympathetic ear. That, however, “fell away after the Brexit vote”, says Mr Kent, who chairs Azimo, a cross-border payments firm he founded in 2012. Like the financial industry at large, fintech lost out to fish in negotiations with the EU, and got no mention in Britain’s free-trade deal with the bloc.

Given Britain’s record in fintech, that is odd. In just a decade London has grown into a fintech hub that is second only to San Francisco. The sector, worth £110bn (\$152bn) globally, is expected to triple in size by 2030. Britain has a 10% share; last year it received more fintech investment than the next three European countries combined. Yet its early lead risks being eroded, says Christian Faes of Fintech Founders, a network of entrepreneurs. From Australia and Singapore to France and the UAE, other countries are eyeing its business. They have been visiting the offices of LendInvest, a digital mortgage lender he co-founded, to persuade it to relocate.

The government is worried. A new wave of fintech is coming, and Brexit has undermined Britain’s chances of riding this one as it did the last. That’s why last July, the Treasury launched a “Fintech Strategic Review”, led by Ron Kalifa, the former boss of Worldpay, a payment firm. Its report is due to be released next week.

Fintech first flourished after the 2008 financial crisis, when shattered trust in traditional banks and the credit crunch spawned digital banks and peer-to-peer lenders. London’s strengths as a financial centre made it a magnet for entrepreneurs. Startups could get capital to see them through from inception to IPO and import talent easily. Regulators encouraged innovation by communicating clearly, organising data-sharing and carving out spaces in which startups could securely test their products. The time-zone, language and legal system all helped.

A second generation of startups, turbocharged by life and business going online during the pandemic, is now looking for a home. While the first were consumer-facing household names, like TransferWise or



Monzo, these less glamorous ventures provide infrastructure enabling non-financial firms to offer web-based financial services—a car dealership selling insurance, for instance, or a supermarket selling loans.

The potential is huge, and Britain still has many advantages, but it also has handicaps. Whereas internet speeds in British offices are decent, elsewhere they remain lousy, especially compared to other startup launchpads like the Nordics. That matters when people are working from home. Brexit has created new problems. It has exacerbated London’s shortage of tech talent: according to Radboud Vlaar of Finch Capital, a venture fund, foreign students in Britain, spooked by visa uncertainty and anti-immigration rhetoric, now eye continental cities after graduation. It has cut Britain off from the European Investment Fund, which seeded British-based venture capital funds. Now there is speculation that capital-gains tax will be increased in the budget next month. “It feels like death by a thousand cuts,” says Mr Faes.

The review will seek to address some of these concerns. It will also recommend fixing old problems, such as the lack of local funding for later-stage startups, which often turn to American or Asian investors when they need money. It is likely to recommend loosening rules preventing domestic pension schemes and insurers from investing in growing companies. And it will press for better co-ordination between Britain’s patchwork of agencies so financial regulations are more consistent and can be speedily changed when they need to be.

In the wake of Brexit, many industries have a list of demands. This one’s virtue is that it should not cost much, either financially or politically. The issues involved are mostly too wonky for voters to care much about; or, when it comes to making visas easy for highly skilled workers, they are likely to approve. The biggest danger, for the sector, is that the government fails to listen—as it has so far to most of the demands of Britain’s most important industries over Brexit. ■

Bagehot | Starmer stuck

The Labour leader is Perfect Peter to Boris Johnson's Horrid Henry



WHEN HE WON the leadership of a shattered Labour Party in April 2020, Sir Keir Starmer got off to a blistering start, wresting control of his party from the far left, rebuilding bridges with a Jewish community that had been alienated by anti-Semitism and impressing middle England with his smart suits and nice manners. Ten months later he is stuck. He swats at the government without ever landing a blow. He has appointed a shadow cabinet that has done the seemingly impossible and underperformed the worst cabinet since the second world war. After months of level-pegging in the opinion polls, the Conservatives have established a solid lead.

There are lots of excuses for this. Sir Keir got off to such a strong start that a loss of momentum was inevitable. The pandemic makes life easier for governments than oppositions because people rally behind their leaders. Sir Keir's sensible attempt to deal with this problem by focusing on competence was fatally undermined by the government's world-beating vaccine programme. But Labour is gripped by the fear that Sir Keir's current doldrums also point to troubling weaknesses in his political abilities.

The most obvious of these is his formulaic approach to his job: he identifies obvious problems and presents solutions to them with a mechanical precision that lacks style or panache. Not patriotic enough? Display a flag. Too London-centric? Go on about "the North". Too left-wing? Expel the chief lefty, the former party leader Jeremy Corbyn. Too anti-business? Unveil "an unashamedly pro-business agenda". The danger is that this paint-by-numbers politics alienates core supporters (who were particularly incensed by the flag business) without convincing the target audience that he means what he says. It's all uncomfortably reminiscent of Michael Dukakis's attempt to de-wimpify himself by sitting in a tank.

The second is excessive caution. Labour's talent pool is necessarily limited following the departure of rising stars such as Tristram Hunt and Andy Burnham during Mr Corbyn's nuclear winter and the reduction of MPs as a result of losses in the 2019 election. But the leader's defensiveness is preventing him from making the best of what material he has. His insistence on leaving established talents such as Yvette Cooper and Hilary Benn on the back benches while keeping the few stars that he has such as Angela Rayner and

Lisa Nandy in the cupboard suggests either an obsession with control or, worse, fear of being overshadowed.

These two weaknesses add up to a bigger problem: a failure to produce a vision of the future. The most successful Labour governments have all been powered by a distinct idea: think of 1945 (New Jerusalem), 1964 (White Heat of Technology) and 1997 (Cool Britannia). Sir Keir tried to provide a hint of this on February 18th in a speech full of references to "a new chapter for Britain", a "partnership between government and business" and a willingness to embrace "the change that's coming in science, technology and work". But who these days doesn't believe in new chapters, partnerships with business and embracing change?

The current doubts on the left about Sir Keir's leadership may blow away as quickly as they have blown in. A victory, let alone two, against Tory mayoral incumbents in Birmingham or Teesside in the local elections in May would panic the Tories. The government's successes—getting Brexit done and rolling out the vaccine—conceal deeper failures: the economic damage Brexit is doing and one of the highest death rates in the world from covid-19.

Yet what if Sir Keir is stuck because he's got nowhere to go? What happens if, for all his positive qualities of decency and determination, he just doesn't have what it takes? Natural politicians are storytellers and preachers: they not only hold their audiences in the palm of their hands but also persuade them to see the world through their eyes. The three great lawyer-politicians of recent years—Tony Blair in Britain and Bill Clinton and Barack Obama in the United States—changed the political world precisely because of their ability to turn the political stage into a pulpit. Messrs Clinton and Blair preached about civilising capitalism (the Third Way), Mr Obama about blue and red America melting happily together. Sir Keir, by contrast, is a lawyer first and foremost—brilliant at tearing down an opponent but mediocre when it comes to creating a compelling narrative.

Boris's scrapes

The contrast with the man in Number 10 is particularly worrying for the Labour Party. Mr Johnson is Horrid Henry to Sir Keir's Perfect Peter. He's forever getting himself into terrible scrapes—likening Muslim women to post boxes, for example, or finding himself stuck on a zipwire because he had lied about his weight. His career sometimes looks like a series of disasters: getting sacked from his first job in journalism and from one of his first political jobs for lying about an affair, messing up his first few months as mayor and making a hash of his time as foreign secretary. But he's also a natural politician who thrives on the whirligig of events. He has never missed an opportunity, from Eton onwards, to get stuck into the fray, the dirtier the better. He knows how to tell a compelling story: indeed, his career was built on an embroidered tale of the pompous incompetence of the EU, which he dreamed up as a journalist in Brussels. Perfect Peter, by contrast, enjoyed his greatest success doing the strictly apolitical job of director of public prosecutions and spent four years criticising the government's Brexit policy without changing the debate, or even coming up with a single phrase to match "take back control" or "get Brexit done".

Mr Johnson has learned from his mistakes: despite messing up when he became mayor he got his act together and won a second term with an enhanced majority. The Conservative Party's biggest worry is that he has many more mistakes in him. The Labour Party's biggest worry is that Sir Keir will go on being competent, and not much more than that. ■

**Italy and Europe**

Whatever it takes

BERLIN AND ROME

Mario Draghi begins the toughest job in European politics

MARKETS HAVE a way of bowing before Mario Draghi, who on February 13th took charge of Italy's 68th government in 75 years. Stocks soared the moment it was reported he had been asked to become prime minister. Three days after he took office, investors flocked to a bond auction, slashing Italy's borrowing costs. It was reminiscent of the hot days in July 2012 when Mr Draghi, then president of the European Central Bank, vowed to do "whatever it takes" to preserve the embattled euro. The bond-buying scheme the ECB assembled to render Mr Draghi's promise credible was never used: his words were enough to calm the financial furies.

But tackling Italy's problems demands more than rhetoric. Ravaged by the pandemic, on current projections Italy will not regain its pre-crisis GDP until 2023. And its covid-19 woes are layered atop deeper pathologies of slow growth, low productivity and high debt that have largely defeated the efforts of successive governments. "We all know the reform priorities," says Marco Valli, an economist at UniCredit, an Italian

bank. "The question is, will Draghi be able to fast-track the badly needed ones?"

The cards may seem stacked against him. Italy has burned through six prime ministers in the past decade; not since 2008 have voters themselves chosen one. The obvious cautionary tale is that of another non-politician in whom Europeans invested high hopes: Mario Monti, a former EU competition commissioner elevated into the job in 2011 after soaring bond yields toppled Silvio Berlusconi. He lasted only 18 months in office, and his reforms to pensions were later watered down.

Yet there is a bullish case for Mr Draghi. The legacy of his bond-buying activism at the ECB, and that of Christine Lagarde, his

successor, should keep markets calm as he pursues tricky reforms. For the moment, voters seem less restive; Mr Draghi takes office with sky-high approval ratings. And whereas Mr Monti faced tough calls to slash spending, Mr Draghi's government will be charged with allocating Italy's share of the €750bn (\$900bn) covid-19 recovery plan agreed on by the EU last summer. This could amount to more than €200bn in grants and loans over six years.

This is essential to understanding what amounted to a government of national salvation unveiled by Mr Draghi on February 12th. Its members range from the radical left to the hard-right Northern League, a party whose populist leader, Matteo Salvini, blithely ditched its Euroscepticism in exchange for seats at Mr Draghi's table. That bears witness to the drawing power of "Super Mario", the man who saved the euro, but even more to the largesse coming Italy's way. How Mr Draghi chooses to dispense it will be crucial.

He offered his first hints during an address to Italy's Senate on February 17th. The new prime minister promised to tweak the recovery plan drafted by the government of Giuseppe Conte, his predecessor, especially the part dedicated to environmental objectives—to which 37% of the recovery funds must be devoted. Final plans must be submitted to the European Commission by the end of April. Mr Draghi said his government would pay close attention to whether Italy's proposed investment pro-

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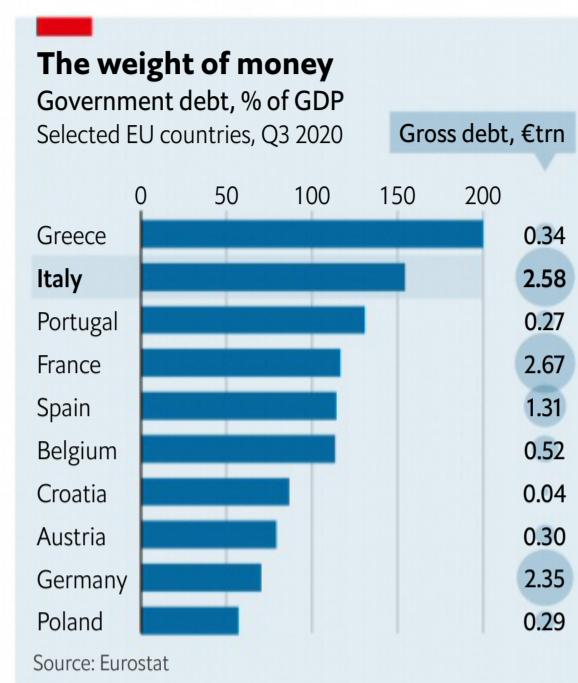
►jects could be completed by 2026, when the last of the funds will be disbursed, but added that they should fit into a strategy aiming at 2050, when the EU's net carbon emissions are meant to reach zero.

Although 15 of the 24 places at Mr Draghi's cabinet table will go to politicians from the various parties in his coalition, the ministries that will execute Italy's recovery plan will mainly be led by technocrats. Three stand out. Roberto Cingolani, a physicist with a background in robotics and nanotech, will run a super-ministry devoted to ecological transition. Vittorio Colao, a former Vodafone boss, will oversee digital and technological matters. Daniele Franco, the new finance minister, comes from Italy's central bank. All three have managerial as well as technical expertise. Such appointments, says Mr Valli, show that "Mr Draghi wants his people in charge" of the recovery fund. At the ECB he was often keener on executing good policy than in winning over critics.

In his Senate address Mr Draghi also promised to speed up vaccination, and to begin a comprehensive overhaul of the income-tax system. He pledged to promote female employment and to narrow one of Europe's widest pay gaps between men and women. Other areas for reform were the judicial system and public administration. Much of this will please officials in Brussels, who saw in Mr Conte's draft plan more ambition on spending proposals than the reform that Italy's huge debt stock (see chart) makes imperative. Paolo Gentiloni, the European commissioner charged with overseeing the recovery plans, is himself a former Italian prime minister who understands the country's roadblocks to reform.

After decades in public service (plus a stint at Goldman Sachs), Mr Draghi's new job marks the 73-year-old's first foray into democratic politics. But the "technocrat" label conceals as much as it describes. He displayed sharp political instincts during the euro crisis, preparing the ground for policy shifts like the start of quantitative easing, and he outflanked critics like Jens Weidmann, the hawkish head of the Bundesbank. German conservatives detested his dovishness but failed to halt his policies. On leaving office in 2019 Mr Draghi was showered with praise by Chancellor Angela Merkel, and was awarded Germany's Order of Merit, its highest civilian honour. Most of Europe's leaders, whom he will meet (virtually) at a summit on February 25th, know and respect him. "The gut feeling is that someone like Draghi won't blow it," says a German official.

All this should help him manage what is likely to be a short-lived administration (an election is due by June 2023.) Still, the snake pit of Italian politics poses a new sort of test. Apart from the League and Mr Berlusconi's Forza Italia, Mr Draghi's cabi-



net unites representatives of the heterogeneous Five Star Movement and three leftist parties. "Unity is not an option; unity is a duty," the new prime minister warned parliament this week. But a quarter of the Five Star lawmakers failed to support him in his first Senate confidence vote. And squabbles have already erupted, over picking junior ministers and closing ski slopes. They will not be the last. ■

Catalonia votes

Variations on a nationalist theme

MADRID

Another separatist victory in Catalonia, but a hollow one

CATALANS PRIDE themselves on their *seu*, their hard-headed common sense. Yet when it comes to politics, as Jaume Vicens Vives, a great Catalan historian of the mid-20th century, pointed out, they have more often acted with its opposite: *rauxa*, or emotional impulsiveness. In the run-up to an election for the regional government on February 14th, many expected that practical matters such as the pandemic and the economic slump would be uppermost in Catalan minds. But the wounds of October 2017, when an unconstitutional referendum on independence for one of Spain's most important regions led to the jailing of nine separatist leaders, are still raw. The Catalan authorities let the prisoners out on day release so that they could campaign. Once again, the emotional divide over independence dominated the election.

The separatist parties won 74 seats, increasing their slender majority in the 135-strong Catalan parliament by four. For the first time since launching their independence drive in 2012 they won a majority of the popular vote, with a total of 51%. But

the import of that was blunted by a record low turnout of under 54% (down from 79% at the previous election, in 2017), depressed by the pandemic and political disaffection. The nationalist vote, meanwhile, was split among four parties with very different strategies. This allowed the Catalan affiliate of the Socialist Party of Pedro Sánchez, Spain's prime minister, to win more votes than any other party, even though it took only 23%. For him it was a useful, if limited, victory.

Esquerra (the Republican Left of Catalonia), which now favours gradually building wider public support for independence, won 21% of the vote and 33 seats. It is now the best placed to preside over the Generalitat, the Catalan administration, dislodging its coalition partner, Junts (Together). As the party of Carles Puigdemont, a former president of the Generalitat who fled to Belgium in October 2017, Junts still flirts with unilateral action of the kind it took in 2017, when it declared independence after the referendum. The two parties have often been at loggerheads with each other and with the CUP, an anti-capitalist separatist group that increased its seats from four to nine. Negotiations over forming a new government may take weeks.

"It's time to sit down and see how we settle this with a referendum," said Pere Aragonès, an Esquerra leader who is likely to be the next president. He also wants an amnesty for the prisoners. Another referendum on independence would aggravate a conflict that splits Catalonia down the middle. More modestly, Mr Sánchez's government, which has sometimes depended on Esquerra in the national parliament in Madrid, is likely to approve pardons for the separatist prisoners. It began desultory talks with Esquerra that could eventually lead to an agreement for even more regional autonomy, which might satisfy most Catalans while irritating other Spaniards. Mr Sánchez's hand was strengthened by poor results in Catalonia both for Ciudadanos, a centre-right party that lost 30 seats, and the People's Party, the main conservative opposition. Both were overhauled by Vox, a hard-right party, which won 8% of the vote.

The messy result of this week's election prolongs rather than resolves Catalonia's political drama. The region is "resigned and downcast", says Jordi Alberich, an economist in Barcelona, the Catalonian capital. "The separatists are resigned to the fact that independence won't happen, and the non-nationalists that there's nothing to be done." The relentless theatre of the independence drive has hurt the Catalan economy, which was overtaken in size by the Madrid region in 2017. "It's very difficult to unwind this," says Mr Alberich. "It takes a long time and that has a heavy day-to-day cost." ■

France

Protection plates

PARIS

Keep safe, drive Corsican

JUST OVER a decade ago, France dropped a rule that had obliged motorists to change their car's number plate each time they moved house to a new administrative *département*. The point was to ensure, in true bureaucratic style, that the vehicle's plate matched the place of residence. Since 2009, however, car owners have been free to choose which *département* code they display, turning number plates into a test of sentimental attachment, with unexpected results.

The surprising favourite is Corsica, an island that is home to just 340,000 people. The 2A that represents one of the island's two *départements*, along with its symbol of a bandanna-wrapped head, was the most sought-after plate, relative to the local population, over an eight-year period. Mountain regions were also popular. Paris did not get into the top ten.

This *amour* for Corsica, which became part of France in 1796 after a history of contested independence and conquest, may simply reflect the strong regional identity of the island's diaspora. To display a 2A or 2B plaque is a badge of pride and belonging. Perhaps, suggest some, it is also a declaration of love for the "isle of beauty", as it is known to French tourists, 2m of whom flock there in a normal year.

Or could it be that a Corsican number plate, consciously or not, is regarded as a form of implicit protection? The island has a history of violent nationalism, after all. The Corsican National Liberation Front waged a decades-long armed campaign for independence. No mainlander wants to at-

tract too much attention there. Two decades ago Claude Erignac, the *préfet*, or central-government representative, was assassinated. Mob and clan rule on the island have a broad hold on the French imagination. Honoré de Balzac's novel, "La Vendetta", was about Corsican vengeance and family honour.

Even non-Corsicans in Paris are known to drive with Corsican plates. "They are convinced that their car won't be damaged, and that they won't be bothered on the roads," suggests Benoit Ginet, founder of Eplaque.fr, an e-commerce number-plate business, which registered a disproportionate demand for those from the island in 2020. There may also be a form of superstition at work. "Motorists feel stronger with Corsican plates," he suggests: "It's a mark of serenity." ■

Russia's propaganda war

Sympathy for the devil

MOSCOW

The Kremlin's propaganda against Alexei Navalny may be backfiring

FIRST THEY ignored him. Then they smeared his underpants with Novichok, a nerve agent. When he survived that, they jailed him. And now they are trying to demonise him. After years of refusing to utter his name in public for fear of making him seem important, the Kremlin is levelling its most intense propaganda at Alexei Navalny, Russia's main opposition leader. He is the subject of every prime-time news programme and talk show—and they are not being polite.

The scale and intensity of this propaganda assault are reminiscent of campaigns waged by Stalin's henchmen in the 1930s against "enemies of the people" and, more recently, are comparable to the Kremlin's information war against Ukraine in 2014. The narrative is tried and tested. As usual, it consists of two parts.

The first is to portray Mr Navalny as a Nazi who belittles Russia's victory in the second world war. Since most Russians are proud of this victory, and Mr Putin portrays the state he rules as the successor of the Soviet Union that won it, the implied message is that Mr Navalny is a threat to the Russian constitutional order itself. What such attacks lack in truth or logic they make up for in vehemence. Vladimir Solovyev, a Kremlin mouthpiece, likens Mr Navalny to Hitler, while adding that "Hitler was a very courageous man and did not dodge military service like this codpiece Führer."

To provide more material for its propaganda machine, the Kremlin has mounted

a show trial. Mr Navalny is accused of defaming a second world war veteran, who had appeared in a propaganda video last year, promoting changes to the constitution that allow Mr Putin to rule Russia beyond 2024. The charge hinges on Mr Navalny having said that everyone who took part in that video was a traitor.

The second part of the Kremlin's narrative is that Mr Navalny is working for foreign intelligence services. According to Mr Putin's people, he is part of a Western plot to destabilise Russia and somehow destroy its national identity. As evidence, they cite the presence of foreign ambassadors at his trial, and his team's pleas to America and the EU to place sanctions on Mr Putin's cronies. A demand on February 17th from the European Court of Human Rights that Mr Navalny be released immediately will doubtless serve as grist to that mill.

Mr Navalny, who now faces a large fine and additional time in prison on top of his current sentence of nearly three years, has counter-attacked. He mocked the judge by asking her to recommend a recipe for pickling cucumbers, since it was pointless to discuss the law with her.

The Kremlin's campaign betrays its nervousness about Mr Navalny. His influence is growing, as shown by the success of a video he released about a vast secret palace that was allegedly built for Mr Putin by his cronies. In a recent poll by the Levada Centre, an independent pollster, some 36% of Russians reported having watched the film or being familiar with its contents, and another 30% had heard of it.

Such viewing figures represent a four-fold increase over Mr Navalny's previous YouTube audience and shatter the Kremlin's monopoly on information. Unable to counter his presence on social media and the internet effectively, the Kremlin has deployed its indiscriminate television artillery. Although television reaches mainly older people, it sends a strong signal to bureaucrats and state employees across the vast country.

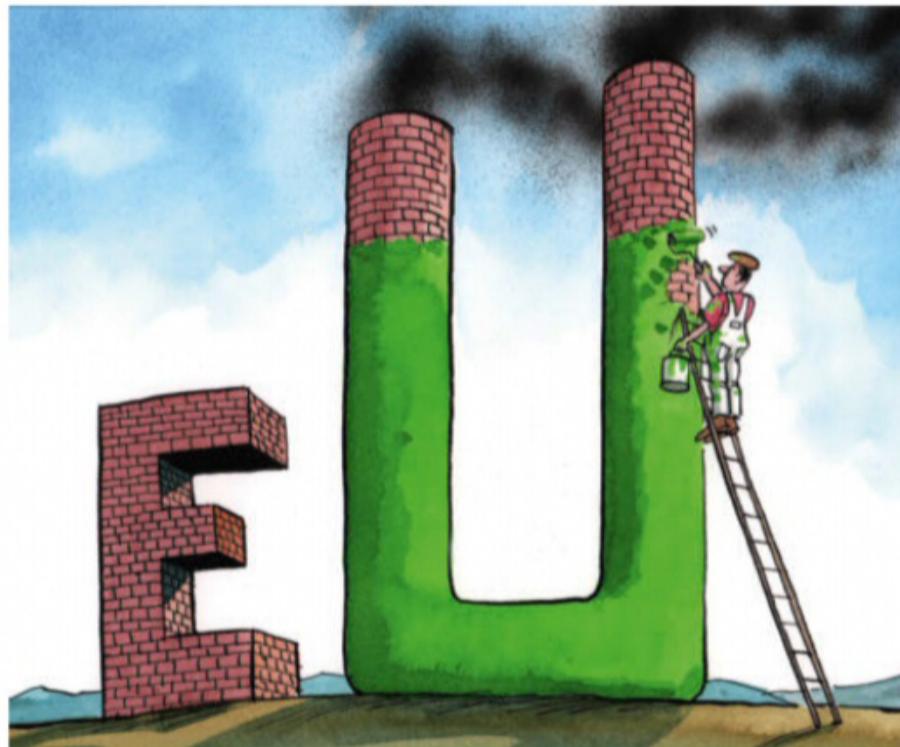
Gregory Asmolov, an expert on information warfare and the internet at King's College London, says the purpose of the mudslinging is to sow hatred and division. "Television propaganda helps to delegitimise people who support Navalny, and turns them into outcasts and enemies of the state and the people," he says. This in turn helps to justify further repression.

Yet, perversely, the Kremlin is also helping to boost Mr Navalny's movement. It is acting so outrageously that it is making it harder for ordinary citizens to acquiesce. And it is making the opposition's supporters angrier, the sort of anger Mr Navalny has long sought to stoke. Propaganda is a powerful tool for prolonging an autocrat's power. But it can also act as an irritant, driving calls for action against him. ■



Charlemagne | Dirty politics

Europe's green wave has a brown undercurrent



THE BOIS DE LA CAMBRE is the most handsome park in Brussels. Its 123 hectares offer mature forest and potential peace for the residents of the Belgian capital's well-to-do southern suburbs. Naturally, the Belgians—among Europe's biggest petrolheads—built a motorway through it. During the lockdown, the park was closed to traffic. Pedestrians were delighted. Drivers were furious, court cases came and a new front in the culture war was born.

Grumpy motorists are easy to find in Europe today. Head north to the Netherlands and they moan about speed limits. There, motorway traffic now crawls along at 100kph (62mph) after the government cut the daytime speed limit from 130kph to stop the country busting through its pollution limits. Mark Rutte, the country's ever-flexible prime minister, declared the measure he had just introduced "rotten". Over the border in Germany, the days of screaming down the autobahn at 200kph could be over, if the Greens end up in government and introduce a speed limit. Green politicians know it will cause a fight. "The speed limit is second amendment stuff," says Daniel Freund, a Green MEP.

Car wars belie Europe's reputation for eco-friendliness. Green parties are riding high in the polls and could return to power in Germany this year. Climate-denier cranks have been routed. Those who believe man has nothing to do with global warming are bracketed with folk who think the Moon landing was fake and Elvis is alive. Ambitious targets are set, and then made more stringent, as the EU positions itself as the class swot of environmentalism. A few years ago, reducing emissions to 40% below 1990 levels by 2030 was deemed enough. Now the demand is 55%. All EU countries have signed up to it, after persuasion and copious bribes via EU funding.

What must be done has been agreed on. The fight over how to do it is just beginning. Support for climate measures is broad but shallow, says Heather Grabbe of the Open Society European Policy Institute in Brussels, which polled eight European countries. Nearly all voters are happy to buy less plastic, though far fewer are keen to pay more for fuel or flights. And good intentions mask complacency. In each country a majority of voters expect life to continue broadly as normal, even if nothing is done by 2035. The size of the likely shift over the coming decades has not sunk in.

Hard choices are yet to be made or a political price paid.

Already certain politicians of the right are jostling to provide voters with an easy way out. Policy platforms promising frequent flights, cheap petrol and a guilt-free carnivorous diet are appearing across fringe parties. Ahead of Dutch elections in March, the far-right Party for Freedom (PVV) promises to raise speed limits to 140kph. Populists have found their previous bread-and-butter issue, immigration, sinking from public consciousness as borders have been more or less closed. So now the likes of the Sweden Democrats, an anti-immigration party, and the similar Alternative for Germany are increasingly focusing on the environment. Most stop short of outright global-warming denial. Instead, they argue that too much is being done, too quickly, at too high a cost. "Nobody is against a green environment," declares the PVV in its manifesto. Instead it opposes "pointless, unaffordable climate policy". The PVV and its ilk are unlikely to get anywhere near office. Such parties achieve their aims, however, not by winning power but by dragging mainstream parties towards their positions. That is what happened with migration.

This makes it politically more dangerous for politicians to go green than at first glance. Get it wrong and punishment is swift. France provided an example of what not to do when, in 2018, it cut speed limits on country roads and raised taxes on fuel. The result was the *gilets jaunes* movement, which snowballed from a crowd of grumpy drivers into protesters waving mock guillotines in Paris. In Germany the Greens learned in 2013 that proposing to ban some things and charge more for others was not popular. In the land of sausage-munching drivers of gas-guzzling cars, the party proposed higher taxes on fuel and meat-free days in the cafeteria. Support plunged and the Greens are still trying to shrug off a reputation for being the party of prohibition.

Foot-dragging is already a problem, even before a proper backlash has begun. Germany agreed to phase out coal only by 2038, after dawdling from both the centre-left Social Democrats and the Christian Democratic Union, their centre-right coalition partners. The new CDU leader, Armin Laschet, is among the coal industry's strongest supporters. The temptation to go even slower may grow as parties on the extremes offer voters an easy alternative. Pushing through environmental reforms in the wake of a catastrophic slump makes life even harder. Suppose the recovery is botched. Even if the real cause is miserly fiscal policy, voters may blame greenery for their woes. That could make reform harder to sustain.

Avoiding a car crash

When it comes to the environment, there will be losers. This is by design. Some behaviour—whether taking a third flight in a year, or zipping through a park in a Mercedes—must become inconvenient or expensive compared with greener options, because technology will not solve the problem fast enough. Some jobs will go. Politicians argue hopefully that if carbon taxes go up, then other taxes can go down; dirty jobs can be replaced by clean ones. But voters may feel they have heard all this before. A similar argument was put forward about globalisation. For years, voters were assured that it did not matter if jobs went abroad as new ones would replace them at home. The proceeds of extra growth would be shared. But the hoped-for redistribution disappointed. Some jobs were not replaced; some areas were left to rot. Politics went to pot. Voters are expected to accept this logic a second time and trust that governments will not betray them. If Europe's leaders flunk it again, the consequences could be ugly. ■

WHAT IS AVAXHOME?

AVAXHOME -

the biggest Internet portal,
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fresh magazines, hot games,
recent software, latest music releases.

Unlimited satisfaction one low price
Cheap constant access to piping hot media
Protect your downloadings from Big brother
Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages
Brand new content
One site

AVXLIVE.ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>



A perfect storm

Light a candle for the kids

The freeze in Texas exposes America's infrastructural failings

WHEN IT RAINS, it pours, and when it snows, the lights turn off. Or so it goes in Texas. After a winter storm pummeled the Lone Star State with record snowfall and the lowest temperatures in more than 30 years, millions were left without electricity and heat. At the worst moment on February 16th, 4.5m Texan households were cut off from power, as providers were overloaded with demand and tried to shuffle access to electricity so the entire grid did not collapse.

Whole skylines, including Dallas's, went dark to conserve power. Some Texans braved the snowy roads to check into the few hotels with remaining rooms, only for the hotels' power to go off as they arrived. Others donned skiwear and remained inside, hoping the lights and heat would come back on. Across the state, what were supposed to be "rolling" blackouts lasted for days. It is still too soon to quantify the devastation. More than 20 people have died in motor accidents, from fires lit for warmth and from carbon-monoxide poisoning after using cars to get warm. The storm has also halted deliveries of covid-19

vaccines and may prevent around 1m vaccinations from happening this week. Several retail electricity providers are likely to go bankrupt, after being hit with surging wholesale power prices.

Other states, including Tennessee, were also covered in snow, but Texas got the lion's share and ground to a halt. Texans are rightly furious that residents of America's energy capital cannot count on reliable power. Everyone is asking why.

The short answer is that the Electric Reliability Council of Texas (ERCOT), which operates the grid, did not properly forecast the demand for energy as a result of the

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storm. Some say that this was nearly impossible to predict, but there were warnings of the severity of the coming weather in the preceding week, and ERCOT's projections were notably short. Brownouts last summer had already demonstrated the grid's lack of excess capacity, says George O'Leary of Tudor, Pickering, Holt & Co (TPH), an energy investment bank.

Many Republican politicians were quick to blame renewable energy sources, such as wind power, for the blackouts, but that is not fair. Some wind turbines did indeed freeze, but natural gas, which accounts for around half of the state's electricity generation, was the primary reason for the shortfall. Plants broke down, as did the gas supply chain and pipelines. The cold also caused a reactor at one of the state's two nuclear plants to go offline. Transmission lines may have also iced up, says Wade Schauer of Wood Mackenzie, a research firm. In short, Texas experienced a perfect storm of equipment failure.

Some of the blame falls on the unique design of the electricity market in Texas. Of America's 48 contiguous states, it is the only one with its own stand-alone electricity grid—the Texas Interconnection. This means that when power generators fail, the state cannot import electricity from outside its borders.

The state's deregulated power market is also fiercely competitive. ERCOT oversees the grid, while power generators produce electricity for the wholesale market. Some 300 retail electricity providers buy that

► fuel and then compete for consumers. Because such cold weather is rare, energy companies do not invest in “winterising” their equipment, as this would raise their prices for consumers. Perhaps most important, the state does not have a “capacity market” to ensure that there was extra power available for surging demand. Such systems elsewhere act as a sort of insurance policy so the lights will not go out, but it also means customers pay higher bills.

For years the benefits of Texas’s deregulated market structure were clear. At 8.6 cents per kilowatt hour, the state’s average retail price for electricity is around one-fifth lower than the national average and about half the cost of California’s. In 1999 the state set targets for renewables, and today it accounts for around 30% of America’s wind energy.

This disaster is prompting people to question whether Texas’s system is as resilient and well-designed as people previously believed. Greg Abbott, the governor, has called for an investigation into ERCOT. This storm “has exposed some serious weaknesses in our free-market approach in Texas”, says Luke Metzger of Environment Texas, a non-profit, who had been without power for three full days when *The Economist* went to press.

Wholly redesigning the power grid in Texas seems unlikely. After the snow melts, the state will need to tackle two more straightforward questions. The first is whether it needs to increase reserve capacity. “If we impose a capacity market here and a bunch of new cap-ex is required to winterise equipment, who bears that cost? Ultimately it’s the customer,” says Bobby Tudor, chairman of TPH. The second is how Texas can ensure the reliability of equipment in extreme weather conditions. After a polar vortex in 2014 hit the east coast, PJM, a regional transmission organisation, started making higher payments based on reliability of service, says Michael Weinstein of Credit Suisse, a bank. In Texas there is no penalty for systems going down, except for public complaints and politicians’ finger-pointing.

Texas is hardly the only state to struggle with blackouts. Parts of California, which has a more tightly regulated power market, are regularly plunged into darkness during periods of high heat, winds and wildfires. Unlike Texas, much of northern California is dependent on a single utility, PG&E. The company has been repeatedly sued for dismal, dangerous management. But, as in Texas, critics have blamed intermittent renewable power for blackouts. In truth, California’s blackouts share many of the same causes as those in Texas: extreme weather, power generators that fail unexpectedly, poor planning by state regulators and an inability (in California, temporary) to import power from elsewhere. In California’s

blackouts last year, solar output naturally declined in the evening. But gas plants also went offline and weak rainfall lowered the output of hydroelectric dams.

In California, as in Texas, it would help to have additional power generation, energy storage to meet peak demand and more resilient infrastructure, such as buried power lines and more long-distance, high-voltage transmission. Weather events that once might have been dismissed as unusual are becoming more common. Without more investment in electricity grids, blackouts will be, too. ■

Impeachment

Marred but at largo

WASHINGTON, DC

Donald Trump lives to fight and incite another day

MITCH MCCONNELL’S denunciation of Donald Trump on February 13th was as withering as it was unexpected. Despite having just voted with 42 of his Republican colleagues to acquit Mr Trump of inciting an insurrection on January 6th, the Republican Senate leader suggested he was guilty as charged. “President Trump is practically and morally responsible for provoking the events of that day.” Headline writers promptly fell over themselves to label this the start of a “Republican civil war”. But if Mr McConnell and the conservative mainstream are really in that fight, they are very much at a pre-Valley-Forge stage, shivering over their wounds, as winter closes in.

Mr Trump’s acquittal was a more accurate measure of his command of the Republican field. The case brought against him by House Democrats—impressively led by Representative Jamie Raskin of Ma-

ryland—was devastating. The video footage they played, depicting the president’s demagoguery and the violence it provoked, was so horrifying it reduced some Republicans to tears. The fact that only seven then mustered the courage to join the entire Democratic caucus in voting against Mr Trump suggests that the impeachment power is now in effect defunct.

Those honourable seven, it must be added, were all to some degree shielded from Mr Trump’s wrath. Bill Cassidy and Ben Sasse were newly re-elected; Richard Burr and Pat Toomey are retiring; Susan Collins, Lisa Murkowski and Mitt Romney (of Maine, Alaska and Utah) have home-state appeal that makes them unusually resistant to Mr Trump’s bullying.

The 43 Republicans who voted to give Mr Trump the insurrection “mulligan” that Mike Lee of Utah had claimed he deserved mostly did so on a technicality. They claimed a former president could not be impeached, a view contradicted by most legal advice, as well as the precedent established by an earlier Senate vote.

Notably, this quavering Republican majority included almost every conservative with presidential ambitions, including Marco Rubio and Tim Scott, as well as dedicated Trump stooges such as Ted Cruz and Josh Hawley. It would seem none is planning to run against Trumpism: they are banking on being post-Trump, not anti-Trump. Polling of Republican voters supports their calculation. Over 80% still back Mr Trump; more than half say he did everything he could to stop the insurrection. Meanwhile, the backlash against the seven Republicans who voted against Mr Trump has been vicious.

Messrs Burr, Cassidy and Sasse have all been censured by their state parties. “I’m getting a lot of feedback from people saying the only reason they supported Senator Cassidy is because President Trump supported him,” said Blake Miguez, a Republi-



Maybe third time lucky?

► can leader in Louisiana's state legislature. "I predict that his next five years will be some of the most miserable a senator from Louisiana has ever experienced." Mr Cassidy, a doctor and faithful Christian, has sought to mollify his constituents by explaining that, contrary to what they may have heard, Mr Trump was guilty as charged. No cigar, it would seem.

Mr McConnell, though tempted to vote against Mr Trump, appears to have concluded that this would have doomed his chances of returning as Majority Leader in 2023. His criticism of the president looks like he is trying to have it both ways. It also seems to have backfired. On February 16th Mr Trump released a statement attacking Mr McConnell as a "dour, sullen and unsmiling political hack" and threatening to unseat him as Senate leader. It could have been even worse for the veteran Kentuckian. Mr Trump reportedly cut some additional insults at the urging of his aides, including a contention that Mr McConnell had "too many chins". ■

Talk radio

Tower of babble

NEW YORK

Rush Limbaugh galvanised and embodied the modern American right

IN 1987, AMERICA'S Federal Communications Commission, which regulates the airwaves, repealed the Fairness Doctrine, a policy that required broadcasters to present balanced views of controversial subjects. One year later, a former executive at ABC radio gave an opinionated but little-known talk-radio host from Sacramento a nationally syndicated show. This contravened accepted practice; most nationally known radio hosts were bland and inoffensive interviewers, the better not to alienate a range of listeners.

Rush Limbaugh was the opposite. His shows rarely had guests or more than a few brief pre-screened callers—the better to let him expound, for hours on end, on the ills of modern American society, most of which were the fault of liberals and the left. His political view was Manichean: easy to understand and engagingly delivered. He made no effort to credit opposing views; he—and by extension his listeners—were defenders of all that was good about America, while the liberalism of Democrats, as he put it, "is a scourge. It destroys the human spirit. It destroys prosperity." He built this simple format into one of the most popular radio programmes in America, attracting millions of listeners and inspiring scores of imitators.



Poisoning the airwaves

Like Donald Trump, whose presidency he championed, he styled himself a tribune of the common man, willing to say things that no one dared but everyone thought. Indeed, much as William F. Buckley's libertarian-inflected traditionalism prefigured the conservatism of Barry Goldwater and Ronald Reagan, Mr Limbaugh's cocksure derisiveness, and the glee he took in angering the left, provided the stylistic underpinnings of the contemporary, Trumpist Republican party.

And like Mr Trump, he inspired a quasi-cultic following, with fans who called themselves "Dittoheads," for the propensity to agree with everything he said, even though—or, perhaps, especially because—the things he said could be repellent. "Feminism," he maintained, "was established so that unattractive women could have easier access to the mainstream of society." He called gay men "perverts", mocked people dying of AIDS and treated the rare phone-in guest who disagreed with him to a "caller abortion"—hanging up after playing the sound of a vacuum motor. He told an African-American caller to "take that bone out of your nose and call me back," remarked that "all composite pictures of wanted criminals resemble Jesse Jackson," and said that the National Basketball Association should be renamed "the Thug Basketball Association".

His first book, released in 1992, championed standard conservative views: small government, anti-environmentalism and a belief that "racial relations will not be enhanced or prejudice eliminated by governmental edict." But few tuned in to hear what he was for. People wanted to hear him hate who they hated. He had particular scorn for Hillary Clinton, whom he said kept her trophies in a "testicle lockbox," and Barack Obama, whom he mused may not have been an American citizen (he played a song on his programme called "Barack the Magic Negro"). He survived some embarrassing scrapes with the law, including get-

ting stopped with Viagra prescribed for someone else in his luggage, and an oxydone addiction. Being married four times did not seem to dent his traditionalist bona fides any more than did Mr Trump's being thrice married.

Mr Limbaugh continued broadcasting until February 2nd, though by then he was something of an elder statesman. The day after he announced that he had advanced lung cancer, Mr Trump awarded him the Presidential Medal of Freedom, America's highest civilian honour, previously awarded to, among others, Jonas Salk, Felix Frankfurter and Martin Luther King junior. Yet that just testifies to how deeply Limbaughism had been absorbed into the conservative mainstream—its influences discernible in Trumpist Republicans' demand for complete fealty, and their casting of political opponents, not as fellow Americans with whom they disagree but as evil. Those attributes make for entertaining radio. But they make governing impossible. ■

Andrew Cuomo and the pandemic

Under pressure

NEW YORK

Andrew Cuomo faces a reckoning for his handling of New York's pandemic

AT THE HEIGHT of the pandemic last spring Andrew Cuomo's daily briefings were "must-see-TV". Millions sought comfort from New York's governor dishing out science-based facts. He talked about his 88-year-old mother to stress the need to protect the elderly. He joked about having to endure his daughter's boyfriend during the lockdown. He begged the federal government for ventilators. When it sent him 400, he said in one briefing: "What am I going to do with 400 ventilators when I need 30,000? You pick the 26,000 people who are going die because you only sent 400 ventilators." The maths was dodgy, but his point was sharp. Mr Cuomo also shared stark PowerPoint presentations with statistics on how many were sick, how many were in hospital, how many were on ventilators and how many were dead.

But New Yorkers learned last month that some of the data were not accurate. Letitia James, the state's attorney-general and a close ally of Mr Cuomo, released a damning 76-page report saying his administration had understated the number of covid-19-related deaths in state nursing homes by as much as 50%. Nearly 15,000 people died in nursing homes and long-term care facilities, over 5,000 more than originally disclosed. It also revealed that a

► state directive requiring the admission of covid-19 patients to homes may have put residents at risk. But it was not until the *New York Post*, a tabloid, revealed on February 11th that Mr Cuomo's top aide privately apologised to lawmakers for withholding the nursing-home death toll that he began to feel some heat. According to the newspaper, the aide said the administration "froze" because they did not want the then president, Donald Trump, to "turn this into a giant political football".

The fact that the report was released by an ally "is an emperor-has-no-clothes moment," says John Kaehny of Reinvent Albany, a government watchdog. His group is calling for full transparency on the state's response to covid-19. "The governor is in trouble," says Doug Muzzio, a political scientist at Baruch College. Mr Cuomo usually controls the narrative, but not this time. On February 15th he held a 90-minute press briefing in an attempt to retake the reins. He stopped short of apologising, but admitted that mistakes were made.

Several lawmakers want to strip the governor of emergency powers granted last March (a near-empty gesture, as the powers expire in April). Some Republicans want Mr Cuomo to resign (unlikely). New Yorkers still seem happy with his handling of the covid-19 crisis, according to a new poll. More than 60% of voters say he has done a good job. The poll was taken just before the *New York Post*'s revelation, but after the attorney-general's scathing report.

The governor is in his third year of his third term. The scandal may well put an end to any fourth-term hopes. On February 17th, Ron Kim, a Democratic state assemblyman, told CNN that Mr Cuomo threatened to "destroy" him when he refused to back down from statements he had made criticising the governor.

Mr Cuomo is used to getting his own way. The state constitution affords him most of the say over budgets. He has unilateral power to withhold state funding from programmes, agencies and authorities. But there is not much transparency in how he gets things done. Many Albany insiders, observers and politicians were perplexed to see the world fawn over the Empire State's governor.

In a way Mr Cuomo was born to lead New York. He learnt much about Albany politics at the knee of his father Mario, a former governor. His experience, probably unparalleled in the 230-year history of New York state, and the inherent powers of his office have created a political mammoth able to crush anyone. Nine of his senior officials who apparently disagreed with him on policy have resigned or retired recently; he remains. Mr Cuomo declared during his first term: "I am the government." That is looking somewhat less certain than it was. ■



Baltimore's homes

Rescued charm

BALTIMORE

Abandoned homes are being recycled into furniture

NINETEENTH-CENTURY brick row-houses on McKean Avenue, a once humming, now rather desolate street in west Baltimore where many homes have been demolished or abandoned, can be had for as little as \$12,000. A more popular way to snap up a bit of historic Baltimore is to spend nearly a quarter of that at Room & Board, a furniture chain based in Minneapolis, on a McKean media cabinet, fashioned from roof-decking planks from the city's razed houses.

The planks come from the Baltimore Wood Project, which was established by the US Forest Service as a joint venture with local non-profits and the city, to show how discarded wood can be kept out of landfill. A lot of wood waste, which releases carbon dioxide and methane as it rots, has little sale value, but old buildings can yield precious salvage. The yellow pine that was used to build Baltimore's rowhouses came from old-growth forests, and is more dense and rot-resistant than faster-growing new lumber; a century of oxidation has given it a handsome, dark patina. Furniture-makers and interior designers play up its provenance, designing items around its joist- and plank-shaped pieces, some of them pocked with nail holes and saw marks. They also advertise the fact that the venture trains formerly unemployed Baltimoreans, many of them former prisoners, in deconstruction and salvaging techniques.

Maryland's biggest city, once a booming factory and port town, is fertile ground for such a project. Its rowhouses, constructed in sprawling grids and quickly filled by immigrants from Europe during the brisk industrial growth

of the late 19th and early 20th centuries, began to empty in the second half of the 20th century, as its shipping and steel industries declined. Since 1950, when Baltimore was America's sixth-biggest city, a third of its residents have left; today it is the 30th-biggest. In the poorest neighbourhoods, more than half of adults are unemployed. Some 16,000 buildings are officially designated empty; the true number may be twice that. Entire streets of still-handsome houses are boarded up. The city is planning to demolish thousands of them.

Projects like the Baltimore Wood Project, which the Forest Service hopes will take root in other cities, are likely to remain small-scale. Deconstructing a house in order to save the materials from which it is built is more expensive and time-consuming than going at it with a wrecking ball. In some long-empty houses with broken rooftops, all the wood has been lost to rot. In the past six years, as the project has salvaged wood from around 850 houses, many more have been reduced to rubble.

But the project has shown that conservation efforts can pay. Last year Brick + Board, the non-profit established to sell the salvaged wood, became a for-profit: it now sells reclaimed wood from other towns and cities, as well as Baltimore brick and the white marble stoops that were once found at the front doors of even the most modest old rowhouses. These steps, one of Baltimore's most distinctive architectural hallmarks, are likely to stay in the city. Their most enthusiastic buyers are gentrifiers, who reuse them in neighbourhoods less blighted by decline.

The ideas of the far right

Deadly inspirations

CHICAGO

What their chosen reading says about America's far-right

PANDEMICS CAN have unexpected side-effects. One of them, according to a report last year by the New York Federal Reserve, may be a surge in support for extremist ideas. It observed how cities in Germany that suffered the most deaths from influenza by 1920 then voted in unusually large numbers for extreme-right parties, such as the Nazis, by the early 1930s. In the past year, too, according to studies in Britain and America, there has been a spurt in online searches for extremist content. Anger over lockdowns or loss of trust in government could be driving new interest.

What texts might people be turning to? Researchers study literary habits of the far-right by monitoring reading lists traded on social media, texts promoted on podcasts or recited by enthusiasts as audiobooks on YouTube, output from right-fringe publishing houses and, most extreme, the diatribes that serve as manifestos of those who commit atrocities. Together they suggest several strands of hateful writing. Brian Hughes of American University in Washington, DC says that the sheer availability of online extremist ideology is, in part, "responsible for the elevated rates of extremist mobilisation".

French writers have been strikingly influential, including those in the "Nouvelle Droit" movement. Alain de Benoist, an illiberal thinker, inspired members of America's alt right such as Richard Spencer, a white supremacist. The works of a philosopher, Jean Renaud Gabriel Camus, also

stand out. Ideas drawn from his book "The Great Replacement" (2011), are often repeated by those who say non-white immigration threatens Western countries. The book has been cited by mass shooters.

The work of another French writer, Jean Raspail, is championed by anti-immigrant activists in America. His dystopian novel from 1973, "The Camp of the Saints", imagines the violent overrun of France by brown-skinned migrants. It is a "weaponised retelling" of an apocalyptic biblical parable, says Chelsea Stieber of Catholic University. "The French understand it as literature," she says, whereas in America "it gets to be this reality that could happen." Leading Republicans have promoted it, she points out, including Steve Bannon and Stephen Miller, both erstwhile close advisers of Donald Trump, as well as Steve King, a noxious ex-congressman from Iowa.

Apocalyptic writing is especially popular among a strand of the far-right known as "accelerationists", meaning those who believe civilisation (or at least liberal democracy) will soon collapse. They hope the end can be hastened by violent acts or even civil war. In this vein an Italian fascist writer, Julius Evola, is also cited by Mr Bannon and Mr Spencer and lauded in far-right circles, along with his call for "blowing everything up". He promoted an idea of heroic men who "rise above" history (Mussolini was a fan). Memes of him in his monocle are shared online by adoring followers.

Extremists turn to such writers because

they justify using violence to clear the way for a supposed new golden age to begin. Others tell them how to achieve that. "Siege", a book by James Mason of the American Nazi party, purports to be a guide to violent revolution. It had little impact when it was published in 1992, notes Graham Macklin of the Centre for Research on Extremism, in Oslo. But its rediscovery by neo-Nazis roughly five years ago has led to a surge of interest. PDFs of it are now shared widely online; the hashtag "read-Siege" spreads periodically on social media. "Now, it's everywhere," he says.

The study of such writing matters, even if one researcher admits he feels like "projectile vomiting" while tackling some especially violent or cruel texts. Ideas can have deadly consequences, says Joanna Mendelson of the Anti-Defamation League. "People are quoting and referencing books as a kind of reassurance that they are validated in their extremist views," she says. Many of the same ones reappear repeatedly among anti-Semitic and other extremist factions. A few, such as the "Protocols of the Elders of Zion" (an anti-Semitic conspiracy originating from Russia in 1903), or the racist, eugenics-based writing of Lothrop Stoddard in the 1920s, are repeatedly rediscovered or reinterpreted by new writers. What used to be called eugenics, for example, is today dressed up as "race realism".

One book is still considered the "bible" of the far right. The "Turner Diaries", a barely readable novel from the 1970s by William Pierce, another American Nazi, imagines an insurrection by a group called "Order" against a government that promotes egalitarian values and gun control. It has supposedly sold 500,000 copies. One avid reader was Timothy McVeigh, who bombed a federal building in Oklahoma City in 1995, killing 168 people. (He used a lorry full of fertiliser and explosives, a method depicted in the novel.) Others were inspired to form a real-world paramilitary group, also called the "Order".

Jared Holt, who researches domestic extremism at the Atlantic Council in Washington, says such books are still powerful. Veteran members of groups pass them on to younger ones. They are used to build ties between adherents, to test new initiates and ease the "anxiety" of some by giving a sense of purpose to their lives. He notes, too, how younger readers are finding new writing. One rambling, self-published book called "Bronze Age Mindset", for example, has won a cult following, reportedly including staffers at Mr Trump's White House. It draws on ideas from Nietzsche and tells readers to prepare for the military rule that will soon begin in America. For some readers such bilious writing is appealing. Finding out why is a first step towards confronting it. ■



When they're not at home with a book

Lexington | John Kerry, eco-warrior

The former secretary of state is a good pick for what may prove to be a chastening task



WHEN JOHN KERRY ran for president in 2004 he was too green for either party. Having been in the Senate in 1988 to hear Jim Hansen testify that “global warming is changing our climate now”, he had been speaking on the issue ever since. He was a habitué of international climate conferences; he wooed his second wife, the environmental philanthropist Teresa Heinz, at the Earth Summit in Rio de Janeiro in 1992. This made him something of an outlier even among Democrats, which is why he said relatively little about costly emissions-cutting during his presidential campaign. And it naturally made him highly suspect to Republicans, an impression that George W. Bush’s campaign manager encouraged by labelling the long-limbed senator from Massachusetts “incredibly environmentally green”.

Sixteen years later, America still has no national climate policy to speak of, and the Republicans seem even more opposed to having one; but Mr Kerry’s party is now as green as he is. This was illustrated by his much-celebrated appointment as Joe Biden’s presidential climate envoy, a new position, which comes with cabinet rank, a seat on the National Security Council and ambitions to elevate the issue across the government. Todd Stern, who was Barack Obama’s special climate envoy, describes this as a masterstroke: “Kerry’s tireless, persuasive and completely committed to the issue.” Even the hard-left seems grudgingly impressed—notwithstanding the plutocratic Mr Kerry’s multiple houses and fondness for private jets. Alexandria Ocasio-Cortez, with whom he co-chaired a pre-election climate working-group for Mr Biden, has not singled him out personally, but lavished praise on the climate team of which Mr Kerry is the most prominent member.

He did not win such plaudits as a politician or, for four years under Mr Obama, as secretary of state. A high-minded man with lugubrious features, Mr Kerry has a reputation for being less genial than Mr Biden, but almost as verbose. He has also been associated with some notable failures. He is the only Democrat to have lost the popular vote in recent decades. He hung his tenure at the State Department on a Middle East peace process that even his boss appeared to think doomed. Even so, the praise for his appointment does not seem misplaced.

He is the most senior politician to have been dedicated to cli-

mate diplomacy by any country, let alone the superpower. And at 77 he has lost none of his career-long zeal for the issue. “I view this as a critical moment where we either get people on the road to getting the job done or we take part in one of human history’s greatest moments of failures. And I refuse to let that happen,” he told your columnist. “Every day I get up with a great sense of purpose and a conviction that we can do this.” Yet what difference, beyond ginning up his party, can he actually make?

The first test of this is fast approaching; Mr Biden has convened a climate summit, to be held remotely, on April 22nd. The idea is to underline America’s return to the Paris Climate Agreement, which Mr Kerry helped negotiate; and also to encourage those attending to commit to stiffer emissions-reductions targets ahead of a UN climate conference in Glasgow in November. Yet there is a tension between those aims.

America’s inability to pass serious climate policy has long since eroded its effort to provide global leadership on the issue. And its post-Trump standing on climate, signified by its brief exit from the Paris accord, could hardly be worse. While few question Mr Biden’s sincerity to turn things round, America’s ability to keep to its word on climate change looks vulnerable to the next Republican election win.

To address that “credibility gap”, Mr Kerry acknowledges an urgent need to turn promising words into impressive domestic action. “You can’t just come back in and say, OK, we’re here, without a demonstration of good faith regarding the things you’re willing and prepared to do”. To that end the administration aims to unveil a new and more ambitious emissions-mitigation target by the time of the forthcoming summit.

Mr Biden is also expected to flesh out, in a speech to Congress next month, a plan to make that commitment seem realistic. He can count on no legislative support from the other side (notwithstanding Mr Kerry’s claim to have received expressions of interest from a few Republican senators). The administration is therefore banking on a combination of regulatory standards—of a kind Mr Obama previously introduced and Mr Trump partly scrapped—and heavy public investment in low-carbon industries and technologies. It is the only available option the president has; albeit, given the tenuousness of the Democrats’ hold on the Senate, by no means a slam-dunk.

And even if that goes according to plan, Mr Kerry may struggle to meet the expectations his appointment has raised. The world has changed since Paris. China’s emissions are now twice America’s. And its growing belligerence and octopine economic reach have made it even more impervious to diplomatic pressures than it was in 2015. Especially, from America’s perspective, considering the deterioration of the two powers’ relations in other areas. Mr Kerry insists that America and China have no alternative but to co-operate on climate, however testy their relations get on trade or security. He is of course right; yet his ability to make progress will depend on China choosing to observe the same distinction.

Kerry on regardless

That is not to deny the hopefulness of the moment. The climate-policy world has been crying out for someone of Mr Kerry’s stature and relentlessness. And for his newfound humility. His goal, he says, is not to restore American leadership but to get the job done. “And if in doing that our leadership and our participation earns some respect back, great.” Of all the ways in which Mr Biden hopes to restore said American leadership, this may be the hardest. ■



Mexico's president

The transformer

MEXICO CITY

Andrés Manuel López Obrador has yet to improve Mexicans' lives. They are willing to give him more time

WE ARE LIVING a stellar moment," declared Mexico's president, Andrés Manuel López Obrador, this month, a little over two years after he took office. It is hard to find evidence of that. Even by the standards of a covid-ravaged world, the country is doing poorly. Mexico has the fourth-highest number of excess deaths as a share of population since the pandemic's onset. Its economy was in recession before the pandemic arrived (see chart on next page). The poverty rate probably rose more than in Latin America's other big economies. Almost half of Mexico's 126m people could not afford to eat properly at the end of 2020, according to official figures. Whereas murder rates have dropped sharply in some violent Latin American countries during the pandemic, in Mexico the decline has been tiny.

If the moment is not stellar, most ordinary Mexicans trust Mr López Obrador, often simply called AMLO, soon to make it so. According to a recent poll, his approval rating is 62%. Another survey found that

nearly 40% of Mexicans plan to vote for his party, Morena, in legislative and regional elections due in June. The two most popular opposition parties have a quarter of that level of support each (and a third of voters are undecided). AMLO's popularity is evident in places like Ecatepec, a municipality near Mexico City that is as poor, violent and covid-blighted as anywhere. Some neighbourhoods lack water; walls are plastered with posters for missing people and help applying for visas to the United States. "We have not yet seen results" from AMLO, admits Efrain Salguero, a local driver. "I think we should give him more time."

Mr Salguero is among the millions of Mexicans who still have high hopes for AMLO's "fourth transformation", which is to make the country work better by ending

corruption and rampant crime and distributing gains from economic growth more fairly. He envisions it as the successor to the war of independence of 1810-21, the war for liberal reform of 1858-61 and the revolution of 1910-17. But in two years of transformation AMLO has changed Mexico much less than did these momentous events, and mostly for the worse.

In practice, the fourth transformation seems to have three main elements: the undoing of recent reforms; new initiatives that fail to solve the problems they purport to; and concentration of power in the president's hands.

Reforms enacted by AMLO's "neoliberal" predecessors, however sensible, were quick to go. Early in 2019 he scrapped an education reform introduced by Enrique Peña Nieto, his immediate predecessor, that linked teachers' pay and promotions to the performance of their pupils. AMLO abolished Prospera, a much lauded conditional cash-transfer programme for the poor. Handouts, for example to farmers, are now presented as presidential gifts.

AMLO tried to reverse the opening of energy markets, once dominated by state monopolies, to private and foreign enterprises. Mexico's Congress is debating a bill under which electricity generated by state-owned CFE would get priority access to the grid, in preference to cheaper alternatives. This would not only raise prices for consumers but could breach the US-Mexico-►

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Women in Mexico

Tampon tempest

MEXICO CITY

The side-effect of a law against single-use plastics

ABAN ON SINGLE-USE plastics sounded like a good idea. But it has ended up enraging many women in Mexico's capital, a city of 9.2m. Last week they discovered that they could no longer buy tampons with plastic applicators.

Mexico City's government, which is led by a woman, Claudia Sheinbaum, has been implementing the law since the start of 2021. Its aim is to reduce the city's solid waste, thought to be second only to the amount produced by the New York metropolitan area, measured by weight. Plastic bags, cups and straws have already been banned. It took until now for tampons with plastic applicators, the only kind that were easily available, to run out of stock in most shops.

Regina Soltero, a 23-year-old doctor who works 24-hour shifts treating covid-19 patients in a public hospital, says she depends on them. "They are comfortable and less likely to leak on my white uniform," she says. Marina Robles, the city's environment minister, added to women's anger by declaring that tampons are not essential items. They are used mainly by prosperous women. Women should instead try reusable menstrual cups, which are made of rubber, said a city legislator.

Most Mexican women use pads, which are cheaper. Some young women think tampons cause them to lose their virginity, says Sandra Peniche, a doctor who runs a sexual-health organisation in Mérida in Mexico's south-east. Others simply don't know much about them. Dr Peniche has seen women who have worn a tampon for three days or had sex without removing it.

The ban is unlikely to help the environment much. Pads, which many women will now have to use—"I hate them," says Dr Soltero—are at least as polluting. The ban will probably be quickly circumvented. Tampons are on sale in towns just outside the city. Pharmacies inside it are reportedly selling them under the counter. As Sergio Sarmiento, a journalist, pointed out, the ban doesn't affect condoms, some of which are made of polyurethane, "despite them being plastic and used only once (I hope)".

Dr Peniche reckons the tampon ban is yet another example of women's needs being ignored—or worse. Last year, when thousands took to the streets to protest against a rise in murders of women, President Andrés Manuel López Obrador, an ally of Ms Sheinbaum, called them conservative opponents in disguise.

His tightfistedness, some economists fear, will lead to "scarring"—a permanent drop in output caused by a loss of jobs and businesses during the pandemic. Bound by fiscal constraints, the patron of the poor has done little to protect them. He has shuffled money around, slashing spending on the government apparatus and boosting it on pet social programmes. He has doubled old-age pensions and aims to pay

2.3m young adults to study or take up apprenticeships. Overall, though, social spending has risen little. Social programmes are being "done on the cheap", says Javier Tello, a television commentator. A sharp rise in the minimum wage has helped some workers with formal jobs. Businesses pay for that.

Where AMLO has splashed out is on old-economy projects that will deliver little return. He has poured money into Pemex, the world's most indebted oil company, and plans to spend \$8bn to build the Dos Bocas refinery in his home state of Tabasco. Airlines think the mountainous terrain around the military airport that is to become the alternative civilian hub for Mexico City will restrict flights.

The fourth transformation has not lessened the greatest dangers to Mexicans' safety, one new and one old. The government's handling of the pandemic has been disastrous. Its miserly social spending has contributed to a widespread feeling that unsafe work is the only alternative to going hungry. AMLO has been spotted just once wearing a face mask (most Mexicans do wear one). Mexico tests few people for covid-19 by international standards. Hospitals are full and oxygen tanks are in short supply. Vaccination got off to a very slow start. People who hoped that AMLO would show a greater sense of urgency after he contracted covid-19 were disappointed. On February 8th he reappeared after a two-week convalescence. He caught the bug, he said, because like many Mexicans he cannot stop working.

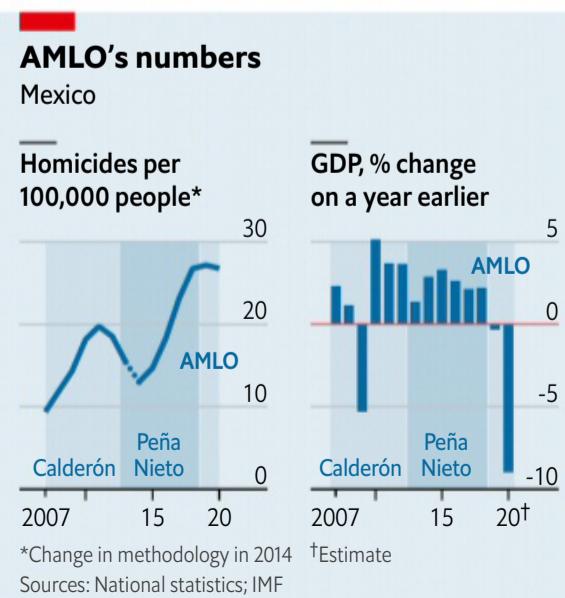
The voters who gave AMLO his landslide election win in 2018 wanted, perhaps more than anything else, a big reduction in the country's high number of murders. They are still waiting. AMLO proclaimed last year's 0.4% dip a "significant success", but it comes after a rise the year before. Murders of women, which led to mass protests last year, stayed at record levels in 2020.

AMLO rejected previous governments' tactic of killing or capturing crime kingpins, because this led to a splintering of gangs and thus to more violence. But his signature policies for combating crime have not so far worked. His notion that reducing poverty will ultimately lower crime "might stop a three-year-old becoming El Chapo", a notorious drug lord, says Mr Tello. "But it doesn't have an answer for the current El Chapos." Formerly suspicious of the armed forces, AMLO issued a decree giving them primary responsibility for fighting crime. A new 100,000-strong National Guard is composed mainly of soldiers rather than people trained in policing.

AMLO has fought the gentler crime of corruption by setting an example of probity and imposing stiffer penalties on bribe-taking bureaucrats. He has done less to strengthen institutions that will carry the

► Canada Agreement (USMCA), North America's free-trade pact. It would put at risk some 150 renewable-energy projects that are expected to bring more than \$40bn-worth of investment, and make it impossible for Mexico to reach its commitments to reduce greenhouse-gas emissions. AMLO cancelled the construction of a \$13bn airport for Mexico City that was already half-built. These policies have undermined the confidence of investors.

If all this were a prelude to enacting bold ideas for improving Mexicans' well-being, the cost might be tolerable. But AMLO's solutions are bullets discharged from an antique gun that is badly aimed and packed with too little fiscal firepower. His dedication to fiscal discipline, laudable in a populist of the left, became counterproductive in the pandemic. In a bizarre role reversal, the IMF is urging Mexico to spend much more than the 0.7% of GDP it has done to fight the pandemic's economic effects. Brazil, by contrast, has spent 8% of GDP, and Argentina 3.8%. AMLO resists because he fears that Mexico could become beholden to foreign creditors as it did during a financial crisis in 1982.



▶ battle forward. The national anti-corruption prosecutor is overwhelmed with cases. A proposal by anti-graft prosecutors for constitutional guarantees of their autonomy and a minimum budget "has not found traction with López Obrador's congressional majority", according to a recent report by WOLA, a think-tank in Washington. An autonomous government agency estimates that the number of acts of corruption rose by 19% between 2017 and 2019. The vast majority of government contracts are not open to tender.

Ordinary Mexicans have overlooked

AMLO's failures because he has a bond with them that most presidents lacked. "He is from the people, for the people and with the people," says Daniel Sibaja, a Morena official in Ecatepec. His popularity flows from who he is rather than what he does. Power thus flows to him.

AMLO sets the national agenda in daily morning press conferences that can last three hours. He has cut the budgets and dismissed the bosses of autonomous institutions such as Coneval, which measures poverty. Last month he proposed to abolish several autonomous agencies, including

the antitrust body and freedom-of-information institute. He rails against critical media and ratings agencies.

AMLO damages the social fabric by constantly "characterising the elite as wicked and the poor as saintly and victimised", says Soledad Loaeza, a historian. The elite call him a Mexican version of Hugo Chávez, Venezuela's late socialist strongman. That is an exaggeration. But the mix of policy failure and power-grabbing is worrying. Next June's congressional and regional elections may be Mexicans' last chance to tame their rampant president. ■

Bello A case of mistaken identity

The failures of Carlos Menem, a conservative caudillo, tarnished liberalism

IN BUENOS AIRES in 1997 Carlos Menem hosted a regional "Davos" of international business types. With a dull evening reception under way, Argentina's president swept in, cheeks shining and eyes flashing, dispensing bear hugs, starlets in tow. Your columnist felt a jolt of political electricity course through the assembled suits. So discredited was Mr Menem by the time he died, aged 90, on February 14th that it is hard to remember that he was once acclaimed as a Latin American economic visionary.

On taking office in 1989 amid hyper-inflation, he swiftly grasped that Argentines wanted price stability and economic order above all else. He tore up the populist programme on which he had been elected and the statist economic doctrines of his Peronist movement, and implemented what he called "major surgery without anaesthetic". Domingo Cavallo, his economy minister, imposed "convertibility", a law under which the peso was fixed at par to the dollar and the supply of pesos was restricted to the Central Bank's hard-currency reserves. Having persuaded Congress to grant him sweeping powers, Mr Menem slashed import tariffs, subsidies and curbs on foreign investment, and privatised hundreds of state enterprises, from the railways to the oil company.

At first it worked. Inflation dissipated, foreign capital poured in and the economy roared. Mr Menem basked in popularity. Having changed the constitution to allow re-election, he easily won a second term in 1995. But unemployment rose, too. Under convertibility, Mr Menem had forsaken both monetary and exchange-rate freedom. When foreign capital poured out of emerging markets, Argentina suffered a slump culminating in financial collapse in 2001-02. In what

until the 1970s had been a middle-class society, the poverty rate soared to 56% and unemployment to 21%. Mr Menem handed health care and education to provincial governments without giving them more resources. Argentina acquired Latin American social inequalities.

Not all of this was Mr Menem's fault, but much was. His lasting legacy was a record so notorious as to shut off rational discussion about economic policy in Latin America for a generation. He and his Argentina were indelibly branded as "neoliberal" slaves to the "Washington consensus". By extension, liberalism and a capitalist economy were damned.

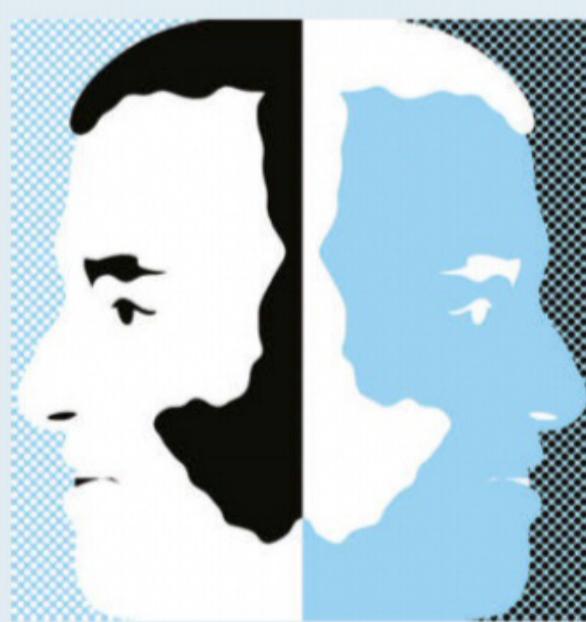
This charge sheet was based on a blurring of political identity. Peronism is an alliance between trade unions and the *caudillos* of the backward north, men such as Mr Menem, who was governor of the province of La Rioja. His keystone, convertibility, divided economic liberals: some thought it necessary in a country with a hyperinflationary past; others saw it as a conservative policy, akin to the gold standard. It certainly violated a tenet of

the Washington consensus, which called for a competitive exchange rate to stimulate exports. Convertibility's fixed peso quickly became overvalued, so the trade opening killed some potentially viable manufacturing firms.

Mr Menem himself undermined convertibility by piling up foreign debt to spend on political clientelism in a quest for an unconstitutional third term. He should instead have helped the unemployed with retraining and public works. In many cases his privatisations created monopolies, or rewarded cronies. He abolished some economic privileges only to create others. These mistakes did much to discredit privatisation, deregulation and economic openness. Their subsequent lack is one reason Latin America has scarcely grown economically for the past seven years. The boldness of his reforms would be welcome in, for example, today's Brazil.

Forgotten is the mess that Argentina's statist, protectionist economy was in when Mr Menem took over. In ministries, broken typewriters (yes), toilets and lifts languished unrepaired; state-owned companies lost 6% of GDP per year; only half the locomotives of the state railways worked; businesses employed staff whose sole job was to hold a telephone handset for hours to get a line.

Mr Menem was a democrat—he was briefly jailed by a dictatorship in 1976. But he was an illiberal one. He packed the Supreme Court and the audit tribunal. In his inner circle influence-trafficking, corruption and links to organised crime flourished. During his presidency, politics merged with *la farándula* (the more vulgar end of show business). When the economy dived, the glitter became a mockery. This was Mr Menem's failure, not liberalism's.





France's forever war

Which way out?

DAKAR

After years of fighting in the Sahel, is it time to start talking?

AT MIDDAY ON January 2nd the roar of motorbikes cut through the quiet near Tchoma Bangou and Zaroumadareye, two villages in western Niger. Next came the rat-tat-tat of gunfire. Then the screaming, as jihadists slaughtered at least 100 people.

That weekend in Bounti, in central Mali, men gathered to celebrate a wedding. As the smell of grilled mutton wafted into the air, two French jets swooped in, bombing the gathering and killing 19 people. The French government insists it was a jihadist meeting. Eyewitnesses disagree.

That grim weekend laid bare the conundrum of France's military intervention (called Operation Barkhane) in Burkina Faso, Mali and Niger, three of Africa's poorest countries. Last year conflict claimed some 6,200 lives, a 30% jump over 2019 (see chart). Fighting has forced almost two million people from their homes; 31m are in need of food. Outside military help is essential to shore up the region's weak states, but it is excruciatingly hard to get right. French troops have been in the Sahel in force since 2013, when they stopped armed northern separatists and jihadists from

sweeping towards Bamako, Mali's capital. They have stayed to fight jihadists.

Last year France sent another 600 soldiers, taking its total to 5,100, in the hope of gaining the upper hand. It has also drafted in commandos from European allies. Thousands of UN blue helmets patrol Mali, while soldiers from the five countries in the region, known as the G5 Sahel, are also

battling jihadists.

The French surge has had some successes. Last year French and allied forces killed scores of fighters, particularly those from Islamic State in the Greater Sahara (ISGS), as well as some of the jihadists' leaders. Yet groups such as Jama'at Nasr al-Islam wal Muslimeen (JNIM), which is linked to al-Qaeda, are proving to be resilient. Overall, says an American defence official, "we don't see anything that is dramatically turning the tide in favour of governments."

One reason may be that they have been too focused on military solutions. Even as French forces have proved able to "cut the grass" by killing jihadists, they have been unable to "stop jihadism from expanding", argues Ibrahim Yahaya Ibrahim of the International Crisis Group, a Brussels-based NGO. The militants recruit most easily from neglected villages without schools and clinics. France and its partners are supporting development, too, but many of the projects have failed.

This leaves France with the challenge faced by others who have recently fought insurgencies in places such as Afghanistan and Iraq. It is that of trying to improve security—which is almost impossible to do without development—and also drive development—which cannot happen without better security. And France needs to show progress, or at least find an honourable way out, in case public support falters.

When Emmanuel Macron, France's president, spoke with the leaders of five Sahelian countries (including Chad and

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► Mauritania) on February 16th, he warned them of “significant changes” to France’s presence in the region, though he also said that these would not happen immediately. For the first time a poll has shown that a small majority of people in France opposes the intervention in the Sahel. Mr Macron, who faces a presidential election next year, may also have had an eye on anti-France protests in the region.

Yet governments in the Sahel want French troops to stay because they have little hope of holding back the jihadists without them. Regional forces have improved markedly, thanks in part to Western training. In 2019 jihadists attacking a barracks in Boulikessi in Mali killed at least 40 soldiers. Two weeks ago jihadists attacked the same barracks. This time Malian troops repelled them for the loss of six of their own.

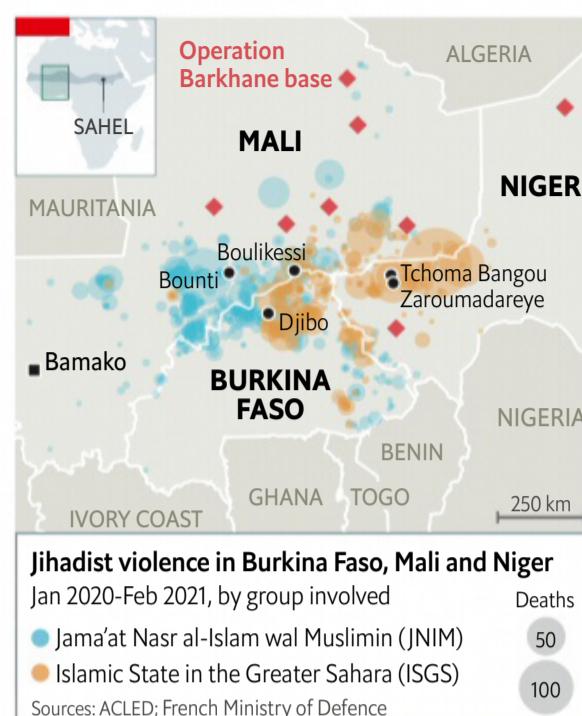
Even so, Mali’s army remains weak. Aly Tounkara of the Centre for Security and Strategic Studies in the Sahel, a think-tank in Bamako, reckons that it could take another ten years before they are ready to replace the French. Local forces also have an appalling human-rights record. Last year more civilians were killed by security forces than by jihadists, reckons José Lueugo-Cabrera of the OECD, a rich-country think-tank. Such abuses drive angry young men into the arms of extremist recruiters.

Politicians such as Mali’s interim prime minister, Moctar Ouane, or Burkina Faso’s prime minister, Christophe Dabiré, are pushing for another approach: negotiating with the enemy. Talks are not on the cards with the most bloodthirsty outfits, such as ISGS, the group blamed for the slaughter on January 2nd. But back-channel communications are already open with JNIM thanks to a prisoner swap last year. In central Mali three local peace agreements were recently signed between rival ethnic groups. Few believe that could have happened without jihadist involvement.

In Burkina Faso the government has already negotiated with JNIM in some places, says Héni Nsaibia of Menastream, a consultancy. One example of a deal may be Djibo, a city in northern Burkina Faso. For months it was blockaded by jihadists. Then, almost overnight, buses and trucks began travelling freely.

Ferdaous Bouhlel of the University of Tours argues that, beneficial as local deals are, it is only national agreements that can stem widespread violence. Iyad Ag Ghali, JNIM’s leader, has said he is willing to talk to the Malian government, but only after French and UN forces have left. Whether this is a bottom line, or simply a negotiating ploy, is not clear.

Publicly France says it does not negotiate with terrorists. France’s foreign-intelligence chief, Bernard Émié, recently called jihadist leaders in the Sahel the “direct heirs to Osama bin Laden”. In private,



however, some French officials admit that their opposition to Sahelian governments talking with some members of jihadist groups is not absolute. Even so, agreeing to talks is far easier than reaching a deal. The chances of failure are enormous. But after years of bloodshed many in the Sahel, if not quite in Paris, are willing to try. ■

The International Criminal Court

The case against the prosecutor

NAIROBI

The International Criminal Court’s new chief prosecutor is controversial

BORIS JOHNSON’S government was cock-a-hoop. The election on February 12th of Karim Khan, a British barrister, as chief prosecutor for the International Criminal Court (ICC) in The Hague was surely a sign that Britain still had diplomatic heft post-Brexit. Mr Khan’s appointment would be “pivotal in ensuring we hold those responsible for the most heinous crimes to account,” beamed Dominic Raab, the foreign secretary. Others say Mr Khan’s appointment is less a diplomatic coup for Britain than for Kenya, whose government has done much to damage the ICC’s credibility.

Victims of human-rights abuses around the world have been ill-served since the court began operating in 2002. Mr Khan’s two predecessors, Luis Moreno Ocampo and Fatou Bensouda, managed to secure just five significant convictions between them in 18 years. Mr Khan has many of the attributes a successful prosecutor needs: he is, admirers say, combative, wily and “frighteningly clever”. He also has decades of experience in international criminal law, most recently heading a UN investigation into atrocities committed by Is-

amic State. His candidacy was backed by, among others, six African NGOs.

But he has critics, too. Last month 22 African human-rights groups, most of them Kenyan, opposed Mr Khan’s candidacy. Their concerns stemmed mainly from his role as chief defence counsel for William Ruto, now Kenya’s deputy president, in one of the most troubled trials before the ICC. In 2012 the court accused Mr Ruto and Uhuru Kenyatta, now Kenya’s president, of orchestrating ethnic violence in which more than 1,000 people were killed after a disputed election five years earlier.

Both cases collapsed. Charges against Mr Kenyatta were dropped in 2014. The case against Mr Ruto was halted two years later, after prosecution witnesses recanted their testimony or simply vanished. The ICC judges refused to acquit him, citing evidence of witness intimidation and “intolerable political meddling”. They also made it clear that the case could be revived.

There is no suggestion, of course, that Mr Khan did anything wrong in defending Mr Ruto. Every defendant is entitled to a lawyer, and lawyers have a duty to represent their clients to the best of their ability. Nor is there any reason to believe that Mr Khan was anything but appalled that witnesses were intimidated. Judges in the case praised him for reporting witness-tampering to the police. Even so, the Ruto case raises a number of questions.

The first is: what would Mr Khan do if the Ruto trial were revived? Even assuming that Mr Khan asks to be recused from all matters involving the Kenyan deputy president, as is routine in such matters, would a pall still be cast over the court? “It is not about bias but about the perception of bias,” says one Kenyan lawyer.

In this regard, Mr Khan has not always helped himself. Critics in Kenya believe that over the course of Mr Ruto’s trial he overstepped the boundaries of a legal advocate. In 2016, after the collapse of the case, he addressed a celebratory rally called by the ruling party at which Mr Kenyatta promised that no Kenyan would ever be tried before a foreign court again. In a television interview Mr Khan criticised the ICC’s prosecution, suggesting it was aimed at “regime change in Kenya”.

Mr Khan’s conduct of the defence won him admiration among Kenya’s ruling politicians. In turn he has them to thank for his new position. Mr Khan’s two predecessors were both appointed by consensus among the ICC’s members. In the middle of last year the ICC’s selection committee released a shortlist that did not include Mr Khan. The Kenyan government objected and demanded that the selection process be opened up again. The committee duly complied, allowing Mr Khan and others a late tilt at the job.

For Mr Khan’s stint in office to be judged ►

► a success, he will have to show zeal and steel in pursuit of big-time human-rights abusers. George Kegoro, the executive director of the Kenya Human Rights Commission, an NGO, has doubts. He called the appointment a “major reversal” for international justice and warned that it would “break the court”. Mr Khan’s first challenge will be to provide the necessary assurance that the ICC will be able to protect future whistle-blowers who testify against murderous bigwigs after the killing of Meshack Yebei, a witness in Mr Ruto’s case, whose mutilated body was found in 2015.

It would be unreasonable to expect Mr Khan to win over all his critics. But he could make a start at rebuilding trust in the ICC by looking at its past failures. Some Kenyan prosecution witnesses who remain anonymous today still worry that their lives could be at risk if they were ever identified. “Everyone involved in that process is very worried,” says Mutula Kilonzo junior, a Kenyan senator and lawyer. Beefing up the court’s protection programmes to allay these fears ought to be Mr Khan’s first step. Only by looking backwards can he hope to ensure that future witnesses are able to testify with confidence. ■

Tree trade

Coconut shy

ZANZIBAR

Why palm trees are driving property moguls nuts

THE ISLAND of Zanzibar has more than 4m coconut trees, and each one has an owner, says Viliai Farahani, a local chief known as a “sheha”. It is his responsibility to remember who owns every tree in and around his village. Standing outside his bungalow, he squints in the sun and points to a swaying palm in the distance. “That one belongs to Hamishim Shamba,” he says, “and that small one over there belongs to Hamisi Makami.” A man known as Haji Mucha used to own a cluster of trees to the east of the village, he explains, but he died and passed them on to his daughter.

That is not unusual. In Zanzibar, the largest island in a semi-autonomous archipelago off the coast of Tanzania, coconut palms (and other fruit trees) are handed down through generations. Whereas all land is owned by the government and may only be leased for up to 99 years, fruit trees can be bought and sold. A withered mango tree on the edge of a road might well be a family heirloom. Coconut trees are the most plentiful and the most useful. Coconuts are the second most important cash crop, after cloves. Islanders also use the

leaves to thatch roofs.

But Zanzibaris’ tradition of passing on trees also makes it complicated for newcomers to lease land. Sometimes they negotiate leases that include the fruit trees on the land, in which case it becomes the government’s job to compensate the tree owners. If the trees are excluded, the new leaseholders may be landed with a headache. Although it is relatively easy to acquire a beachside plot and a permit to build on it, it can take years to identify and pay off the owners of every single coconut tree.

“When we leased the land we started noticing these little trees growing,” says Joyce Nyambura Boswell, a Kenyan hotel owner. “The girls went and sat under them, and somebody came and said, ‘Hey, this is my tree. The land belongs to you but the tree is mine.’” Soon more tree magnates turned up, each demanding payment. For three years people squabbled over who owned the 50-odd coconut trees on the land. Sometimes Ms. Boswell ended up paying three times for one arboreal asset. Luckily they were cheap: about \$30 each.

In the past 15 years the cost of land in Zanzibar has rocketed, and so has that of trees. “People can demand all they want if it’s prime land,” reflects one hotel manager in the beachside town of Bwejuu. Mr Farahani reckons that a coconut tree on a stretch of Zanzibar’s most desirable ground could now go for up to \$2,000.

Resorts are springing up near Zanzibar’s white-sand beaches to cater for tourists, mostly from Russia. Their number was growing rapidly before the pandemic. Some people grumble that these developments risk ruining a magnificent coastline. But in the short run, at least impoverished locals are making good profits off their ransom trees. They have realised they can get richer by selling their trees to hoteliers than by flogging overpriced coconuts to tourists on the beach. ■



Climbing the property ladder

Angola’s economy

Oil, toil and spoils

JOHANNESBURG

João Lourenço’s reforms please the IMF. What about Angolans?

JOSÉ EDUARDO DOS SANTOS ruled Angola for 38 years. During his presidency Angola fought an on-off civil war that ended in 2002, just as an oil boom was starting. As the price of black gold soared, Luanda, the capital, became one of the world’s most expensive cities, a place where developers imported palm trees from Miami and melons cost \$100 each. Though most of the country lives on less than \$2 per day, bigwigs in the ruling party, the MPLA, stashed billions of dollars abroad.

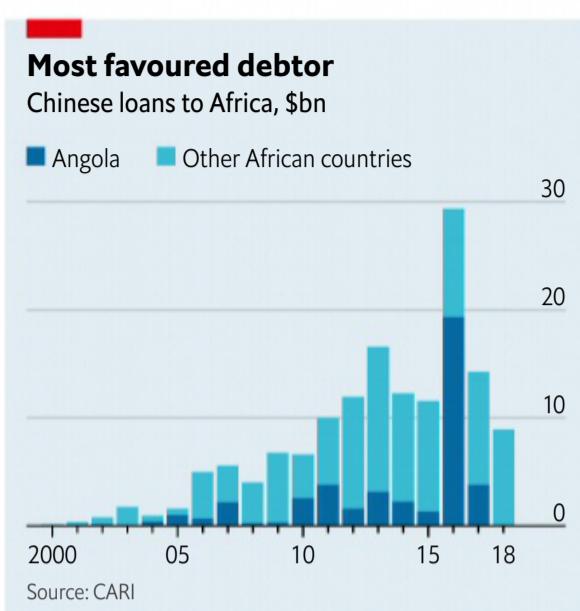
By the time João Lourenço took over in 2017, the oil boom was over. The former defence minister pledged to clean house and overhaul the economy. The Angolan leader can point to some successes. But prolonged hardship and public scepticism about his anti-graft efforts are raising doubts about his ability to reform one of sub-Saharan Africa’s largest economies.

How he fares will depend partly on Vera Daves de Sousa. At 37 she has been alive for less time than Mr dos Santos was president. The youngest finance minister in Africa—and one of just three women—took the role in October 2019, months before covid-19 hit the fragile economy.

Hers is a monumental task. Oil accounts for nearly all of Angola’s exports and two-thirds of government revenues. Low prices and declining production have brought a collapse in GDP and soaring debts. GDP per person is almost a quarter lower than in 2014. The IMF estimates that debt repayments due in 2020 exceeded government revenues and that the ratio of public debt to GDP reached 134%. It is likely that 2021 will be the sixth consecutive year in which the economy shrinks.

Angola has, however, recently gained some “breathing space”, Ms Daves de Sousa says. Its key talks have been on a “case by case” basis with Chinese lenders, she says. From 2000 to 2018 Angola received almost 30% of all loans from China to African governments (see chart on next page). Today \$20bn—roughly half of Angola’s external debt—is owed to Chinese lenders; \$15bn of that is owed to the China Development Bank. It and another large Chinese creditor have agreed that Angola can delay principal repayments until mid-2023. These deals will “deliver substantial cash-flow savings” in the short term, says the IMF.

The fund, which has since 2018 agreed to lend \$4.5bn to Angola, is also encouraged by the country’s fiscal policies. Ms ►



► Daves de Sousa has cut wasteful spending. In fact, she says, the IMF told her to go easy in some areas, protecting funding for health and education. Given the fund's reputation for promoting austerity, this was "a positive surprise", she says.

Her privatisation plans have also been welcomed. Under Mr dos Santos there was little separation between party, state and economy. Sonangol, the state oil company, owned businesses in nearly every industry. The finance minister wants it to sell shares to the public and for 194 state firms or assets to be sold. There have been delays; just 34 sales have taken place. But, says Ms Daves de Sousa, private firms must be the "main driver" of growth and diversification away from oil. When *The Economist* asks whether the MPLA is still Marxist, she laughs: "In our hearts, yes; in reality, no."

Most Angolans have yet to see much benefit. Annual inflation is around 25%. Last year there were protests in some cities. People want an end to suffering, but also for the president to live up to his promises on tackling corruption.

Angolan prosecutors have gone after some of those at the very top of the old regime, including the "royal family". In August, José Filomeno dos Santos, son of the former president, was one of four men found guilty of trying to defraud the central bank. Authorities have frozen assets of Isabel dos Santos, the former head of Sonangol, and daughter of the ex-president. (She denies any wrongdoing.)

Yet for many Angolans the anti-corruption drive appears selective and excludes people close to the current government. This, coupled with a brutal crackdown on some protests, suggests that there are limits to how much an outfit like the MPLA can change. Mr Lourenço has consolidated his position within the ruling party. He is pleasing outsiders with some of his economic policies. But it is hard to stay popular with ordinary Angolans when the cost of food is soaring. The danger for the president is that, having raised expectations, he cannot, or will not, fulfil them. ■

Iranian politics

The agitator

Mahmoud Ahmadinejad is mulling another run for the presidency—and espousing better relations with America

AS MEMBERS OF the Iranian regime marched through the capital, Tehran, to mark Revolution Day on February 10th, Mahmoud Ahmadinejad held his own gathering. The former president, an irritant to clerics and liberals alike, had his fans gather outside his flat in a modest neighbourhood of Tehran, where they asked God to grant him a third term in office. The police eventually dispersed the crowd for gathering without a licence. With no hint of irony, Mr Ahmadinejad (pictured) then accused the relatively moderate current president, Hassan Rouhani, of "encroaching on the sanctity of liberty".

Mr Ahmadinejad did plenty of that when he was in office. In 2009, after winning a second term in a fishy election, he crushed the largest protests in Iran since the revolution in 1979. His foes saw him as a populist troublemaker. Even his powerful allies grew tired of him. But as Iran gears up for an election in June, Mr Ahmadinejad is considering another run. Polls say he is the favourite—if the clerics let him stand. "He has immense popularity, especially among less educated and less affluent Iranians," says Sadiq Zibakalam, a political scientist.

Mr Ahmadinejad got his start in politics at university during the revolution, when he co-founded a group uniting revolutionary student factions. Some people have accused him of being directly involved in the storming of the American embassy in Tehran and the taking of hostages. Mr Ahmadinejad

denies this (apparently he thought the Soviet embassy was a more deserving target). He later joined the Basij, a militia run by the Islamic Revolutionary Guard Corps (IRGC), the regime's most powerful security force. But it was as mayor of Tehran that he distinguished himself as a conservative man of the people. Appointed in 2003, he reversed liberal reforms put in place by his predecessors and won over the public by, for example, helping street-sweepers clear the rubbish.

Iran held a presidential election in 2005. Then, as now, the public was angry with corrupt insiders rigging the economy. Many saw Mr Ahmadinejad as someone who would take on the elite and clean things up. His scruffy checked shirts and use of slang in campaign speeches were a contrast to the clerics. Yet he was also supported by conservative voters and, most importantly, by the supreme leader, Ayatollah Ali Khamenei.

Mr Ahmadinejad became the first and only layman to win the presidency since 1981. During two controversial terms (from 2005 to 2013) he denounced America, Israel and the Arab states, souring relations. At home he increased spending and maintained subsidies, winning over the poor but racking up huge deficits in spite of record oil revenues. He also struggled with the clerics over personnel matters, among other things. They supported his re-election in 2009 and the quashing of protests, but the animosity between them grew. ►



A man who knows how to please crowds, or disperse them violently

When Mr Ahmadinejad asked Mr Khamenei for permission to run again in 2017, the ayatollah told him that it was not in Iran's best interests. His candidacy was eventually rejected by the Guardian Council, which oversees electoral matters and is controlled by Mr Khamenei. Protests over the economy broke out later that year. Mr Ahmadinejad's response was initially circumspect (angering some), but he would later criticise all of Iran's leaders. More recently he wrote to Vladimir Putin, Russia's president, telling him not to stay in office forever. That was seen as a veiled message to Mr Khamenei, who now keeps Mr Ahmadinejad at a distance. The authorities have shut down Mr Ahmadinejad's website and arrested some of his advisers.

While Mr Ahmadinejad's relationship with the clerics has grown worse, his hostility to America seems to be dimming. During his time in office, America rallied international support for economic sanctions aimed at stopping Iran's nuclear programme. Mr Ahmadinejad's threatening rhetoric made that easier (he once said Israel should be "wiped from the map"). But in 2019 he called on the Iranian government to talk to Donald Trump, then America's president, who had ditched a deal under which Iran curbed its nuclear programme in return for sanctions relief. Perhaps Mr Ahmadinejad saw something of himself in Mr Trump, another populist demagogue who uses language like a club.

Mr Ahmadinejad posts on Twitter (unlike Mr Trump, who was banned). He writes notes to Angelina Jolie, an American movie star, and quotes Tupac Shakur, a deceased American rapper. In January he spoke to Fox News, a cable network in America that often has guests who are hawkish on Iran. "I have sent a letter to [President Joe] Biden after he was elected," said Mr Ahmadinejad. The text of the letter is vague, but the move suggests he would be open to dialogue with America's new president, too. "He knows many Iranians have had enough with anti-Americanism and want a deal with America," says Mr Zibakalam. "He's bold enough to do it and, unlike Rouhani, he does not fear the supreme leader's wrath."

Will the supreme leader allow him to run, though? The clerics might see his candidacy as a way to get out the vote at a time of widespread disillusion with the status quo. But they clearly do not trust him. Mr Ahmadinejad, for his part, remains coy about his future. Regardless of whether he runs, many think he will continue to influence politics. Critics call him *bache-porou*, a rude child who cannot be tamed. "He's trying to remain relevant till the time of crisis," says Saeid Golkar, an Iran-watcher in America. "If the supreme leader dies or the regime collapses, he wants to be there to fill the vacuum." ■

The United Arab Emirates

Hope and despair

DUBAI

A probe journeys into outer space; a princess cannot leave her villa

IT CERTAINLY looks like a video made by a hostage: a nervous close-up filmed in a dark room. On February 16th the BBC broadcast smuggled messages from Sheikha Latifa, a daughter of Dubai's billionaire ruler, Mohammed bin Rashid al-Maktoum. The princess has twice tried to flee the emirate, accusing her father of abuse. He denies the allegations. Her second escape, in 2018, ended with her being seized off a yacht in the Indian Ocean. Now she alleges she is being held under house arrest, in what she terms "solitary confinement" without medical care. The UN's top human-rights body said it would raise her case with the United Arab Emirates (UAE), of which Dubai is part.

The tapes overshadowed what was supposed to be a triumphant moment for the UAE. On February 9th a probe called Hope finished its seven-month journey of 493m km (306m miles) to Mars. Its arrival in Martian orbit made the UAE's space agency only the fifth to reach the red planet, and the first from the Arab world. After two months of course corrections and instrument calibrations it will begin to study Mars's atmosphere, with the first batch of data due for release in September.

Dubai's Burj Khalifa, the world's tallest building, was lit up in red for the occasion (pictured). A popular image on social media showed the rulers of Abu Dhabi and Dubai, the UAE's capital and its business hub, strolling hand in hand with Mars in the background and a space shuttle blasting off over their shoulders.



To Mars, or solitary confinement

The shuttle, of course, is a now-defunct bit of American engineering. The Hope probe was not a strictly Arab endeavour either. Under half of the 450-person team is Emirati, with most of the others drawn from American universities. It was assembled in Colorado and lofted into space aboard a Japanese rocket.

Science is often a team sport: American astronauts relied on Russian rockets to reach orbit after the shuttle was retired. And the Emiratis say they have learned new skills that will help build an indigenous space industry. "Five or ten years from now I'd like to see Emirati companies and Emirati engineers building components for space programmes, not only in the UAE but overseas," says Omran Sharaf, the project manager for the Mars mission.

Even in scientific endeavours, though, politics are never far off. Signs on Dubai motorways that typically warn of collisions or fog instead proclaimed, in Arabic, "congratulations to the Arabs, the Hope probe reached Mars". The UAE is hardly the first Arab country to try to export an ideology across the region. In the 20th century Egypt sought to spread Arab nationalism, and Saudi Arabia an austere strain of Islam. However, whereas they were natural leaders—one the most populous Arab country, the other the custodian of Islam's holiest sites—the UAE has just 1m citizens and will mark its 50th birthday only in December.

The UAE posits itself as a post-ideological country, the sort that would make a national celebration of launching a spacecraft to propel science education. That is its own kind of ideology, one that resonates in less functional Arab states. In Lebanon, for example, some noted the contrast with their own country. Since the Hope probe began its journey, Beirut was devastated by a massive explosion and politicians have spent months bickering over cabinet posts in a bankrupt state. Other Arabs joked about modest infrastructure projects in their countries which have dragged on for far longer than six months.

Mr Sharaf describes the Mars mission as a challenge to other Arab states: "If the UAE can reach Mars in less than 50 years, then you can do more, given your history." That is a compelling message. But the UAE also has room to improve, in the areas of human rights and liberty, as the saga of Sheikha Latifa shows.



India's labour market

200m jobs short

MUMBAI

Work is getting scarcer and more precarious, especially for women

BEFORE COVID-19, Ashwini Pavde's small family was doing fine. She worked as a cook for as many as six households. Her husband was the driver for a company boss. A combined monthly income of \$300 tidily covered fees at a local "English-medium" school for their 14-year-old son, as well as the \$75 rent on their single-room cement house in Gandhi Nagar, a dense slum wedged between bristling tower blocks in the outer suburbs of Mumbai.

The pandemic has been tough, though. Ms Pavde's husband lost his job when his employer started working from home last March. He has found the odd job as a taxi driver. Mostly he has been idle. During weeks of heavily enforced lockdown, just two of Ms Pavde's clients kept paying her, and only half her normal wage.

Similarly stricken neighbours have fled to their villages of origin, but the Pavdes have no land to go back to. So they have stuck it out, although with Ms Pavde's earnings reduced to barely \$50 a month, they rely heavily on subsidised rice and lentils. To pay school fees she has bor-

rowed \$680 through a savings pool that she joined with women friends. But when will she find work enough to repay the loan? "People tell me we'll call you if we need you; we're working from home and can manage," Ms Pavde says. She reckons it will take two years for her family to get back to where they were a year ago.

In terms of health, India appears to have escaped relatively lightly from covid-19, with a toll of reported deaths per million people that is less than a tenth of those in America or Britain. In terms of jobs, Indians have suffered worse. Like the Pavdes, millions have lost work, or been forced to accept less money and harsher conditions. With only the thinnest cush-

ion of government support, it is the poor who are hit hardest. A household survey in Mumbai in January found that 9% of those in the top socioeconomic quintile had lost their jobs. Their average daily income had dropped from \$22.30 to \$17.40. Among those on the bottom rung, 47% had lost their jobs. Daily income had fallen by nearly half, from \$6 a day to just \$3.35.

Women have been squeezed especially hard. The same survey in Mumbai found that while three-quarters of men said their jobs had been adversely affected by the crisis, the proportion among women was 89%. And whereas most men have now either returned to old jobs or found new ones, joblessness among women appears to have lingered. The Centre for Monitoring the Indian Economy (CMIE), a private research firm that closely tracks employment, reckons that back in 2019 some 9.7% of adult women in Indian cities considered themselves part of the labour force. That number dropped to 7.4% during the lockdown last spring, but disturbingly seems to have sunk still lower by November, to just 6.9%. CMIE's surveys, which cover 170,000 households across India, found that men who lost their job during the lockdown were eight times more likely to find another within a few months than women who had lost theirs.

There are simple reasons why covid-19 has been a particular shock to female employment. One is that more women have lower-paying, precarious jobs to start with,

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such as in domestic service. Many women are teachers, and India's 450,000 private schools have been hard-hit by mandatory closures that are only now lifting, state by state. Hemalatha, a 46-year-old high-school computer teacher in Salem, a city of 1m in the state of Tamil Nadu, considers herself lucky: although she suffered a 50% cut to her salary in June and is still paid less than before, most teachers in the junior school got fired. Far more women than men have also pulled out of jobs in order to look after children who have been stuck at home. And meanwhile men have found it easier to shift into fields boosted by the pandemic, such as delivery services. In Chennai, Raj Suresh abandoned a local travel magazine he had run for 20 years when advertising crashed, but found a new career peddling "immunity-boosting" herbal remedies.

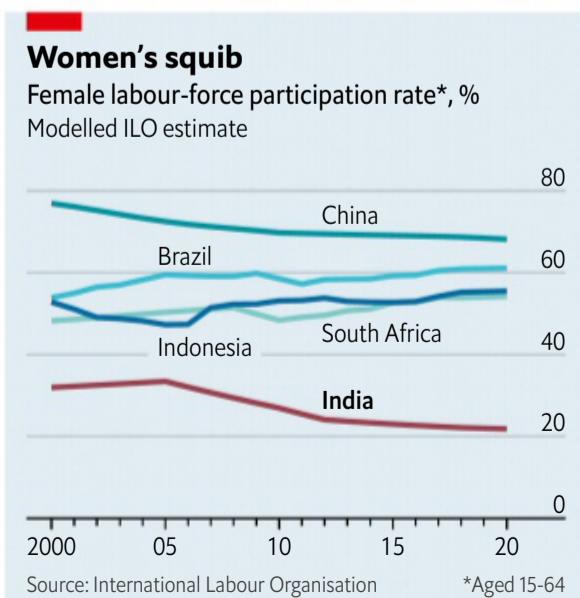
In many ways, however, the pandemic has simply exacerbated labour-market trends that were already in motion. The proportion of women in the workforce has been falling for some time, in part owing to structural changes such as mechanisation on farms and the decline of traditional craft industries. Relatively small improvements in living standards also prompt women in many families to stop working, both as an emblem of their status and out of fears for their safety outside the home. According to the International Labour Organisation, the female participation rate fell from almost 26% in 2010 to less than 21% in 2019. CMIE uses a more exacting definition of participation, which requires people to have been working or actively and recently looking for work. By its measure participation sank from 16% in 2016 to 11% by the end of 2019 because of the slowing economy and a series of harmful policies, such as "demonetisation" (the withdrawal of most paper currency, which led to a nationwide cash crunch).

Largely because of the dismal level of female participation, India's overall workforce has failed to grow. It was 420m in 2016, and is now just 400m by CMIE's

count. It would be around 600m if India had a similar labour participation rate to, say, China or Indonesia (see chart). Just as worrying as the failure to generate jobs, says Mahesh Vyas, CMIE's boss, is the failure to generate good ones. Despite long efforts to "formalise" the economy, a government survey in 2018 found that 77% of workers were either self-employed or casual labourers. That proportion has stayed stubbornly fixed, as companies have grown used to skirting onerous labour laws by subcontracting, hiring temporary workers or doling out tasks to freelancers. This practice is what led to clashes at an iPhone assembly plant near Bangalore in

December, where thousands of subcontracted workers had been infuriated by poor pay and long hours compared with the plant's far smaller number of pukka salaried employees.

Mr Vyas does not think this trend will change soon. During the pandemic, he notes, a lowering of corporate taxes and of interest rates was intended to boost investment and hiring. But many companies simply boosted dividends while continuing to trim payrolls. Even as unemployment has risen, corporate profits and stock prices have hit record levels. "Quite simply, the terms of trade have turned against labour," says Mr Vyas. ■



New Caledonia Les Kanaks en marche

WELLINGTON
Parties that favour independence win a majority

GOVERNMENTS COME and go in New Caledonia, a French territory of 270,000 in the south Pacific. There have been 16 since 1998, when the French government and local politicians signed the Nouméa Accord, a power-sharing deal that aimed to end violent agitation for independence. The new government named this week, however, stands out. It is the first dominated by pro-independence parties, with six of 11 ministers. That, in turn, means New Caledonia should soon have its first indigenous and first pro-independence president.

The indigenous Kanaks, although the largest ethnic group, are less than half the population. (Europeans and migrants from other parts of the Pacific are most of the rest.) In two successive referendums on independence, in 2018 and 2020, the islanders chose to remain part of France, although the outcome of the most recent ballot, in October, was a narrow 53%-47%. The territorial congress reflects the same division, with a loyalist coalition holding a slim majority. The congress elects the 11 members of the government, although a proportional system means that both pro- and anti-independence forces are represented. Hitherto, the loyalists' majority in the congress had allowed them to dominate the government, and thus control the presidency.

After a squabble about the sale of a big nickel mine caused the previous government to fall, a small party, L'Éveil Océanien (Oceanian Awakening), supported by migrants from France's other Pacific territories (French Polynesia and Wallis and Futuna), withdrew its support for the loyalist coalition. Instead, it backed the ministerial slate put up by a pro-independence coalition, the Front de Libéra-

In the middle of a chain reaction

tion Nationale Kanak et Socialiste (FLNKS). Further partisan manoeuvring prevented L'Éveil from winning a portfolio itself, but its support gave independence parties a majority.

Further horse-trading is to come. Each of the two main pro-independence coalitions, FLNKS and UNI, has a candidate for president. But with six of 11 votes, independence forces should be able to elevate one of their own. That could matter a lot. The third and final referendum on independence under the Nouméa Accord will probably be held next year. The government can do much to shape the campaign. And the feeling that independence is nigh may prompt some Europeans to move away, altering the shape of the electorate. The parliamentary wrangling is arcane, but the consequences for New Caledonia are likely to be profound.

Lockdown in the Philippines

Suffer the little children

MANILA

Filipino kids have been confined to their homes for almost a year

OFELIA ABO has not left home for 11 months. In the mornings she eats lots of snacks, plays Uno with her mother or, when it isn't raining, runs around on the roof of her building. She doesn't mind: "I can play all day." Then again, she admits, "I sometimes get bored." If she were allowed, she would like to go to a mall or the beach.

Ofelia and the 32m other Filipinos under the age of 15 (a third of the population) are "required to remain in their residences at all times" as part of the government's efforts to curb the spread of covid-19. Even as quarantine restrictions have been loosened for working-age adults, they have remained in place for the youngest and oldest members of society, who are deemed most vulnerable. "She tells me how much she wants to go out," says Ofelia's mother, Iris, who asked that she and her daughter not be identified by their real names. All the same, Iris considers the rules "OK and reasonable", since the disease remains such a risk. Known new infections, having peaked at more than 4,000 a day in August, are still running at around 1,600 a day, despite limited testing.

The Philippines is not unique in keeping children at home. Spain did the same thing for several weeks at the start of the pandemic. But it is an outlier in keeping them confined for this long. "Everyone ac-

cepts that it could result in poor psychosocial effects on children," says Bernadette Madrid of the Child Protection Unit at the University of the Philippines. But she, along with many paediatricians, psychiatrists, epidemiologists, public-health specialists and parents, believes that the benefits of keeping children at home outweigh the risks, in part owing to the nature of Filipino households.

It is rare for children to suffer serious cases of covid-19. But they can still catch the virus and transmit it to others. That is a problem given the preponderance of multi-generational households in the Philippines. Less than a tenth of elderly Filipinos live alone. And more than 10% of people older than 60 live with their grandchildren but not their children, who are often working elsewhere.

As a result, the loudest opposition to the lockdown of children comes not from outraged parents, but from businesses. Cities in the Philippines, and especially Manila, the capital, are not over-endowed with parks and playgrounds. For many families, shopping malls are the closest thing to a public space. Banning kids from malls means adults visit less often too, dragging down consumer spending. GDP contracted by 9.5% last year, the worst of any large South-East Asian country.

For the most part, Filipinos gripe about the haphazard rulemaking rather than the

rules themselves. A senator complains that cock-fighting pits have been allowed to operate again even as schools remain closed. Others think the blanket lockdown should be replaced with local restrictions determined by the case rate in each area. The workings of the Inter-Agency Task Force for the Management of Emerging Infectious Diseases, the country's covid-19 response unit, are opaque. In January it said it would allow children aged ten and older to go to shopping malls. President Rodrigo Duterte abruptly reversed the decision. The u-turn had "nothing to do with incompetence, not at all", he explained. ■

The coup in Myanmar

General strike

SINGAPORE

As civil servants take to the streets, government is grinding to a halt

YANGON HAS its share of traffic jams, but the congestion on February 17th was unusually bad. At busy intersections across the commercial capital, cars were parked with their bonnets raised, as if they had broken down. By late morning the city was paralysed. Yet few seemed to mind. When the police tried to shunt some vehicles to the side, residents of houses lining the road rushed out to stop them. The gridlock was intentional. Activists protesting against a military coup on February 1st were attempting to prevent troops from entering the city and civil servants from going to work. Many government employees were shirking anyway.

For almost two weeks, tens of thousands of Burmese, and sometimes hundreds of thousands, have taken to the streets to protest against the coup. But it is a subtler form of protest that is causing the generals the most grief. Thousands of public-sector workers, from at least 245 districts and 21 ministries, are on strike, according to Kim Jolliffe, an analyst. Government offices are deserted. So too are classrooms. Many public hospitals have in effect shut. Those that have not are so understaffed they are turning new patients away. "Operations at many government departments all but halted this week," reported the *Irrawaddy*, a news website, on February 16th.

The banking system is also seizing up. Online banking remains possible, at least when the army allows the internet to operate, but most branches are closed. Reports suggest lending has dried up and most administrative work has stopped. "A dysfunctional financial sector would definitely hurt the regime," says Ko Ko (not his real name). ■



Red alert: a child on the loose

Banyan The swing to the sultans

As Malaysia's politicians bicker, its royals gain authority

IN A LANDMARK election in 2018, Malaysians voted for change. Instead, they got upheaval. Appalled by the growing venality of the ruling United Malays National Organisation (UMNO), in power since the country's founding, they plumped instead for Pakatan Harapan ("Alliance of Hope"). Yet bickering within the new government led, a year ago, to its collapse, and the emergence of a different coalition, including UMNO, that is itself perpetually rumoured to be on the brink of implosion.

Few are happy. Malaysians voted for Pakatan Harapan's promises of good governance, enhanced democracy and an end to racially divisive politics. Yet the new prime minister, Muhyiddin Yassin, hounds critics and spreads patronage about like manure—just like the good ex-UMNO man he is. Ordinary folk grumble at the government's handling of the coronavirus pandemic, at once arbitrary and repressive.

The country's royals, by contrast, are in clover. Nine of Malaysia's 12 states have monarchs: seven sultans, a raja and, in Negeri Sembilan, a ruler-for-life elected by four local grandees. The nine royals take turns to serve five-year terms as *Yang di-Pertuan Agong* ("He Who is Made Lord")—the constitutional head of the Malaysian federation.

In their states, the sultans exercise considerable theoretical power: approving the chief minister, controlling the civil service and, in Johor, even commanding the palace guard. But at the federal level, recent kings have taken a back seat in politics. Their role in the appointment of prime ministers had been considered largely ceremonial.

Last year's political turmoil thrust the current *agong*, the sultan of Pahang, into prominence. Pakatan Harapan fell as the

nonagenarian prime minister, Mahathir Mohamad, and Anwar Ibrahim, who hoped to succeed him, feuded. Dr Mahathir resigned as prime minister, apparently hoping to form a new government that excluded Mr Anwar. But the *agong* instead turned to Mr Muhyiddin, who then took ages to prove his majority in parliament. As William Case of the University of Nottingham Malaysia puts it, the king became the kingmaker.

A few months later Mr Anwar sought time with the *agong*, claiming that he had "convincing" evidence that he could command a parliamentary majority. For several days the monarch found himself conveniently incapacitated. Even Mr Muhyiddin failed last year to persuade him to declare a state of emergency to tackle the pandemic (and helpfully forestall a vote of no confidence in the prime minister). Only in January, on the second request, when Mr Muhyiddin again looked like losing his shaky majority, did the king accede.

As political power fragments, royal influence will only grow, says James Chin of the University of Tasmania. The rulers

are officially the guardians both of the culture of Malaysia's Malay majority and of their religion, Islam. They still have considerable constitutional powers, although Dr Mahathir, during a previous stint as prime minister, took some away.

There is a commercial dimension to their authority. The sultans influence how land is used in their states. They can also benefit from property developments accompanying federal projects, such as a planned high-speed railway. In Johor the royal family has prospered from deals with nearby Singapore and from a China-backed boondoggle, Forest City. Critics make the comparison to the Thai royal family's prodigious if opaque holdings. Patron-client business networks run through Malaysian royal circles, as they do through its politics. No aspiring prime minister would be foolish enough to ignore the sultans' interests.

Not all Malaysians are happy. In Selangor, the sultan's heir is behind an unpopular bid to turn a tract of protected forest over for development. A daughter of the *agong* is chairman of a company involved in a bitter land dispute with durian farmers.

Many want the royals to stick to Instagram. There, one of them touchingly touts inelegant baking efforts, another her sonic healing and, in the case of the crown prince of Johor (once involved in a nightclub brawl with another royal), a rather naff polo-and-private-plane lifestyle. Someone who is acquainted with several royals calls them, on balance, "a gruesome bunch". Yet few will denounce them in public. As in Thailand, the royals are protected by draconian laws, including the one against sedition. While they kept away from politics, why cross them? Cross them now, says one politician, and it could be jail.



their game plan," says Mr Jolliffe.

The army commander and junta leader, Min Aung Hlaing, seems to be getting skittish. State newspapers warn that those who encourage "dutiful civil servants" to go on strike will be "seriously punished legally". Security services have begun a campaign of intimidation to try to force public-sector workers back to their posts. On February 14th protesters outside a branch of MEB in Mandalay, Myanmar's second city, were urging the remaining employees to abandon their desks when soldiers and police began firing ball bearings at them from

airguns. At least three people were injured.

The commander-in-chief probably hopes that the protests will quickly peter out. "At the end of the month, people will need to draw their salaries," points out Khin Zaw Win, director of the Tampadida Institute, a think-tank in Yangon. But if other civil servants are as determined as Mr Ko Ko, the regime will need to think again. "We aren't afraid of losing our jobs," he says, noting that many mutual-aid funds are being set up to support workers who are sacked for their activism. "We want our freedom back." ■



► name), a manager at a branch of AYA bank in Yangon. He and almost all his colleagues have been on strike since last week.

The government pays bills and salaries and disburses pensions via Myanma Economic Bank (MEB). But so many of its employees are on strike that it is at a "near standstill", says Mr Jolliffe, who is studying the civil-disobedience movement. With many tax collectors on strike, too, the coup leaders may end up with neither the infrastructure nor the money to pay staff. "This is a real pressure point and is something the military probably did not include in



The vaccine roll-out

Sinovaccine

BEIJING

Despite a head start, China has fallen behind the West in dispensing covid-19 jabs

IN ANY OTHER year, Mr Lai would have been among the millions who usually return to their ancestral homes for the spring festival, when families celebrate the lunar new year. But this year, to prevent outbreaks of covid-19, the government had urged citizens to stay put for the weeklong holiday, the last day of which was February 17th. So Mr Lai, a 40-year-old office worker in Beijing, was instead among the first in China, other than essential workers and employees of the state, to get vaccinated against the disease. Before the holiday, China had administered some 40m doses of Chinese-made vaccines to people such as medical and delivery staff, government officials, and students and workers going overseas. Now the capital is calling on all residents to volunteer for jabs.

China is second only to America in terms of the absolute number of shots it has administered (America has dispensed more than 57m doses). But per head, China is dawdling. Just 3% of people in China have received a jab, compared with 17% of Americans (see chart, next page). The

country has not yet begun to inoculate its elderly, lacking data on whether local vaccines are safe for them. Beijing is so far the only city to have begun a mass inoculation programme. It covers those aged 18 to 59. Late last year the central government had aimed to administer 100m doses before the spring festival. Why is it falling short?

China got off to a quick start last summer, under an emergency-use programme that involved giving shots to soldiers, health-care and aviation workers and the staff of state-owned firms. To the alarm of scientists overseas, the Chinese vaccines had not yet made their way through the big “phase three” trials that are normally required for new vaccines. Such trials are still under way, but, in December, Chinese regulators authorised a vaccine by Sinopharm, the country’s largest maker of such

products, for general use. This month they approved a second one, by Sinovac, a smaller producer. The two firms aim to make 2bn vaccines this year. Under a two-shot regimen, that would be enough to cover 70% of China’s population.

It is not that people in China are resisting vaccination. A survey in December by Ipsos, a pollster, found that four in five were willing to get a shot, the highest proportion among the 15 countries they surveyed. And they are keen on China’s own vaccines. The government’s effective crushing of the virus, in contrast with the rampant spread of covid-19 in much of the West, has boosted the credibility of made-in-China approaches. Many people say that, given the choice, they would prefer Chinese vaccines to Western ones. That is remarkable in a country which has been rocked by vaccine scandals. The most recent one erupted in 2019 after infants were given expired doses of the polio vaccine.

Official propaganda has helped. State media have questioned the safety of the mRNA vaccines, such as those made by Pfizer and BioNTech, that are being used in the West. Chinese vaccines that use an inactivated virus have “more mature technology”, they insist. Mr Lai warns darkly that the mRNA sort could “alter a person’s DNA” (this is false).

Hesitancy in China appears to be not bottom-up, but top-down. If leaders are reluctant to roll out a mass programme nationwide, it is probably because there is ➤

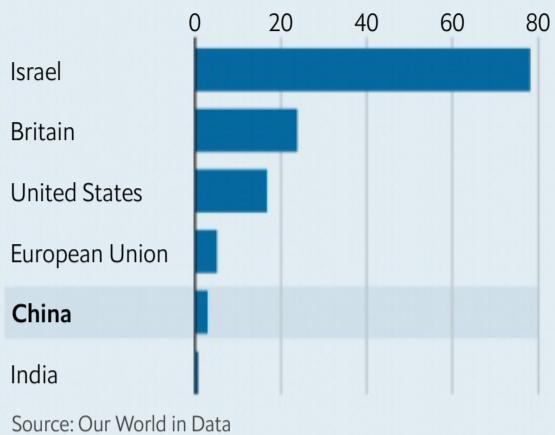
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Lagging behind

Covid-19 vaccination doses per 100 people
February 16th 2021 or latest available



still too little vaccine to go around, says Gavekal Dragonomics, a research company in Beijing. Ernan Cui, an analyst at the firm, has noted that although Sinovac is getting ready to produce over 1m doses a day, its factories were still only making less than half that number in January. It is hard anywhere to produce large quantities of vaccine quickly with inactivated viruses. It does not help that China also has to import most of the glass vials for its vaccines.

This has not deterred China from offering its vaccines abroad. Xi Jinping, the country's leader, said last May that he would ensure that Chinese vaccines were made a "global public good". Makers have already signed contracts to export half a billion doses to more than a dozen countries, including Indonesia, Brazil and Peru. According to state media, the government has also pledged to provide "vaccine aid" to 53 countries. It sees all this as an opportunity to give China's pharmaceutical sector a shot in the arm, says Jennifer Bouey of Georgetown University. Some countries grumble that shipments from China are being delayed. But in some cases China may have no choice but to fulfil its commitments. Because it has all but eradicated the virus at home, it has had to look abroad for places to conduct phase three trials. In return, it has promised host countries priority delivery of its shots.

China may calculate that it can afford a leisurely inoculation campaign. Because of its success in eradicating the virus, there is little sense of urgency. In the Ipsos survey, a third of Chinese who said they preferred not to take the vaccine felt that the virus was not common enough to pose a threat. Few chafe at mask-wearing or at the tests they must take for some interprovincial travel. Almost all support China's closed-border policy aimed at preventing the virus from being reseeded at home.

But China's efforts to keep infections as close to zero as possible come with a cost. "Citizens will not tolerate a single case of infection either, now," points out Huang Yanzhong of the Council on Foreign Rela-

Pirated films

Winter is coming

HONG KONG

China has lost a great source of (illegal) entertainment

FOR A GENERATION of young Chinese, American television shows like "The Big Bang Theory", "Breaking Bad" and "Sex and the City" were their first taste of life in the West. Growing up with limited English inside China's "great firewall", millions of them watched pirated versions online, with the help of subtitles produced by volunteers. Many of the translators were Chinese students, both in China and at universities abroad. They provided their skills for little reward, except the glory of an on-screen credit, to streaming services that allowed free access or offered super-cheap subscriptions. Being accepted into such firms' "translation groups" was a badge of distinction. Standards were high and competition for membership was fierce. It will not be in future, however.

On February 3rd 14 people from China's largest such streaming firm, Renren Yingshi (meaning "everyone's movies and shows"), were arrested in Shanghai for alleged copyright infringements. Since then, many other such outfits have gone underground or disbanded. For

many internet users, this has been a sad moment. On social media they bade farewell to what they described as something irreplaceable: entertainment free of the dead hand of China's censors, and with far more accurate subtitles than most officially approved content.

Demand for Renren Yingshi's offerings was fuelled by tight supply. China is one of four regions without Netflix: the others are North Korea, Syria and Crimea. Even though it is one of the fastest growing film markets, China approves only a few foreign films for screening in cinemas each year. It is possible to watch some foreign shows on officially approved streaming sites. But they are heavily censored—so much so in the case of "Game of Thrones" that the plot is hard to follow. Such restrictions helped to turn translation-group services into big operations. Police in Shanghai said Renren Yingshi had produced more than 20,000 television shows for its 8m registered users.

Renren Yingshi's popularity is evident in the debate that still surrounds it on Weibo, a Twitter-like platform. Posts with hashtags relating to the clampdown have garnered more than a billion views. In one of them, Yan Feng of Fudan University in Shanghai said the subtitling effort had been one of Chinese history's great translation projects, on a par with a drive to render Western literature into Chinese in the 19th century. Uncensored foreign films and shows will remain accessible to Chinese viewers with foreign-language skills and software that can scale the great firewall. But most people are unlikely to try, not least because the government disapproves. Netizens have been sharing the poetic Chinese term, *lindong jiangzhi*. It is one that subtitling enthusiasts have used to translate a phrase made famous by "Game of Thrones": winter is coming.



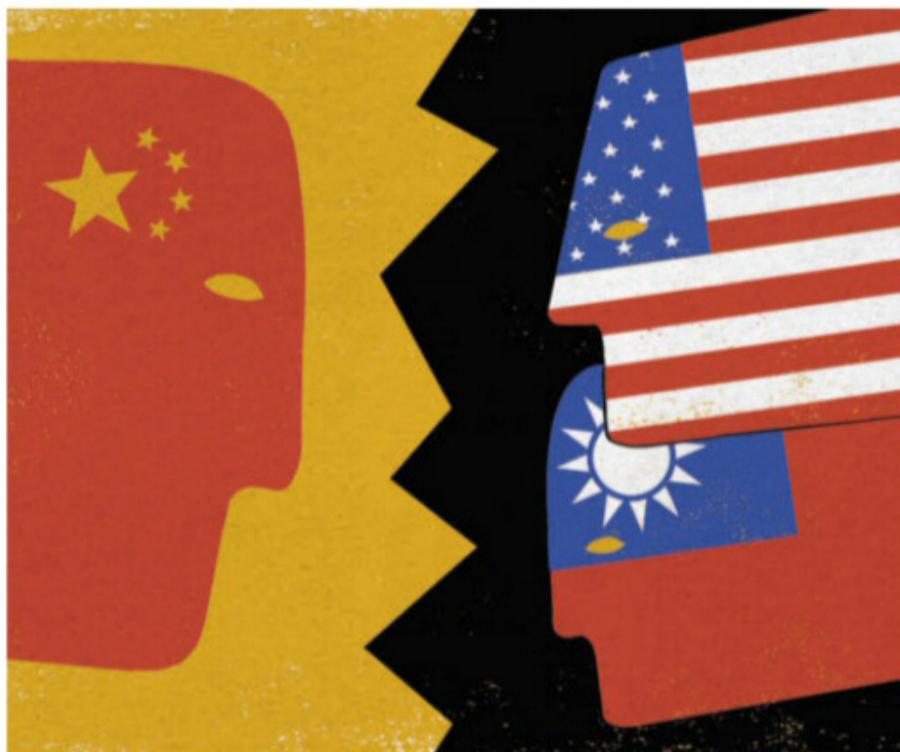
tions, an American think-tank. As he notes, as long as China keeps its borders shut it will lack a clear incentive to vaccinate its citizens. That will mean herd immunity will take longer to achieve and delay China's reopening to the world.

Virologists reckon that around 70% of the population needs protection, either from having caught the disease or through inoculation, to reach the herd-immunity threshold beyond which the epidemic abates. However this number is higher for

new, more transmissible variants. For China to attain just 60% will take at least until the end of 2022, reckons the Economist Intelligence Unit, our sister company. That is a year longer than the briskest vaccinating countries will take to reach that level. If they open up while China remains shut, it will become harder for Chinese officials to convince citizens that their approach is sound. Sooner or later, says Mr Huang, "they will need to educate people to learn to live with this virus." ■

Chaguan | How to kill a democracy

America is losing its ability to deter a Chinese attack on Taiwan. Allies are in denial



CHINA'S RISE involves some fateful decisions for President Xi Jinping, the country's leader. None matters more than whether to attack Taiwan, to bring that democratic, pro-Western island of 24m people under Communist Party control. If, one day, an armoured Red Flag limousine carries Mr Xi as a conqueror through the streets of the island's capital, Taipei, he will become a Communist immortal. He will join Mao Zedong as co-victor of a Chinese civil war that was left unfinished in 1949 when the defeated Nationalist regime fled to exile in Taiwan.

Perhaps Mr Xi will ride through Taipei streets still scorched by fire, stained with blood and emptied of ordinary Taiwanese by the diktats of martial law. But Taiwan's conquest would still mark China's elevation to the ranks of powers so mighty that no single country dares to defy their wishes. To the hard men who rule China, history is not written by the squeamish. Should Mr Xi order the People's Liberation Army to take Taiwan, his decision will be shaped by one judgment above all: whether America can stop him. For 71 years Taiwan's existence as a self-ruled island has relied on deterrence of Chinese aggression by America. True, Taiwan also benefited from a degree of Chinese patience, as China tried other gambits that might avoid war.

Since the days of Deng Xiaoping, Chinese leaders have been binding Taiwan to the mainland economically. They have also tried to woo the Taiwanese public with promises of autonomy should they accept rule from Beijing, under the rubric of "one country, two systems". That concept was transformed last year from dubious to empty by the crushing of civic freedoms in Hong Kong, a territory that was offered similar promises. But China is losing patience with "peaceful reunification", and colder calculations have always mattered more. At root, China stayed its hand for fear that Taiwanese troops would hold it off until American rescuers arrived.

America's centrality to this stand-off is well-known to President Joe Biden and his foreign-policy aides, who are an experienced bunch. That is why, on the Biden administration's fourth day in office, the State Department rebuked China for military, economic and diplomatic attempts to intimidate Taiwan, and declared America's commitment to the island to be "rock solid".

In reality America's ability to deter an invasion over Taiwan is crumbling. The main reason is China's single-minded pursuit, over 20 years, of the advanced weapons and skills needed to keep American forces at bay. Another is Mr Xi's sense of historical destiny, and his use of populist nationalism to bolster his authority—though nationalism also raises the costs of a botched attack. In some forums, American scholars and retired high officials have praised the Trump administration for approving more than \$17bn in arms sales to Taiwan. They have also scolded Trump aides who used showy support for Taiwan as a way to provoke China, without thinking through risks to the island. Some scholar-diplomats, such as Richard Haass of the Council on Foreign Relations (CFR), have urged America to end its policy of "strategic ambiguity", which avoids making explicit pledges to respond to aggression against Taiwan. This vagueness is meant to discourage rash moves by Taiwanese politicians and avoid enraging China.

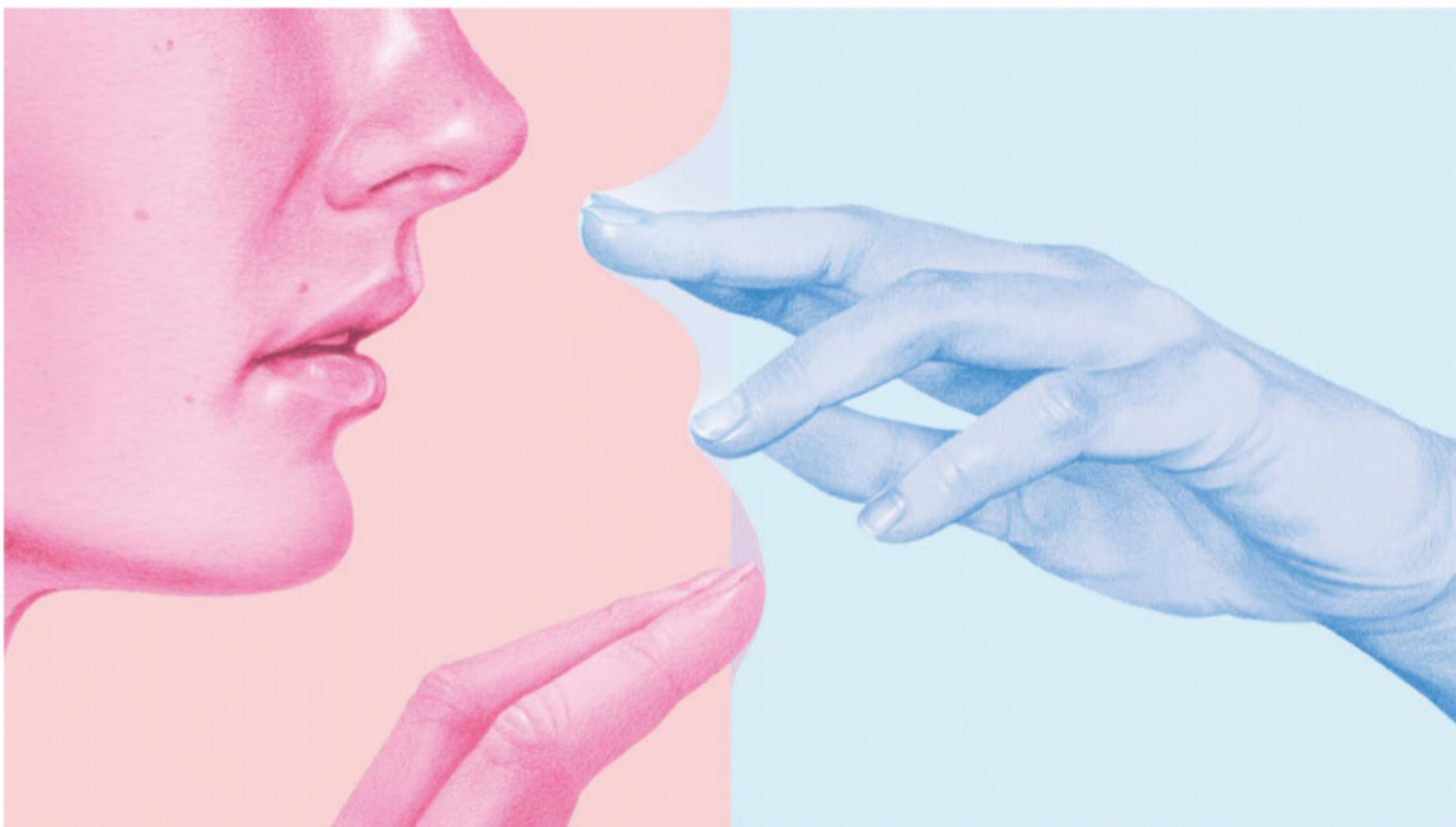
Bonnie Glaser, an expert on Chinese and Taiwanese security at the Centre for Strategic and International Studies, a think-tank in Washington, says that the Biden administration is showing resolve when talking about China and Taiwan, because it is "very worried about the potential for accidents and miscalculation". It is sobering to hear Ms Glaser, a well-connected scholar, express concerns about accidental clashes today, for instance between Chinese and Taiwanese aeroplanes or boats, and about the possibility of a deliberate military conflict five or ten years from now.

Robert Blackwill, a former national-security aide to George W. Bush and co-author of a new paper by the CFR, "The United States, China and Taiwan: A Strategy to Prevent War", wants America to create credible "geoeconomic deterrence", as well as to shore up the military kind. He says America, and allies such as Japan, should make clear that China will be expelled from dollar-based financial and trading systems if it attacks Taiwan. Should Chinese commanders urge war, "we want the economic principals in the room" to spell out the costs, says Mr Blackwill.

Asians will miss America if it leaves

Alas, the hardest part of deterring China involves building robust coalitions that are ready to challenge Chinese aggression. Comparisons with the cold war do not capture the problem. West Berlin's survival was seen as a vital national interest by America and its NATO allies, who planned for war to stop the Soviets cutting access to the city. But it matters that the Soviet Union was an economic pygmy. Today, there is no consensus among America's regional allies that Taiwan's survival is a vital interest over which it is worth angering China, often their largest trade partner.

Meanwhile Chinese leaders are trying to reduce their country's vulnerability to external economic pressure. In an article last May, Qiao Liang, a retired air force major-general, predicted that in a war over Taiwan, America and its allies would block sea-lanes to Chinese exports and imports, and cut China's access to capital markets. General Qiao duly endorsed Mr Xi's moves to reduce China's dependence on economic demand from the rest of the world. He added that the key to the Taiwan question would be the outcome of China's contest of strength with America. The general is a nationalist provocateur, but his comments reflect the views of many in Mr Xi's China. That should give American allies pause for thought. To many Chinese, Taiwan's recovery is not just a sacred national mission. Its fulfilment would also signal that American global leadership is coming to an end. If China ever believes it can complete the task at a bearable cost, it will act. ■



Touch and covid-19

You've lost that lovin' feeling

ROME, SÃO PAULO AND SINGAPORE

Only when the pandemic deprived the world of human contact did people realise its importance

IT HAS BEEN 11 months since anyone hugged Larry. The 62-year-old accountant lives alone in Chicago, which went into lockdown last March in response to covid-19. He has heart problems so he has stayed at home since then. The only people to touch him have been latex-sheathed nurses taking his blood pressure. Larry describes himself as a “touchy-feely” person. Sex is nice, but more than that he longs for casual platonic contact: hugs and handshakes. He lies in bed, he says, yearning to have someone to hold or to hold him.

The pandemic has been an exercise in subtraction. There are the voids left by loved ones who have succumbed to covid-19, the gaps where jobs and school used to be, and the absence of friends and family. And then there are the smaller things that are missing. To stop the spread of covid-19 people have forsaken the handshakes, pats, squeezes and strokes that warm daily interactions. The loss of any one hardly seems worthy of note.

And yet touch is as necessary to human survival as food and water, says Tiffany Field, director of the Touch Research Insti-

tute at the Miller School of Medicine, part of the University of Miami. It is the first sense to develop and the only one necessary for survival. We can live with the loss of sight or hearing. But without touch, which enables us to detect such stimuli as pressure, temperature and texture, we would be unable to walk or feel pain. Our skin is the vehicle through which we navigate the world.

Certain groups have long been starved of touch. For centuries lepers were deemed untouchable. Dalits, the lowest caste in India, were literally known as such. Solitary confinement is used as a punishment in prisons. In a film made before his death in 2015 Peter Collins, a Canadian convict locked up alone, said he craved so intensely the touch of another human that he pretended the flies walking on his skin were his wife’s fingers. But not until the pandemic, with its widespread social distancing, have such vast swathes of the population been deprived of friendly physical contact for so long.

Humans need touch to form close relationships. To improve its chances of sur-

vival, *Homo sapiens* evolved to live in groups. Humans “need to interact with each other”, explains Alberto Gallace, a psychobiologist at the University of Milano-Bicocca, which may explain why, like other social animals, they have developed a neurological system designed to respond to affectionate touch. Stimuli applied to the skin at a certain pressure and speed—“basically a caress”, says Dr Gallace—activate a dedicated nerve fibre in the skin. Stimulating this fibre lights up parts of the brain responsible for pleasure, releasing a cocktail of hormones, including dopamine, serotonin and oxytocin, that soothe anxiety and make us feel happier.

The importance of touch starts early. A review of scientific literature conducted in 2016 found that babies who had skin-to-skin contact with their mothers immediately after birth were 32% more likely to breastfeed successfully on their first attempt than those who did not. Several hours later, they also had better heart and lung function and higher blood-sugar levels. In one study in 1986 in America premature babies who were given regular massages for ten days shortly after they were born gained weight more quickly and left intensive care sooner than premature babies who were not. Their physical and cognitive development was also better than the control group in tests a year later.

The positive health effects continue. Touch depresses levels of cortisol, a hormone produced in response to stress. In addition to triggering the “flight or fight” ↗

► response, cortisol smothers “natural killer cells”, a type of white blood cell that attacks viruses and bacteria. Touch can also increase the production of natural killer cells in patients with HIV and cancer, according to Dr Field. In 2014 researchers at Carnegie Mellon University observed that healthy adults who were hugged more frequently were less likely to get colds, perhaps because such embraces are a way of communicating affection, and people who feel cared for are less likely to fall ill.

A lack of touch, by contrast, is damaging. After controlling for factors such as poverty and quality of medical care, studies of infants show that the absence of touch leads to a broad range of developmental problems, argues David J. Linden, a professor of neuroscience at Johns Hopkins University, in a book called “Touch”. Children who are not cuddled tend to develop certain cognitive skills later than their peers. A lack of touch may fuel aggression. In 2002 Dr Field observed that compared with French adolescents, children in America received less affectionate physical contact and were more combative. But those who received daily massages became less aggressive after five days.

Without regular contact people can become “skin hungry”, a state in which they experience less touch than they want. The few studies that have been done into skin hunger suggest it is harmful. A survey of 509 adults from around the world in 2014 suggested that being deprived of touch was linked to loneliness, depression, stress, mood and anxiety disorders and secondary immune disorders.

The pandemic supercharged that. In a poll of 260 Americans who had been under lockdown for a month last April, conducted by Dr Field, 60% said that they longed for physical contact. The impact may be particularly acute in places where people are normally more tactile. In southern Italy “keeping your distance from someone is almost offensive”, says Luca Vullo, the author of a book on Italians’ non-verbal communication. And yet even Italians have surprised themselves with the level of their compliance with social-distancing measures. Most wear masks and keep their distance in queues (although when restrictions have been eased, many have found it harder to maintain, especially in restaurants, and particularly after a glass or two of wine). In Brazil, however, Claudia Matarazzo, an etiquette coach who wrote a guide in mid-2020 on how to limit physical contact without being rude, has given up trying to convince her compatriots to swap kisses for elbow bumps. Her efforts have not been helped by the president, Jair Bolsonaro, who regularly hugs and shakes hands with supporters. He failed to keep his distance even when he had covid-19.

By contrast, people from more reserved

countries may hardly notice they are receiving less physical contact. Leonard Lim, a Singaporean tech worker, has not met anyone in the flesh, except for his wife, with whom he lives, and their parents, since last February. It did not occur to him that he had received less physical human contact over the past year until asked whether he had noticed its absence.

The sense of touch is easily overlooked. Its flashier cousins, vision and hearing, have entire art forms dedicated to them while chefs and perfumers serve our taste buds and nostrils. Scientists neglect it. For every research paper on touch, there are 100 on sight. In the 19th century European intellectuals dismissed touch as “a crude and uncivilised mode of perception”, inferior to sight, according to Constance Clasen, a cultural historian. In Anglophone countries, the Victorian horror of the body gave popular ballast to this bias. Strictures against touch persisted in those countries into the next century. In the 1960s Sidney Jourard, a psychologist at the University of Florida, observed the behaviour of couples in coffee shops around the world. Over the course of an hour couples in Paris and Puerto Rico touched each other 110 and 180 times respectively. Their counterparts in Florida touched each other just twice. Those in London avoided any contact at all.

Out of touch

People in such countries are more demonstrative today. But Dr Field argues that many Americans were suffering from skin hunger before the pandemic. Among those surveyed by Dr Field in April only a fifth said that they touched their children frequently. Outside the home, tactile interaction has effectively been outlawed in many places. Many American states have banned teachers from touching their students. A lot of schools have similar policies. The

MeToo movement means physical contact is rare in offices. And in recent decades the number of people living alone has shot up in many rich countries. So too has the time spent online. Virtual spaces bring users together but these connections are forged in an immaterial dimension. Screens are portals to digital worlds that require us to leave our bodies behind. Richard Kearney, a professor of philosophy at Boston College, calls this process “excarnation” and argues that it is fuelling a “crisis of touch”.

Some were trying to mend this before the pandemic. In Japan Deguchi Noriko, the founder of the Japan Touch Counselling Association, instructs new mothers, nurses and nursery teachers in the art of what she calls “skinship”, the act of “deepening our bond and trust with others” through clasping hands, hugging and stroking. In America urbanites were congregating at “cuddle parties”, hopeful that draping themselves over strangers would banish their loneliness.

In 2015 Madelon Guinazzo and Adam Lippin founded Cuddlist, a company which trains “cuddle therapists”. They suspected that many people longed for “platonic, mutual, consensual touch that’s purely about affection”, says Ms Guinazzo. That need was not being met, she argues, because of the “hypersexualisation” of touch in America. Their company has put therapists in contact with 50,000 clients around the world. They tend to be people experiencing too little touch or the unwelcome kind. Larry, the accountant from Chicago, began seeing Ms Guinazzo three years ago. He was uncomfortable with the idea of paying for hugs but his desire for contact exceeded the brief embraces he received from friends. He was surprised to find that the shoulder rubs, hugs and hand-holding brought him comfort and “a sense of joy”.

At present Larry can only meet Ms Guinazzo online. They evoke the sensation of touch through words and their imaginations—or try to. Zoom cuddles are not as potent as those in the flesh, says Larry. But in the age of distance, the skin-hungry must make do with what they can. Between February 10th and 13th 2020 sales of massage chairs in China were 436% higher than in the same period in 2019, according to Suning.com, a big retailer. Others are turning to technology to simulate caresses. CuteCircuit weaves haptic sensors into shirts which, it claims, can transmit the sensation of a hug using Bluetooth technology to corresponding shirts. Between April and December, traffic to its online shop surged by 238%. The pandemic has made many more people aware of their craving for touch, says Ms Guinazzo. Her business has suffered, but once covid-19 ebbs she expects demand to surge. People need to touch people, not just screens. ■





Mobility in China

Trafficking dreams

BEIJING

To glimpse the future of the ride-hailing business, look east

“WE INVEST A lot of money here in China,” proclaimed Travis Kalanick, founder and then boss of Uber, at a confab in Tianjin in June 2016. But, he added with foreboding, “we have a competitor who is investing even more.” Two months later the American ride-hailing giant threw in the towel, selling its Chinese operations to its Beijing-based rival, Didi. Uber lost some \$2bn over two years in China. Its retreat paved the way for Didi to grow into China’s undisputed ride-hailing champion, which today processes over four-fifths of all domestic orders. The Chinese titan is widely expected to go public in the next few months, eight years after its launch. It could fetch a valuation of \$60bn.

That Uber was willing to burn through so much cash, at least for a time, is a testament to the size of the prize. China boasts the world’s biggest ride-hailing market. According to its transport ministry, 21m trips were booked on ride-hailing platforms each day, on average, last October. That is double the figure in pre-pandemic America, when travel was safer. Until it sold its Chinese business, Uber received

more orders in China than in any other country, including its home market. The gross transaction value of China’s ride-hailers reached 221bn yuan (\$32bn) last year, up by more than half since 2017, reckons Frost and Sullivan, a consultancy.

America may have invented ride-hailing. But it is in China where the conditions are most fertile for it to flourish. The rea-

sons go deeper than the size of the market. Didi has the most to gain. But its dominance will increasingly be contested.

Ride-hailing firms depend disproportionately on customers in big cities, where population density is highest. Around a quarter of Uber’s gross bookings by value in 2019 came from just five metropolises: Chicago, Los Angeles, New York, San Francisco and London. China has 14 metropolitan areas with a population of over 10m (see map), more than any other country.

Most of these cities, keen to reduce rage-inducing congestion, discourage private car ownership by restricting the supply of licence plates. In Beijing’s most recent bi-monthly lottery 3.6m applicants competed for 6,370 number plates. Shanghai, China’s most populous city, puts a small number of plates up for auction each month. The average winning bid at the auction in January was 91,863 yuan, more than double what it was a decade ago and costlier than many mid-range cars (see chart on next page). The southern boomtowns of Guangzhou and Shenzhen have hybrid models whereby some plates are allocated via lottery and the rest sold to bidders. All that leaves millions of disappointed wannabe motorists for ride-hailing firms to cater to.

Moreover, high urban density and the absence of American-style suburban sprawl turn parking space into a prized (and pricey) commodity. The number of public parking spaces per car in Beijing, China’s second-most populous city, is a

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fifth of that in its American opposite number, Los Angeles. China's extensive high-speed rail network, the world's longest, blunts the benefits of car ownership for long-distance travel. And cheaper labour means rides can be offered at low prices, making them accessible to a wider group of customers. More than 340m Chinese booked a ride-hailing service at least once in the first half of 2020, notes the Ministry of Industry and Information Technology.

In 2019 Didi disclosed that it was losing an average of just 2% of the total fare on each ride. The company now says its "core ride-hailing business in China is already profitable". It is coy about the details; Uber also insists it makes money from ride-hailing but continues to report vast operating losses, of \$4.9bn last year. Yet most analysts in China take Didi at its word. The question for Didi, they say, is not whether it can break even but rather how well it can sustain profits, maintain its near-monopoly in China and expand abroad.

In recent years the firm has expanded into new business lines, from bike-sharing and food delivery to financial services. The aim is to build up a convenient "ecosystem" to make it costlier for customers to switch to a rival platform. Those rival platforms are not standing still, however. Jack Wei, boss of Shouqi Yueche, Didi's closest domestic competitor, is sanguine about the challengers' prospects. He sees room for "multiple firms", perhaps three or four, to thrive in China in the long term.

One way to carve out a bigger slice of the market is through differentiation, Mr Wei suggests. Shouqi prides itself on premium customer service (as Lyft, Uber's domestic rival, tries to). Its ambition is to become the "leader" in upscale rides while "keeping up" with Didi in the mass market. China is large enough that serving this niche is big business. Shouqi expects to turn a net profit this year on revenues of 8bn yuan.

Another path is to forge strategic alliances. Shouqi has one with Meituan, a rising Chinese e-commerce star that offers, among other things, food-delivery and bike-sharing services. The agreement allows Meituan's 477m annual active users to book Shouqi rides directly in its super-app. In return Shouqi pays Meituan a small commission on each booking. Crucially, Meituan excludes Didi, which it views as a threat, from its platform.

Despite its advantages, the Chinese market presents some obstacles. As in the West, the authorities are concerned about big tech. In December the markets regulator summoned six online giants, including Didi, and lectured them on how not to abuse their dominant positions. At the local level, more than a hundred municipalities have drafted stricter rules on who can drive for ride-hailing firms over the past four years. The aim appears to be to ap-



pease embattled local taxi industries. The rules typically set a high bar, such as requiring existing residency status in the city where a driver wants to work. Yet most drivers are migrant workers who lack the proper papers. In 2016 Didi complained that only 3% of its 410,000 drivers in Shanghai would have passed the test.

The arrival of self-driving cars, which Didi has been developing since 2016, may one day solve this problem, though proba-

bly not imminently (last year Uber called it quits and spun off its autonomous-vehicle arm). In the meantime, Didi is hedging its bets by diversifying. In 2017 it set up an international division. A chunk of the \$4.5bn it raised a year later was earmarked for foreign expansion. Today it operates in 13 overseas markets, mainly in Latin America. Three years ago it acquired a controlling stake in 99 Taxi, which competes with Uber in Brazil, in a deal that valued the Brazilian startup at around \$1bn.

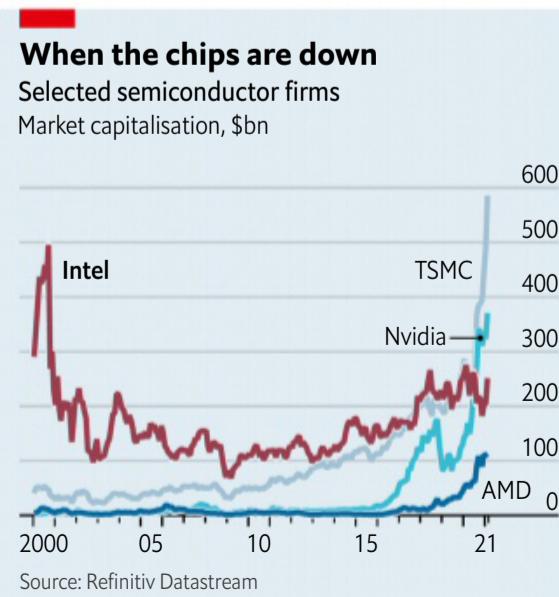
But China remains the biggest opportunity, which explains why Shouqi has chosen to lock in on its home market for the time being. It helps that local authorities have, for the most part, turned a blind eye to rule-bending by the ride-hailing firms. Perhaps they calculate that unemployment resulting from tougher enforcement imperils social stability, not least as economic growth slows and good manufacturing jobs are harder to come by. One in eight drivers for Didi in China are military veterans, a group known for staging small-scale protests when their interests are harmed. Given Beijing's harmony-obsessed leaders, it is a good bet that ride-hailing in China has plenty of road left to run. ■

Intel

Hard reboot

Can Pat Gelsinger turn the chipmaking giant around?

SUCCESS BREEDS complacency. Complacency breeds failure. Only the paranoid survive." So said Andy Grove, the Hungarian emigré who helped turn Intel from a scrappy startup in the 1960s into the firm that did more than any other to put the "silicon" in Silicon Valley. They will be ringing in the ears of Pat Gelsinger, Intel's new boss, who took over on February 15th.



He takes the helm of a company that looks, from some angles, to be in rude health. With \$78bn in revenue in 2020, it is the world's biggest chipmaker by sales. It has a 93% share of the market for powerful—and lucrative—chips that go into data-centre computers, an 81% share in desktop PCs, and operating margins of around 30%.

Yet Intel's share price has underperformed those of rivals. Nvidia, a firm with one-seventh of Intel's revenues, has a market capitalisation, at \$370bn, that is half as high again (see chart). The manufacturing technology on which much of Intel's success was built has fallen behind. It has missed the smartphone revolution. Some of its big customers, such as Apple and Amazon, are turning into competitors. Mr Gelsinger inherits quite the in-tray, then.

Start with production. Chipmaking is propelled by the quest for smallness. Shrinking the components in integrated circuits, these days to tens of nanometres (billions of a metre), improves the performance of both the components and the microchip as a whole. For decades Intel led the way, its "tick-tock" strategy promising

► a manufacturing revolution every other year. Now "it has lost its mojo," says Alan Priestley of Gartner, a research firm, who worked at Intel for many years. Its "ten nanometre" chips were originally pencilled in for 2015 or 2016 but did not start trickling out until 2019—an unprecedented delay. The technology is still not mature. In July Intel said the next generation of "seven nanometre" chips would not arrive until 2022, a delay of at least six months.

Manufacturing stumbles have cost it business. AMD, its most direct rival, outsources production to Taiwan Semiconductor Manufacturing Company (TSMC), whose technology is now ahead of Intel's. That means AMD's chips are generally faster, and consume less power; its market share has more than doubled since 2019.

A second challenge is the industry's growing specialisation—a problem for Intel's traditional forte of general-purpose chips, especially if desktop PCs continue to stagnate. Technology giants, flush with cash and keen to extract every drop of performance for their specific purposes, increasingly design their own semiconductors. In 2020 Apple said it would drop Intel from its laptops and desktops in favour of custom-designed chips. Amazon is rolling out its "Graviton" cloud-computing processors, also designed in-house and made by TSMC. Microsoft, whose cloud business is second only to Amazon's, is rumoured to be working on something similar.

Intel has also failed to make any headway in smartphones, the most popular computers ever made. An effort in the late 1990s to build graphics chips, which have also proved handy for artificial intelligence (AI), and to which Nvidia owes its enviable valuation, petered out. Attempts to diversify into clever new sorts of programmable or memory chips—in 2015 it paid \$16.7bn for Altera, which makes them—have so far not paid off in a big way.

Mr Gelsinger has yet to say how he plans to deal with the challenges. He does not look like a revolutionary. He began working at Intel aged 18, before leaving in 2009 to preside over EMC, a data-storage firm, and for the past nine years heading VMware, a software firm. In an email to Intel's staff after his appointment was announced he invoked its glory days, recalling being "mentored at the feet of Grove, [Robert] Noyce and [Gordon] Moore", the last two being the firm's founders. Like them but unlike his predecessor, Bob Swan, Mr Gelsinger is an engineer, who in 1989 led the design of a flagship chip.

His first job will be to try to turn the firm's ailing manufacturing division around. Intel already outsources the manufacturing of some lower-end chips to TSMC. Its production woes will force it, at least temporarily, to send more business to Taiwan, perhaps including some of its pri-

cier desktop and graphics chips. Daniel Loeb, an activist investor with a sizeable stake in Intel, sent a letter to the firm's management in December urging it to abandon factories entirely and restrict itself to designing chips that other firms, such as TSMC, would make. On paper, that looks attractive: Intel capital expenditure in 2020 amounted to \$14.2bn, almost all of it on its chip factories. AMD, meanwhile, spun out its manufacturing business in 2009, and is thriving today. Nvidia has been "fabless" since its founding in 1993.

Finding a buyer could be tricky, says Linley Gwennap, a veteran chip-industry watcher, precisely because Intel's factories are now behind the cutting edge. Most of the world's chipmakers, which might be tempted by the fabs, are in Asia. Since

chips are a front in America's tech war with China, politicians may veto a sale to a non-American bidder.

In any case, Mr Gelsinger has said he will ignore Mr Loeb's suggestion. In January the new boss said that, although the firm may use more outsourcing for some products, he intends to pursue the hard, costly task of restoring Intel to its customary position at chipmaking's leading edge. He also seems minded to pursue his predecessor's strategy of diversifying into new products, including graphics-to-AI chips. "Our opportunity as a world-leading semiconductor manufacturer is greater than it's ever been," he wrote. The direction of travel, then, is not about to change. Intel's shareholders will have to hope that Mr Gelsinger can at least get it back on the pace. ■

The record industry

Musical shares

The latest listing of a major label shows the streaming boom is maturing

FROM "GOLD DIGGER" to "Money, Money, Money", Vivendi's shareholders have lots of tunes to whistle as they stroll to the bank. On February 13th the French conglomerate announced plans to spin off Universal Music Group, its most valuable asset and the world's largest record label. Vivendi and Tencent, Universal's Chinese co-owner, will each retain a 20% stake, with the rest distributed among Vivendi's shareholders.

Universal, which owns the rights to those Kanye and ABBA classics, among other discographies, will be the second big label to go public. Warner Music Group did so last June. Its value has since risen by 28%, to \$20bn. Vivendi expects Universal's to exceed €30bn (\$36bn).

Eight years ago, when Vivendi turned

down €7bn for Universal from SoftBank, a Japanese group, the offer looked generous. The recorded-music industry was on its knees, revenues cut almost in half by online piracy. Now the internet is powering a revival, as streamers like Spotify bring in subscribers. Universal posted a 5% rise in revenues, year on year, in the first nine months of 2020. Industry sales should surpass their peak in 1999 within three years.

By going solo Universal will shed the "conglomerate discount" that weighs down Vivendi's shares, as would-be investors in the music business are put off by its parent's TV, advertising, telecoms and other interests. The music business is thirsty for capital. An executive at another label reports bidding wars in which artists offered \$200,000 to sign in the morning command \$500,000 by day's end. Vivendi, for its part, is looking at new media acquisitions, many of which are going cheap.

Yet the listing also hints that recorded music's comeback may be nearing a crescendo. Double-digit revenue growth in recent years will drop to about 3% a year by 2024, forecasts Bernstein, a broker. Three in five American homes now have a music-streaming subscription, up from one in five in 2016. The share won't go much higher. Artists, as well as platforms like TikTok, are pressuring labels for a better deal on royalties. "There's a phrase in French: 'The trees don't grow right up to the sky,'" says Simon Gillham, who sits on Vivendi's management board. "There's a right time to cash in on the value you've created."



Kanye ponders Universal truths

Glencore

Pit stop

KOLWEZI AND PARIS

A new boss takes the reins at a good time for commodities

MINING BOSSSES often leave under a cloud, ousted after a profit slump, a public-relations disaster or pit-hole calamity. Not so Ivan Glasenberg. For his last set of results on February 16th the boss of Glencore offered shareholders—including himself—a reinstated dividend and an upbeat outlook. Leaving on a high after 19 years in the top job will not make life easier for his anointed successor, Gary Nagle.

All miners have had a bull run of late as commodity prices have surged. China's appetite for natural resources is unabated. America and Europe are planning infrastructure pushes that will juice demand. The green tinge of such stimulus spending is especially good news for Glencore, a big producer of the cobalt, copper and nickel needed for electric cars and the like.

Investors on the earnings call were as focused on life after Mr Glasenberg. It may not be so different. Those used to seeing the Swiss firm run by a fast-talking South African accountant who has spent much of his career on the coal side of the business might not notice the handover, due to happen in the next few months. Like his predecessor, Mr Nagle is all those things. He will become only the fourth boss to lead the company since its founding in 1974.

Investors expect continuity in the business. Mr Glasenberg has re-engineered a pure commodities trader into a firm that also digs the stuff up. The model has not delivered stellar returns, at least since the firm went public in 2011 (see chart). But trading profits last year were fat and Mr Nagle says the set-up is fit for purpose.

Three thorny dossiers will keep him busy. The first is coal, of which Glencore is the

biggest shipper. The banks that fund its trading arm are under pressure to cut ties to polluters. Glencore has some green credentials and says it is running down coal assets gradually. But a more radical move, like a spin-off, may be needed.

Then there is the Democratic Republic of Congo. A big source of copper and cobalt profits, it is also in the sights of America's Department of Justice. Glencore denies any wrongdoing. After the Congolese elected a new president in 2018 some faces that helped Glencore thrive are being replaced. Dan Gertler, who teamed up with Glencore to develop assets in the DRC, recently earned a partial reprieve from American sanctions (he also denies wrongdoing). The copper belt is rife with rumours that Mr Gertler may be looking to cash out.

Perhaps the trickiest dossier is Mr Glasenberg. He will not upgrade himself to chairman, as some CEOs are wont to do. But he intends to keep his 9% stake, making him the second-biggest shareholder. And, potentially, its biggest back-seat driver. ■

Carmaking

ICEy conditions ahead

Volkswagen's boss wants more electric cars—but won't kill the petrol engine

THE SCRAMBLE to electrify motoring resembles a car race. Tesla and like-minded startups, unencumbered by the legacy of the internal combustion engine (ICE), are surging up the straight. Behind them, jostling for position at the first corner, are the established carmakers, urged on by ever-tightening government deadlines for clean power to supersede fossil fuels. Many are calling time on the ICE. On February 17th Ford's European division said that it would go all-electric by 2030. Days earlier Jaguar Land Rover (JLR), an Indian-owned firm based in Britain, announced that the posh Jaguar brand would become fully electric by 2025. In January General Motors (GM) promised it would make only zero-emissions cars after 2035.

No one is dedicating more resources to electrification than Volkswagen Group, says Herbert Diess, the German giant's boss. The company plans to spend around €73bn (\$88bn) over the next five years on battery power and digitisation, he says. "The competition is now taking the same decisions," Mr Diess notes, alluding to rival firms' pledges.

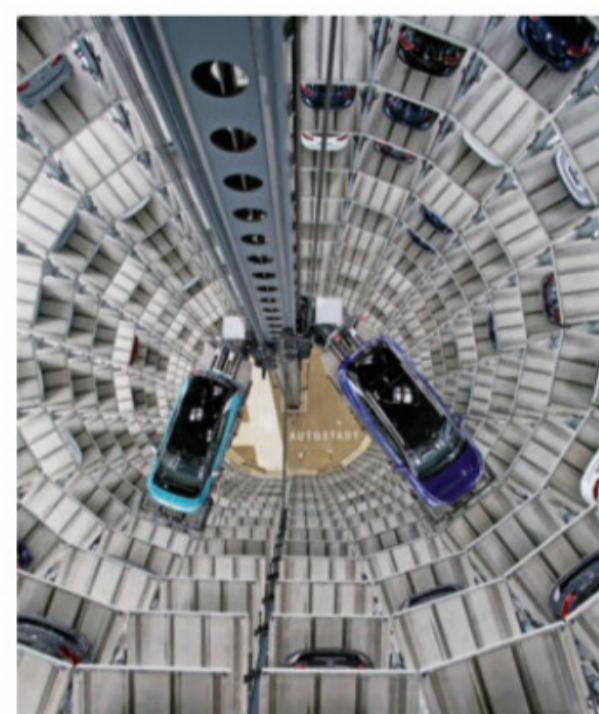
Among the old guard, VW is indeed firmly in the driving seat. A fifth of the millions of cars it sells will be electric by 2025. Some analysts think that by then VW will

churn out more electric cars than Tesla, today's market leader. Mr Diess is more circumspect. A year ago he was confident his firm would lead the world in electric vehicles in ten years' time. Now he is less sure, admitting that Tesla's surging shares give it the resources to grow fast. Although Apple's talks with carmakers such as Hyundai and Nissan did not go anywhere, the tech giant's evident interest in an iCar could yet make it a force to be reckoned with, Mr Diess admits. But he still thinks that the electric race is Volkswagen's to lose, not least because the cashflow from its traditional business gives him the money to invest in the future.

Indeed, despite all the noise about electrification the old ICE technology has plenty of mileage left in it. Unlike his counterparts at Ford Europe, JLR or GM, Mr Diess is unwilling to set a date for the demise of the fossil-fuel engine. His electric plans for 2025 still leave four-fifths of his firm's cars powered by petrol or diesel. Volkswagen is a global company and, he says, many markets will not be ready for electric cars by 2035. Coal-fired power stations will still provide part of the electricity that might charge batteries, making electric cars a moot proposition. In places such as Latin America ICE-friendly biofuels will be the prevailing green alternative to petrol.

Scratch the surface and the ICE seems to be lurking even at firms which claim to be forsaking it. GM says its target is an aspiration. Citigroup, a bank, notes that the majority of investment by established carmakers is still directed towards conventional power trains. BloombergNEF, an energy-analysis firm, reckons that more than one in three cars sold in 2040 will be powered by petrol and diesel. Some will sport the Volkswagen logo. ■

For the full interview with Herbert Diess go to economist.com/VWpod

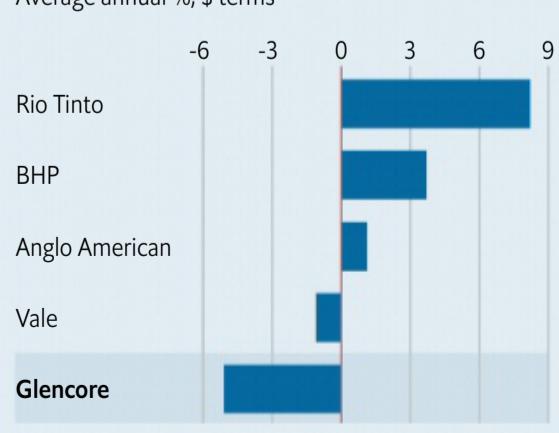


Electrification is a heavy lift

Mining the depths

Total returns, May 18th 2011*-Feb 15th 2021

Average annual %, \$ terms



Source: Refinitiv Datastream



Danone

Culture wars

Anglo-Saxon activist investors want to whip Danone into shape

EMMANUEL FABER used to be seen as the spiritual son of Franck Riboud, honorary chairman and former boss of Danone, whose father Antoine co-founded the French yogurt-maker. Mr Riboud hand-picked Mr Faber as his successor and loyally backed his transformation of Danone into France's first *entreprise à mission*, a corporate form with a defined social purpose.

In recent months the relationship has soured. According to the French press, Mr Riboud thinks Mr Faber is more interested in saving the planet than saving his firm. Danone's share price fell by 27% in 2020 while those of rivals such as Nestlé and Unilever made gains amid pandemic larder-stocking. Its full-year results, due on February 19th, are unlikely to inspire investors' confidence.

Danone has been hit harder by covid-19 than rivals because of its large bottled-water business. Its Evian, Badoit and Volvic brands make money mainly from sales in restaurants, bars and airports. But that is not the only problem. In 2017 Danone overpaid for WhiteWave, an American maker of health-focused fare that it bought for \$12.5bn. The deal, which strained the balance-sheet but did not produce hoped-for returns, is the main reason for Danone's current malaise, says Alan Erskine of Credit Suisse, a bank. Bruno Monteyne of Bernstein, a broker, points to years of underinvestment in brands, which face stiff competition from supermarkets' private labels, at a time when Danone's dairy and baby-

food businesses slow as birth rates fall and people drink less milk.

Faced with these challenges, in October Mr Faber announced an overhaul of the business along more geographic lines. Perhaps 2,000 jobs will be cut. It was the fifth reorganisation on his seven-year watch.

Enough already, huffs Artisan Partners, an American hedge fund which says it is Danone's third-biggest shareholder with a 3% stake. In a meeting with board members on February 16th it demanded Mr Faber's exit, a stop to his latest restructuring, and the sale of struggling brands such as Mizone, a Chinese vitamin drink, and the Vega range of plant-based foods.

Artisan is the latest Anglo-Saxon meddler to pile on the pressure. In November Bluebell Capital Partners, a London-based hedge fund that owns a stake in Danone, demanded that the firm boot out Mr Faber and split the role of chairman and CEO. Causeway Capital Management, an American fund, has echoed Bluebell's call.

Mr Faber's entourage refers to the demands, which appear to have the blessing of 65-year-old Mr Riboud, as a "revolution of gunslinger grandpas". The activists may still succeed, and not just because they are not in fact that wizened. Helpfully, the French state is staying out of the fray; its spokesman said it had no comment. The government has no stake in Danone, but in 2005 declared it an "industrial jewel" to be defended against foreign buyers. Maybe not when they have an ally on the inside. ■

Online shopping

South Korea's baby Amazon

SEOUL

Coupang hopes to emulate other second-generation e-commerce stars

WANDER AROUND Seoul's residential neighbourhoods at dawn and you will invariably encounter a Coupang delivery van. In the past few years South Korea's mini-Amazon has parked itself in a choice spot amid a crowded e-commerce market by steadily expanding the range of products it offers to deliver in time for breakfast, so long as customers order before midnight. Some items arrive the same day. The strategy looked sensible before the covid-19 pandemic. After 2020 it looks inspired. Coupang's revenue nearly doubled from \$6.3bn in 2019 to \$12bn last year. It employs 50,000 people, twice as many as a year ago, and controls a quarter of South Korean e-commerce, up from 18% in 2019, according to Digeo, a research firm.

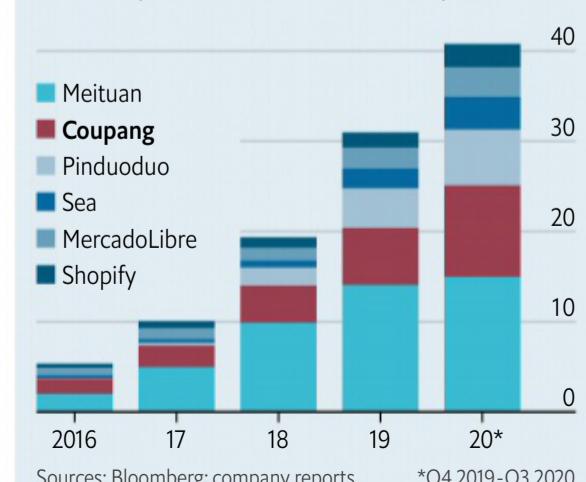
The 11-year-old firm has yet to make money—its cumulative \$4.1bn loss so far has been bankrolled by venture capital, notably SoftBank's \$100bn Vision Fund, which owns a 37% stake, according to estimates by Bloomberg. Cashflow has improved, says Kim Myoung-joo of Mirae Asset Daewoo, an investment firm in Seoul. But it needs more capital to grow.

Happily for Coupang, investors' appetite for startups seems insatiable, as the boom in blank-cheque companies created to merge with them shows (see Finance section). So on February 12th it filed the paperwork for an initial public offering (IPO) on the New York Stock Exchange. It may go public as soon as next month, at a market capitalisation that could surpass \$50bn.

Coupang is the latest in a generation of young e-commerce stars nibbling at the heels of Amazon and Alibaba, a Chinese titan. The incumbents are being challenged ►

They grow up so fast

Revenues, selected e-commerce firms, \$bn



► at home (by Shopify in Amazon's American backyard, and Meituan and Pinduoduo in Alibaba's), as well as in places like Latin America (by Argentina's MercadoLibre) or South-East Asia (by Sea, a Singaporean group). The upstarts' sales have soared of late (see chart on previous page). In the past 12 months they have more than quadrupled their combined stockmarket value, to \$1trn.

With no known plans to expand abroad, Coupang's prospects depend on fending off local rivals. These range from the e-commerce arms of big conglomerates such

as Lotte and Shinsegae to internet platforms like Naver and upstarts like Baemin, a food-delivery service backed by Germany's Delivery Hero. To extend its dominance Coupang must thus continue to nurture the customer goodwill it has garnered thanks to those pre-dawn deliveries. The firm prides itself on employing delivery workers directly, and has a newsroom section dedicated to correcting allegations, for instance over working conditions, that it deems false or distorted. But it has not escaped scrutiny of the e-commerce industry. Earlier this month it had to

apologise after a government commission classified the death of a young contract worker at one of its logistics centres as an industrial accident.

Even if it manages to keep consumers on its side, as seems likely, long-term growth could require looking beyond fulfilment and logistics, thinks Ms Kim. MercadoLibre and Sea owe significant chunks of their rich valuations to adjacent businesses, from e-payments to gaming. To thrive in South Korea's isolated online ecosystem, Coupang may need to occupy more than one niche. ■

Bartleby Back for good, or bad

Returning to the office will be tricky

WHEN WILL most people be back at the office? As with Tantalus and the fruit tree, the prize seems to be close, only to recede out of reach. A survey conducted by Morgan Stanley, an investment bank, found that employees have adjusted their expectations for when they are likely to repopulate their desks, moving the date back from April to June. Given the slow pace of vaccinations in some countries, even that may be optimistic.

Companies have also had to adjust their expectations. Brian Kropp of Gartner, a research and advisory firm, says that businesses have gone through three phases. In the first, during the spring of 2020, they thought that the pandemic would be short-lived and that corporate life would soon return to normal. In the second, economic restrictions seemed set to last indefinitely and companies figured there was little point in planning for a post-pandemic world. In the third, current, stage the vaccines have brought hope of a reversion to normality, and businesses are trying to work out what the new world will look like.

Interestingly, Mr Kropp observes that views have switched since the start of the pandemic. A year ago, many executives were dubious that productivity could be maintained if employees worked from home. Staff, meanwhile, enjoyed the greater flexibility. Now managers are much more comfortable with the idea. But employees are hankering after the office, at least for part of the time.

This employee restlessness seems to relate to the sheer length of the lockdown. The novelty has worn off and working from home seems much less appealing in winter. And the time spent on screen has led to a feeling of fatigue. It has also led to increased stress. A

study of 1,500 workers in 46 countries by the *Harvard Business Review* found that 85% said their well-being had declined and 55% felt they had not been able to balance their work and home lives.

The problems are physical as well as mental. A survey of Italian workers found that 50% reported greater neck pain, and 38% increased lower-back pain, while working remotely. This is probably because home furniture is not designed to accommodate extensive computer use.

This does not mean that workers want to go back to the old days entirely. The Morgan Stanley survey found that employees said that, in future, they would like to work from home for two days a week, on average, compared with just one day a week before covid-19.

When people do come back, mask-wearing and social distancing will have to continue for a while. Even if they legally can, few employers will force their employees to get vaccinated, not least because of the furore this might arouse. Gartner surveyed 116 human-resources professionals and only 9% were planning

to mandate vaccination. This may mean that 30-35% of American workers will not be vaccinated, Gartner says. They will be vulnerable to catching the virus at work.

Another problem for companies is that employees have become less loyal as the pandemic has progressed. Mr Kropp says that workers are spending more time looking for jobs online and updating their LinkedIn profiles. Since few businesses are hiring at the moment, not many employees have left. But when the economy opens up again, there might be a rush for the exit.

The urge to depart may not be universal. As Bartleby has argued before, the pandemic has divided workers into slackers and Stakhanovites. The first group are getting away with the minimum effort. The second are working even longer hours than before. It is the Stakhanovites who are more likely to leave, Mr Kropp argues, if they feel their efforts are not adequately rewarded.

All this presents challenges for managers who are planning a return to normal. They may have to redesign their offices to create more distance between desks, and come up with a system for allocating space to employees who may turn up for just three days a week. They need to recreate camaraderie within their teams and make sure their best employees do not head out the door.

Issues of equity may be trickiest of all to deal with. Women appear to be keener on working from home than men are. But Mr Kropp warns that managers have a tendency to reward those employees whom they can see, at the expense of those with whom they have reduced contact. That could widen the existing gender pay gap. In short, when the all-clear finally sounds, that may be just the start of managers' problems.



Schumpeter | Red in tooth and clawback

How to design CEO pay to punish iniquity, not just reward virtue



IF BUSINESS HAD a Moses, "Thou shalt link pay to performance" would be on his tablet. Compensation committees have, however, tended to stick to a narrow reading of the commandment. Whereas they reward good behaviour, deterring the bad is an after-thought. Worried that this may lead bosses to adopt a mentality of "heads we win, tails shareholders lose", boards are rethinking their priorities—partly in response to pressure from regulators and investors, but also to shifting social winds. Perfectly balanced incentives remain as elusive as the promised land. Still, measures designed to ensure that misconduct does not pay are becoming central to the debate about how to craft bosses' salary plans.

The most striking change of recent years has been the rise of the "clawback". This is a provision in pay plans that gives the board the right (or, less commonly, an obligation) to yank bonuses or stock awards given but later found to be unjustly earned. A prototype, contained in America's Sarbanes-Oxley reforms of 2002, required retrieving pay from chief executives and chief financial officers whose sins caused accounting restatements. The idea gained traction after the global financial crisis. The European Union mandated recouping money from wayward bankers. In America Congress told regulators to craft a new clawback rule. While they mulled this, big firms got the message and began to draw up such policies voluntarily. Some 93% of those in the S&P 500 index now say they have one covering cash bonuses, equity awards or both, according to ISS, a proxy-advisory firm, up from a small minority before Sarbanes-Oxley.

As such provisions have grown in popularity, two things have happened. First, the list of misdeeds covered has lengthened. What initially applied solely to criminal financial conduct now extends to almost anything that might damage a firm's reputation. That includes creating a toxic corporate culture, sexual harassment and "inappropriate" personal relationships; cupping backsides is taken as seriously as cooking books.

The second development is that more firms—albeit still a minority—are plucking up the courage to invoke the provisions. Wells Fargo clawed back \$28m from John Stumpf on top of the \$41m he forfeited when he resigned as CEO of the lender in 2016, after a probe concluded he had engendered a culture that encour-

aged employees to open fake accounts to lift sales. Goldman Sachs tapped a dozen current and former executives for \$175m last year to help ease the pain of whopping fines over the investment bank's role in the 1MDB embezzlement scandal. McDonald's is trying to recoup \$57m of severance pay from its ex-boss, Steve Easterbrook, who was fired over sexual relationships with underlings.

The Goldman Sachs case encapsulates the pros and cons of clawbacks. The firm won plaudits for its stance; here was a Wall Street giant willing to make top brass pick up some of the tab for wrongdoing. But what initially seemed a bold move became an embarrassment when Gary Cohn, its former second-in-command, who had cashed in his pay awards on joining the Trump administration in 2016, demurred. The stand-off ended when Mr Cohn agreed to pay a sum, reportedly \$10m, to charity. Much as the bank tried to spin this as fair, it was made to look impotent.

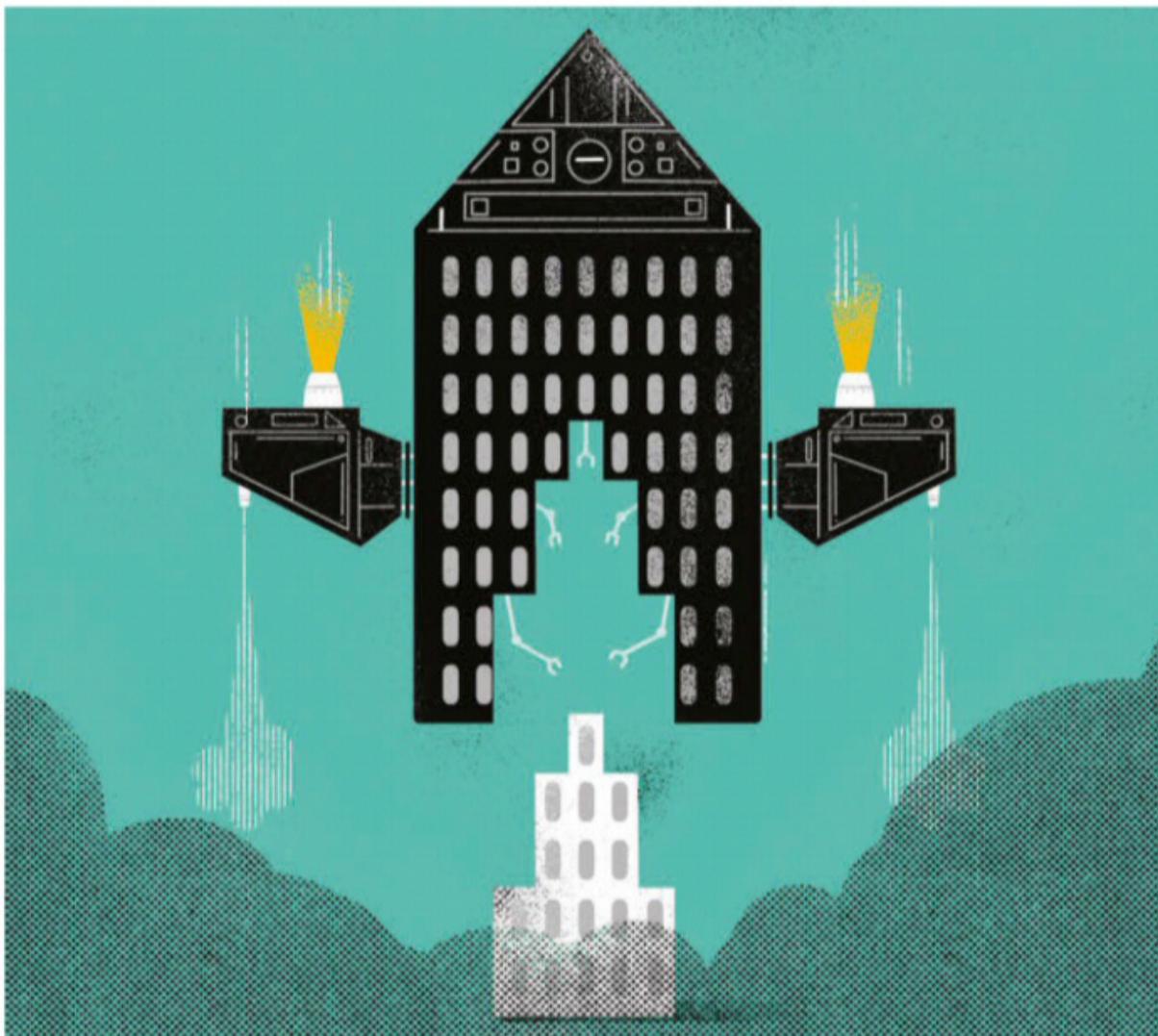
The episode underlines that, when it comes to compensation, he who has already paid the piper finds it harder to call the tune. Goldman Sachs's board could have shown more spine and seen Mr Cohn in court, if only to signal it was serious about holding grantees to account. That, though, would have been costly and risky. Lawyers' fees might have exceeded what Mr Cohn owed as they wrangled over what is "excessive" pay, "inappropriate" behaviour or "inadequate" oversight in a scandal that involved decisions at many levels. The court might have sided with Mr Cohn, who was never personally accused of wrongdoing. Boards must also consider potential bad publicity. McDonald's was put on the back foot when Mr Easterbrook claimed it already had information about his liaisons, including sexually explicit emails, when it approved his severance package.

Unsurprisingly, then, some firms try to just put the mess behind them. GE decided last month not to claw back pay from an ex-boss, Jeff Immelt, after a huge write-off and a probe into disclosure policies led to a \$200m fine for the industrial conglomerate. (He denies wrongdoing.) Drugmakers accused of stoking the opioid epidemic have also eschewed clawbacks. Such clauses may deter some executives from reporting misconduct. And broadening what is considered wrongdoing creates ambiguity. Some firms include behaviour "embarrassing" to them. Might a CEO expressing exotic political views count?

Fire, brimstone and bonuses

Still, deterrence efforts are proliferating. One popular policy is to lengthen deferral periods for pay, by a year or more for cash bonuses, and a similar period beyond the vesting date for equity grants—in some cases until after the executive leaves the firm. Though less dramatic than clawbacks, this has the advantage of reducing the chance that the money has left the company before alleged misbehaviour emerges. Last month CVS Health, other pharmacy chains and even a few drugmakers (like Bristol Myers Squibb), agreed on a set of extended-deferral principles with a group of investors who had threatened to agitate over the firms' role in the opioid crisis.

Clawbacks, too, will spread. For one thing, the pandemic recession has stoked anger over excessive executive pay—particularly perceived pay-for-failure such as Boeing's \$62m payoff to Dennis Muilenburg, who presided over the bungled response to two crashes of its 737 MAX passenger jets. And big investors like such provisions. In just a few years BlackRock, the world's biggest asset manager, has gone from tepid to wholehearted support for them. What better way to focus executives' minds than to make it clear that what the board giveth, the board can take away? ■



Capital markets

SPAC invasion

NEW YORK

Blank-cheque firms are gobbling up capital and companies. How to make sense of the craze for SPACs

WHAT LINKS Martin Luther King III, the son of the civil-rights leader; Shaquille O'Neal, a former basketball player; and Kevin Mayer, the former boss of TikTok? The unlikely trio sponsors a special-purpose acquisition company (SPAC), a listed pot of capital that seeks a firm to take public through a merger. Mr O'Neal is not the only sportsman turned SPACman. Colin Kaepernick, the former quarterback famous for kneeling during America's national anthem to protest against racism, has teamed up with a private-equity firm to launch a "socially conscious" SPAC. Alex Rodriguez, a former baseball player, plans to raise up to \$575m for a SPAC targeting sports-related firms.

Financiers are in on the action, too. Bill Ackman, the boss of Pershing Square, a hedge fund, launched a SPAC that raised \$4bn in July, making it the biggest to date. Gary Cohn, a former Goldman Sachs banker and adviser to President Donald Trump, has one too. So do a number of private-equity giants, including Apollo, Ares, Bain, KKR and TPG.

Around 250 SPACs were launched last year in America, raising \$83bn. Things have only sped up since: in January an average of five were created each working day, amassing more than \$26bn in capital. Because they tend to raise more cash once

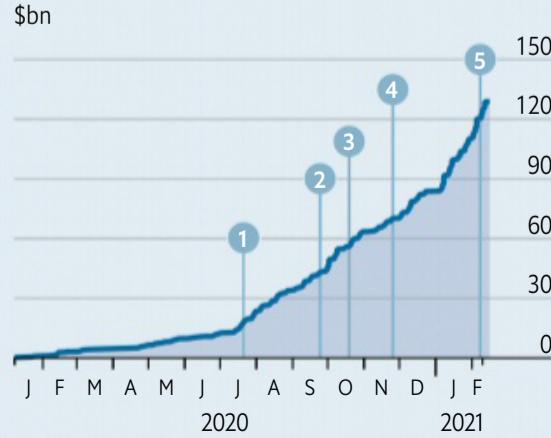
they find an acquisition target—around five times that in the initially listed pot—SPACs may be looking to buy firms worth as much as \$500bn, about 1% of the value of all listed American companies. Look beyond the frenetic growth and you find a spectrum of SPACs, ranging from the earnest to the exuberant.

The life of a SPAC tends to last at most two years. It begins with the sponsor taking the blank-cheque firm public. Investors typically pay \$10 a share and also receive warrants, which give them the right to buy more shares at a later date. The sponsor then searches for an acquisition target that is looking to raise capital and go ►

SPAC attack

Special-purpose acquisition companies (SPACs)

Cumulative capital raised since January 2020



Selected SPAC developments

- 1 **Ack-SPAC** Bill Ackman launches biggest ever SPAC with improved cost structure
- 2 **SPAC-SPAC** Easterly Alternatives, an asset manager, announces fund to invest in other SPACs
- 3 **Circular SPAC** Vehicle backed by HPS, an investment firm, merges two private-credit funds, one of which owns a stake in HPS
- 4 **Shaq-SPAC** Shaquille O'Neal, a former TikTok CEO and Martin Luther King III launch SPAC
- 5 **Sport-SPACs** Alex Rodriguez, former baseball player, backs SPAC; Colin Kaepernick, former football quarterback, sponsors another

► public. Once it is found, shareholders vote on the merger; often new investors are brought in to provide more capital. When the deal is done the sponsor receives a slice of the merged firm's equity and typically a seat on the company's board. The pot of capital is now cash to be used by the newly public firm.

Proponents say SPACs are cheaper than conventional initial public offerings (IPOS), but they still incur underwriting fees, and the sponsor's share of the proceeds dilutes other shareholders. The path to going public can be shorter and less uncertain than an IPO, though. A firm merging with a SPAC knows exactly how much capital it will raise.

Though SPACs have been around as a financing vehicle for almost two decades, they were regarded warily for much of that time—as a route to be used only by firms shunned by sharp-suited investment bankers. The latest mania can be traced to a serendipitous deal struck in 2019 by Chamath Palihapitiya, a venture capitalist turned boss of a SPAC, and Sir Richard Branson, a billionaire businessman.

Mr Palihapitiya's SPAC had raised \$674m, wooing investors with promises of disrupting the IPO scene. Sir Richard had sought funding for Virgin Galactic, a space-venture company, from Saudi Arabia's sovereign-wealth fund. But after Jamal Khashoggi, a journalist, was killed in a Saudi consulate in Turkey, Sir Richard suspended the plan. A year later Virgin Galactic merged with the SPAC. It received the \$674m pot, and another \$100m in investment from Mr Palihapitiya, and went public at a valuation of \$2.2bn. Its market capitalisation is now \$12bn.

That success set off the trend. Today SPACs range from the tiddlers, with less than \$50m in capital, to the titans, such as Mr Ackman's \$4bn SPAC. (The median SPAC raises \$240m at the initial stage.) Some issue vast quantities of warrants and hand sponsors fat slices of firms; others are leaner. Some have target industries in mind; others are ambivalent. High-profile deals tend to spawn mini-trends. After Virgin Galactic went public several space deals took off; when Nikola, an electric-truck maker, merged with a SPAC, interest in electric-vehicle deals picked up; the enthusiasm for sports-SPACs follows the listing of DraftKings, a sports-betting platform, in April.

Their sudden popularity and the sheer variety of their size, scope and structure raise the question of which SPACs are sensible and which show signs of mania. A financier in charge of a big investment bank's SPAC business sees a clear bifurcation. There are plenty of good SPACs with excellent management teams that can help turn mediocre companies into good ones. But the rest, perhaps a third to two-thirds,

"don't know the first thing about the businesses they are dealing with".

That seems to be confirmed by a recent study by Michael Klausner and Emily Ruan of Stanford University and Michael Ohlrogge of New York University. The authors look at blank-cheque firms that made acquisitions between January 2019 and June 2020. They find that, in 25% of cases, the sponsor's payout exceeded 12% of post-

merger equity, compared with a median stake of 7.7%.

They also conclude that some SPACs deliver far worse returns for investors than others: companies that went public through the SPAC route fell in value by an average of 3% after three months, 12% after six months and by a third after 12 months. They lagged behind the wider market and even further behind an index of firms that ►

SPACs in Silicon Valley

Rain for the rainmakers

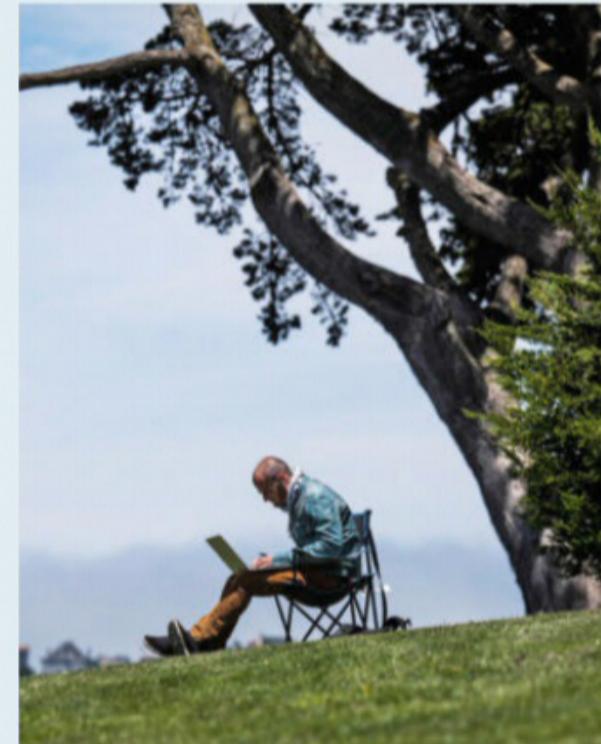
The SPAC craze will change tech investing

SILICON VALLEY has thrived by inventing new ways of doing things, from searching for information to contacting friends. So it may come as no surprise that the Valley is eagerly embracing another sort of disruption: special-purpose acquisition companies (SPACs), as an alternative to the conventional initial public offering (IPO) for startups. "So many things have become cheaper and more efficient. Why are IPOS as expensive and inefficient as ever?" asks Roelof Botha, a partner at Sequoia Capital, a venture-capital firm. He describes the IPO process as "chicanery and grand larceny".

With Wall Street banks allocating shares to top clients and encouraging companies to price their offerings low to ensure a rise on the first day, many in Silicon Valley feel the IPO "tax" is too great. Last year in America, underpricing led to \$30bn of unrealised gains for newly public companies (and their employees). With SPACs and direct listings, another route to going public, there is no pressure for a price to pop.

Signs of the SPAC craze are now as common as sightings of unicorns in the Valley. A few venture-capital firms, including Khosla Ventures, have announced SPACs, as have hedge funds that invest in tech, and individual venture capitalists. Prominent tech firms, including 23andMe, a genetic-testing firm, and SoFi, a personal-finance platform, are going public through SPACs.

Though their impact will be felt across corporate America, SPACs will have a pronounced effect on the Valley. For one, they might help finance adolescent tech companies that struggle to attract more private investment, but are too small to do an IPO. Some point to Opendoor, a property-tech firm, as an example of a company that struggled to raise another round of funding but has thrived since going public through a SPAC. Valued at \$4.8bn before its merger



Investing al fresco

in September, it is now worth \$18.1bn.

Blank-cheque firms may also fund technologies in need of long-term investment. "Deep tech" like autonomous vehicles, biotech and quantum computing could benefit. (Software companies, which make easy, quick margins, are less likely to be targets.) "A SPAC allows you to be valued on the hopes and dreams of tomorrow, versus the results of today," says Nirav Tolia, the founder of Next-door, a social network, and an independent director of IPOD, a SPAC.

SPACs are opening up tech investing to retail investors, too. The fact that tech firms tended to delay listing meant that the lion's share of returns had already been captured by venture capitalists even before startups reached public markets. SPACs that merge with early-stage firms could give more investors a chance to pile in. They "are the closest thing a retail investor can get to a venture investment", says Mr Tolia. This lucrative but speculative kind of investing will bring punters both risk and reward.

listed via IPO.

However, about half the sample is made up of “high-quality” SPACs, defined as those run by former Fortune 500 bosses or set up by large private-equity firms. These perform much better, outperforming IPOs and the wider market over six months (though not over 12).

How might the craze play out? About three-quarters of SPACs launched last year are yet to do a deal. One scenario worth considering is that bumper issuance leaves many SPACs unable to find suitable targets. Investors can redeem their shares at cost until a target is bought (the proceeds from the SPAC’s IPO are kept in an escrow account in the meantime). The burden of failure—the SPAC’s set-up and search expenses—would therefore probably fall on sponsors. In order to avoid this, many might take any willing firm public. Voting and redemption mechanisms guard investors against dodgy deals, though they have not prevented investors from losing money so far.

Investors’ willingness to accept poor returns may wane as they become more familiar with SPACs. They certainly grasp that those like Mr Ackman’s, which will issue him 6.7% of the shares in the merged firm only once investors earn a 20% return, are more sensibly structured, valuing it more handsomely than the rest. (Its share prices are trading at 50% above their IPO level.) But they also still want to take a punt on Nikola and other electric-vehicle copycats, in the hope of finding the next Tesla. Seen this way, the mania around SPACs is simply an expression of wider exuberance. ■

Stock exchanges

Advantage Amsterdam

BERLIN

The Dutch financial centre gains an edge over continental rivals

THOUGH MANY exchanges are run by multinational companies, they are still often seen as the financial equivalent of a national football team. When Amsterdam ousted London as the largest share-trading centre in Europe last month, it made headlines in both countries. “The EU wins first battle for stock trading over Britons,” said *Het Financieele Dagblad*. London’s *Financial Times* observed that “Amsterdam punctures the City’s post-Brexit hopes”.

Announcements of high-profile listings in Amsterdam have further bolstered the Dutch side. Jean-Pierre Mustier, the former boss of UniCredit, an Italian bank, and Bernard Arnault, a luxury-goods tycoon, are intending to list a special-purpose acquisition company (SPAC) in Amsterdam aimed at buying fintech and other financial firms. Vivendi, a French media group, plans to list Universal Music, its record label, in the city. Earlier this month Martin Blessing, the former boss of Germany’s Commerzbank, said he planned to raise around €300m (\$362m) for a SPAC listed in Amsterdam that targets the financial industry. That follows an initial public offering (IPO) last month by Poland’s InPost, an e-commerce group, which raised

€2.8bn—the biggest continental European listing since 2018.

Ever since Britain voted to leave the European Union, a number of continental cities, including Paris and Frankfurt, have been vying to snatch business from London. Amsterdam seems to have gained a head-start. In January average daily European share trading amounted to €9.2bn on the Amsterdam bourse and the Dutch arms of the Chicago Board Options Exchange (CBOE) and Turquoise, a share-trading platform, much higher than daily trading of €2.6bn in 2020. By contrast, trading sank to about €8.6bn in London in January, about half its level in 2020.

The shift was foreseeable: after Britain’s exit from the single market on January 1st, the EU refused to grant it “equivalence”, a regulatory arrangement that would have allowed the City of London to trade relatively unhampered in European markets. That forced trading in European shares to move to the continent. Both the CBOE and Turquoise plumped for the Netherlands as their alternative to Britain.

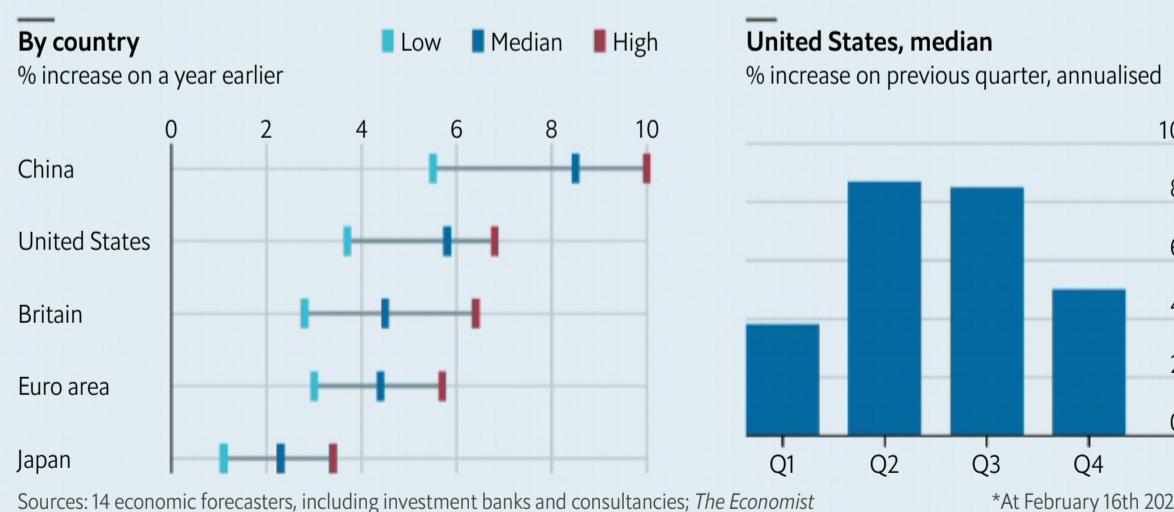
Why Amsterdam? Euronext, the company that runs exchanges in cities including Amsterdam, Brussels and Paris, has focused on building relationships with big and small tech companies all over Europe, says Michael Werner, a stock analyst at UBS, a Swiss bank. The aim is to become the listing venue of choice for hot tech companies. Several factors make the Dutch exchange more attractive than its continental rivals. Its regulation and governance framework, such as its tolerance of dual-class voting structures, are slightly more favourable to companies. Its first-class internet infrastructure makes it easy to trade fast. And the fact that English is so widely (and well) spoken probably helps attract foreigners.

Nonetheless, in most respects London’s crown is still secure. Take the Dutch IPO boom, which starts from a very low base. Last year only two companies went public in Amsterdam, compared with 33 on London’s stock exchange; 11 firms have already listed in London this year, to Amsterdam’s one. A spokeswoman for Euronext says that it is “too early to draw any conclusions” from the jump in trading volume.

For Marieke Blom of ING, a Dutch bank, the big question is whether the Brexit effect proves temporary or not. The EU is considering whether to grant Britain equivalence. Even if it does, Amsterdam could still benefit from a virtuous circle. Stock exchanges compete so aggressively for the thin-margin business of share trading because liquidity begets liquidity. The high volume of trading should make it easier for sellers and buyers to find each other, and that should make the exchange more attractive for listings. Some of Amsterdam’s gains will probably stick. ■

The shape of things to come

GDP forecasts*, 2021



Great expectations

Economic forecasters are pencilling in heady growth rates for the world’s big economies this year. GDP in America is expected to expand by close to 6% in 2021, the fastest pace since 1984. Growth is expected to be most rapid in the second and third quarters of the year, as vaccinations boost activity and fiscal stimulus takes effect. By contrast the bounce-back in the euro area and Britain is expected to be more modest this year. That reflects a delayed recovery: with economies still locked down, output is expected to contract in the first quarter.

Digital currencies

Token gestures

Bitcoin grabs the headlines, but the real action is at central banks

ANYONE WHO bought bitcoin a year ago must feel vindicated—and rich. The price of the cryptocurrency crossed \$50,000 for the first time on February 16th, a five-fold increase over the past year. Wall Street grandes including BlackRock, Bank of New York Mellon and Morgan Stanley are mulling holding some for clients. Last week Tesla, an electric-car maker, said it had bought \$1.5bn-worth of bitcoin and would accept it as payment for its cars.

Investors' interest in bitcoin as an asset may be rising, but the inefficiencies and transaction costs associated with its use make it unlikely ever to be a viable currency. Here the action has been within central banks. As consumers have shifted away from using physical cash, and private companies—such as Facebook—have expressed an interest in launching their own tokens, many central banks have begun planning to issue their own digital currencies. The Bank for International Settlements, a club of central banks, last month said it expects one-fifth of the world's population will have access to a central-bank digital currency (CBDC) by 2024.

China is the clear frontrunner. On February 17th it concluded the third big test of its digital currency, handing out 10m yuan (\$1.5m) to 50,000 shoppers in Beijing. It has announced a joint venture with SWIFT, an interbank-messaging system used for cross-border payments. Sweden, another champion, has extended its pilot project.

The latest big central bank to get serious about a CBDC is the European Central Bank (ECB). Its public consultation, seeking views on the desirable features of CBDCs, concluded in January, garnering over 8,000 responses. Speaking to *The Economist* on February 10th, Christine Lagarde, its president, said she planned to seek approval from her colleagues to begin preparing for a digital euro. A decision is expected in April. Ms Lagarde hopes the currency will go live by 2025.

Much like other central banks, the ECB wants to offer consumers digital tender that is as safe as physical cash. Unlike bank deposits, a claim on central-bank reserves carries no credit risk. Digital-currency transactions could be settled instantly on the central bank's ledger, rather than using the pipes of card networks and banks. That

could provide a back-up system in the event that outages or cyber-attacks cause private payment channels to fail.

The bank also sees a digital currency as a potential tool to bolster the international role of the euro, which makes up just 20% of central-bank reserves globally, versus the dollar's 60%. It could let foreigners settle cross-border transactions directly in central-bank money, which would be faster, cheaper and safer than directing them through a web of "correspondent" banks. That could make the digital euro attractive to businesses and investors.

Its main draw may be to offer a level of privacy that neither America nor China can promise, says Dave Birch, a fintech expert. The former uses its financial system to enforce sanctions; the latter seeks control. But getting the design right will be tricky: the European Union still wants to be able to track cash that is being laundered or hidden to dodge taxes. One fix could be to let users open e-wallets only once they have been vetted by banks, but for the use of the digital currency itself to be unmonitored.

A wildly successful digital euro could siphon deposits away from banks and threaten the availability of credit. Remedies being considered include capping the amount of currency users can hold or—as Fabio Panetta, a member of the ECB's executive board, suggested on February 10th—charging penalties on use above a threshold. A digital euro could also involve "huge legal reform", says Huw van Steenis of UBS, a bank. "Settlement finality"—which governs when a payment completes and cannot be reversed—varies across the euro zone's 19 countries, and would need to be harmonised. Launching a CBDC will take more than token efforts. ■

Trade

In search of a cure

WASHINGTON, DC

The wto has a new chief. Is it time for new trade rules too?

FIXING THE World Trade Organisation (WTO) is not enough for Ngozi Okonjo-Iweala, the first woman and first African to lead it. On February 15th, the day she was appointed as director-general, she announced that she wanted to help bring an end to the pandemic, too. The two are related; she hopes to encourage members to lift export restrictions on food and medical products, and even stimulate vaccine production. The former Nigerian finance minister and chairwoman of GAVI, a vaccine-finance agency, is not alone in thinking the WTO could do more.

For the full interview with Christine Lagarde, go to economist.com/CLpod



Ngozi takes her seat

When the pandemic first struck the WTO seemed largely irrelevant. That was partly by design: it permits trade restrictions if they protect health. Global Trade Alert (GTA), a watchdog, recorded 202 export restrictions on medical supplies and personal-protective equipment between January and September 2020. Members' failure to alert the WTO of their actions was more egregious. Bernard Hoekman of the European University Institute calculated that over a similar period GTA recorded more than twice the number of trade measures reported to the WTO.

Now some are asking whether the WTO should do more to discourage trade restrictions. Members including Singapore and New Zealand have sought to limit export controls and lower import barriers for pandemic-related products. On paper the proposal offers gains for everyone: companies in producing countries would access bigger markets, and consuming countries would achieve greater security of supply. But the idea has not caught on among exporters, perhaps because they know that they would struggle to keep up their side of the bargain when crisis hits. Ms Okonjo-Iweala is keen to beef up the WTO's monitoring efforts, which should be easier.

Another complaint has been that the WTO's intellectual-property rules are too rigid, and protect pandemic profiteers over the poor. Médecins Sans Frontières, a charity, has pointed to Italian producers of 3D-printed ventilator valves threatened with patent-infringement lawsuits, or South African producers struggling to access raw materials for covid-19 tests. In emergencies the agreement on Trade Related Aspects of Intellectual-Property Rights (TRIPS) allows governments to issue "compulsory" licences to make health-related products without the permission of the patent holder. So far, though, none has. ►

Buttonwood Jumping ship



What market-based measures do and don't tell you about inflation fears

IF YOU HAD to pick an emblem of the wild ride that financial markets have been on, it would be Carnival. When the pandemic took hold, its cruise ships were regarded as floating petri-dishes. Yet last April it was able to raise capital, as the corporate-bond market thawed. More recently it raised \$3.5bn at half the interest rate that it paid last year. Now all the talk is of pent-up consumer demand and the inflation that will unleash. Carnival's bookings for the first half of 2022 are above their level in 2019. The company has captured the market zeitgeist once again.

If you can marvel at the speed of the firm's change of fortune, marvel too at another turnaround. The yield gap between ten-year Treasury inflation-protected bonds (TIPS) and conventional bonds of the same maturity is widely seen as a measure of long-term inflation expectations. These inflation "break-evens" have soared to 2.2% from a low of just 0.5% last March.

Serious people are talking of a return to 1970s-style inflation. In America bumper fiscal-stimulus packages seem to arrive like overdue buses, one after another. They are layered on top of unprecedented monetary easing and a pledge by the Federal Reserve to tolerate inflation above 2% for a while. The case for higher inflation seems more persuasive than it has for years. But break-evens will not tell you a lot about whether it might be sustained. They are too volatile to be a reliable guide.

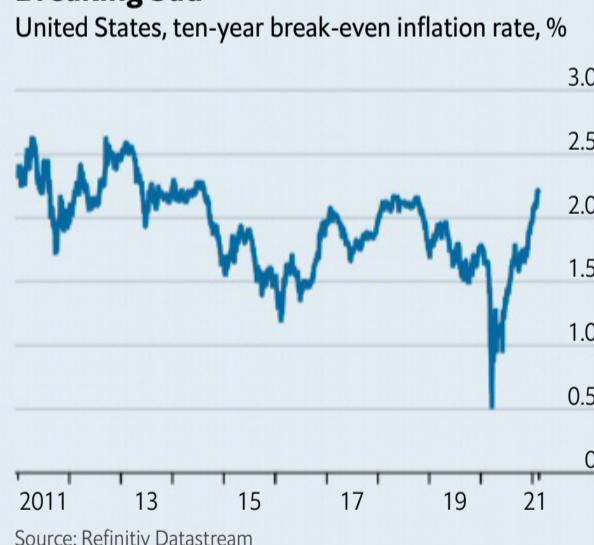
A jump in annual inflation seems assured. Last spring, when cruise liners were beached, there was a glut of crude oil in storage and in seaborne tankers. The month-ahead price of oil briefly turned negative. A year on, inventories are falling. The price of a barrel of Brent

crude has surged past \$60. The trend is mirrored in the rising prices of other commodities. That will push up year-on-year comparisons of prices and thus annual inflation. Commodity markets offer a template of what could yet happen in the wider economy: a surge in demand meets constrained supply, leading to inflation.

In the central-banking model, expectations are self-fulfilling: businesses set prices and wages in accordance with the inflation they look ahead to. Yet it would be unwise to put too much faith in break-evens. They often reflect market influences that are only tangential to future inflation. Look at Britain, for instance. Legislation in 2004 obliged pension funds to match their assets to their long-term promises. This in turn spurred demand for long-dated index-linked bonds, and the debt-management office issued lots more of them. Despite this issuance, the demand for inflation protection has over time driven real yields down to unusually low levels and pushed up break-evens.

In America, the oil price appears to have an outsize influence on break-evens.

Breaking bad



A simple model based on the oil price and the dollar tracks market measures of expected inflation quite closely, according to a recent note by Steven Englander of Standard Chartered, a bank. His model, based on data from 2006 to 2016, predicts the recent rise in break-evens pretty well. Sharp rises in the oil price tend to push up inflation, but the effect is temporary. They ought not to influence medium-term break-evens, but in practice they do.

Bonds respond to changes in risk appetite in ways that have implications for implied break-evens too, says Eric Lonergan of M&G, a fund manager. The ten-year Treasury is the quintessential safe asset. It is liquid (unlike TIPS) and investors use it as protection against extreme moves in share prices. When the stockmarket falls hard, as it did last March, the price of a ten-year Treasury typically rallies, and the yield collapses, as investors seek safety. But as risk appetite returns, the effect unwinds. The yield curve has steepened—which is to say, yields on longer-dated bonds have risen relative to those on shorter-dated bonds—as it tends to at the start of an economic recovery. A corollary is that break-evens have also risen. But this is mostly the outcome of shifting attitudes to risk, rather than forecasts of inflation.

For all their shortcomings, inflation break-evens are closely watched. The whole edifice of asset prices, from shares to homes, rests on rock-bottom interest rates, and thus on quiescent inflation. Before the pandemic, financial markets were prone to periodic growth scares (trade wars, an over-zealous Fed, and so on) that spooked stockmarkets. Now we seem to be set for a series of inflation scares. And Carnival's cruise liners are not even at sea yet.

▶ In October South Africa and India therefore proposed to suspend TRIPS rules relating to copyright, industrial designs, patents and trade secrets, until most of the world's population is immune. James Love of Knowledge Ecology International, a think-tank, says the waiver could help overcome the often intense pressure from rich-country governments on poorer ones not to use flexibilities written into the rules. Patent holders, of course, claim such waivers hurt their incentive to invest. (Whereas under a compulsory licence buyers would have to pay some royalty, un-

der the proposed waiver they would not.)

The truth is that the waiver itself might not do much to expand vaccine production. Without companies facilitating the transfer of technology it would have "roughly zero net effect", says Rachel Silverman of the Centre for Global Development, another think-tank. And today's supply constraints reflect manufacturing bottlenecks rather than patent protection. As for other products, Bryan Mercurio of the Chinese University of Hong Kong says that if governments have not issued compulsory licences, often the problem is not

with the existing trade rules but with their own domestic lawmaking.

In any case, the proposal has not gained much support among other WTO members and Ms Okonjo-Iweala does not seem to be advocating for it. On February 15th she pointed to existing TRIPS flexibilities, and warned about the risks of putting off investment in vaccines to combat the variants of covid-19. Ms Okonjo-Iweala wants to set up a longer-term framework for responding to pandemics instead. The question is whether it can look different to the one already in place. ■

Free exchange | Radiant energy

If America's economy runs hot, what happens to the rest of the world?



WHEN AMERICA sneezes, the rest of the world catches a cold. But what happens when it runs a fever? After a trying 2020 in which GDP fell by 3.5%, America is poised to enjoy a robust rebound in 2021 simply by returning to something like normal as vaccination proceeds. Yet it might manage more than just that. If President Joe Biden's covid-19 relief bill is enacted, total stimulus this year may exceed \$2.5trn. That could easily push output above what the Congressional Budget Office estimates to be its "potential" level: that is, the amount the economy can produce without an increase in inflationary pressure. This possibility has some American economists on the lookout for signs of accelerating growth in prices and wages. America does not operate in a vacuum, however; should overheating occur, its effects will not be confined within its borders. Depending on how the recovery plays out, a hot American economy could be a boon for the rest of the world—or yet another source of concern.

In a closed economy that does not trade with the rest of the world, too little spending leads to job losses and downward pressure on prices, whereas too much should push up employment and, eventually, prices. In an open economy, however, some of the effects of the shifts in demand spill over to the rest of the world. A sharp drop in spending, for instance, may be associated with plunging demand for imports, in which case some of the pain of a slump is exported abroad. During the global financial crisis of 2007-09, troubles in financial markets wreaked havoc all over the world, but even countries relatively insulated from those woes felt a chill thanks to trade links with America and Europe. According to one estimate, about a quarter of the drop in American demand and a fifth of the fall in European demand was borne by other economies, and transmitted through trade.

A boost to demand ought to work in a similar way, but in the other direction. As Americans spend more, some of it leaks abroad: through purchases of foreign goods, for example, or spending on services—including tourism, which should begin to rebound as pandemic restrictions are lifted. An analysis of fiscal-policy spillovers published by the IMF in 2017 found that an American stimulus consisting mostly of spending (as opposed to tax cuts) and worth 1% of GDP raises the output of the average country

by 0.33% in the first year. Countries with closer trade ties experience bigger effects; the fillip to Canada's economy is estimated to be almost three times the average, for example. If the combination of reopening and stimulus invigorates the American consumer, the effects could quickly be felt all over the world.

The degree to which it is felt, however, depends crucially on the policy response, both at home and abroad. Fiscal spillovers are more powerful when recipient countries are themselves operating below potential. American spending is thus more likely to spill over to the rest of the world if its recovery is much stronger than those of its trading partners. Ordinarily, spillovers provide a strong incentive for governments to co-ordinate their stimulus efforts—lest some tight-fisted economies (eg, those in Europe) free ride on the largesse leaking from more generous ones. Indeed, on February 12th Janet Yellen, America's treasury secretary, urged her counterparts in the G7 group of countries to "go big" on stimulus, too. Countries that free ride could find themselves in hot water with Ms Yellen: the Biden administration has promised to be stern with countries that run large, persistent trade surpluses.

But if America does come close to overheating, then a reluctance to spend elsewhere may be less irksome than usual, as demand-starved countries serve as a release valve for the pressure building up at home. Growth in global trade seems to have enhanced its pressure-relieving capabilities, according to work by Jane Ihrig, Steven Kamin, Deborah Lindner and Jaime Marquez of the Federal Reserve. They reckon that the expansion in trade has served to weaken the link between changes in domestic demand and corresponding shifts in total output, with net exports bearing more of the burden of adjustment to changes in domestic spending. In the late 1990s, for instance, measures of domestic demand grew even faster than real GDP (which was itself growing at a rapid clip). Inflation remained relatively subdued, however, in part because America's current account deficit swelled. Similarly, a surge in imports this year might dissipate potential inflationary pressures in America while giving a lift to its weaker trade partners.

Built to spillover

The biggest uncertainty about the global effects of a hot American economy is the reaction of the Fed. Recent work by Kristin Forbes of the Massachusetts Institute of Technology suggests that domestic inflation has become more responsive over time to global factors—including the amount of economic slack across the global economy as a whole. Yet wage inflation still seems to respond mostly to domestic conditions. The Fed might therefore shrug off price rises later this year, reckoning that short-run price pressures will not translate into sustained inflation until America's job market, and the world economy, is fully recovered. A doveish Fed should make for a weaker dollar and easier financial conditions worldwide, adding to the boost that comes from Americans buying more goods from abroad.

But a really rip-roaring economy could test the Fed's patience, particularly if a yawning current account deficit and soaring asset prices cause it to worry about a build-up of financial risk. The spectre of American interest-rate hikes could frighten global markets, and force emerging economies to adopt less stimulative fiscal and monetary policies. A bit of demand spilling over from America would seem insignificant in comparison. That the Fed will suddenly turn hawkish still seems unlikely. But if America's temperature runs high enough, the rest of the world may break out in cold sweats. ■

**Gender medicine**

Arrested development

Prescriptions for puberty-blocking drugs are on the rise. There is little solid evidence about their effects

GENDER DYSPHORIA—the miserable feeling of being at odds with one's sex—is one of the fastest-rising medical complaints among children. America had one paediatric gender clinic in 2007. It now has at least 50. The sole paediatric gender clinic for England and Wales, known by its acronym, GIDS, has seen referrals rise 30-fold in a decade. A similar pattern is evident across the rich world.

Many attending such clinics are given gonadotropin-releasing hormone (GNRH) agonists, or “puberty blockers”. These drugs, licensed to treat cancers of the breast and prostate, endometriosis and “central precocious puberty”—a rare condition in which puberty starts far earlier than normal—are prescribed off-label to stop the signals that stimulate the testicles or ovaries to ramp up sex-hormone production. The idea is to delay puberty, buying time for patients to decide whether to proceed to cross-sex hormones and surgery with the aim of “passing” as adult members of the opposite sex.

All drugs offer a mix of harms and bene-

fits. But despite their popularity, the effects of puberty blockers remain unclear. Because they are not licensed for gender medicine, drug firms have done no trials. Record-keeping in many clinics is poor. A 2018 review by researchers at the University of Melbourne described the evidence for their use as “low-quality”. In December British judges likewise flagged the lack of a “firm evidence base” when ruling that children were unlikely to be able to give meaningful consent to taking them. Britain’s National Health Service recently withdrew a claim, still made elsewhere, that their effects are “fully reversible”.

The studies that do exist are at once weak and worrying. The day after the court ruling, GIDS published a study that found

children were happy to receive the drugs. But there was little other evidence of benefit—not even a reduction in gender dysphoria. Two older studies of Dutch patients given puberty blockers in the 1990s found that gender dysphoria eased afterwards. But without a control group, it is impossible to tell how patients would have felt had they not taken the drugs.

A 2020 paper analysed responses to an online survey and concluded that people who had taken puberty blockers were less prone to suicidal thoughts. But online surveys capture convenient samples, not representative ones. People may answer repeatedly, or at random. Much of the data appeared to be misreported: many who said they had taken puberty blockers were too old to have plausibly done so.

In the absence of direct, robust evidence, researchers can try to extrapolate from other findings. Off-label prescribing is common in paediatric medicine, because drug firms do not generally like running trials on children. So doctors look for second-hand evidence from elsewhere to guide their decisions. One source is studies that look at how GNRH agonists are used to treat other conditions.

Interrupting normal adolescence is not the same as treating cancer, endometriosis or precocious puberty. Nevertheless, data from these conditions have flagged unpleasant side-effects. Men who take GNRH agonists lose energy and sexual desire. (This is why some countries prescribe ►

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► them to sex offenders.) Women are thrust into an artificial menopause, an experience unpleasant enough that, in endometriosis, drugs are typically prescribed for six months at most. Several legal cases have been brought against drug firms by adults who took puberty blockers for precocious puberty. They allege cognitive deficits, brittle bones and chronic pain in later life, though none has made it to court.

Animal studies suggest such concerns may be worth investigating. One 2017 study looked at sheep, which go through a developmental spurt similar to human adolescence. Sheep given puberty-blockers performed worse than controls on a maze-navigation task, suggesting their spatial memory was inferior. A 2020 paper looking at mice found, among other things, that females given puberty blockers were more timid in unfamiliar environments, and gave up sooner on a "forced swim" test that is commonly used to assess whether anti-depressants work.

One big worry is that puberty blockers seem to reliably lead to cross-sex hormones, in what doctors call a "cascade of interventions". The best estimate, from studies starting in the 1970s, is that around 80% of gender-dysphoric children who are allowed to express themselves as they wish, but who do not socially transition—change their clothes, pronouns and the like to present as members of the opposite sex—will, as they grow up, become reconciled to their biological sex. Yet puberty blockers seem to prevent that reconciliation. In European clinics that report numbers, it happens with just 2-4% of children given the drugs. American clinics rarely publish figures, but anecdotally the picture is similar.

Such numbers led British judges to rule that the effects of those subsequent treatments should be taken into account when assessing puberty blockers. Besides their intended effects, such as the growth of breasts or facial hair, cross-sex hormones also cause side-effects. One 2018 study concluded that females who take testosterone are more likely to suffer cardiovascular disease, while males who take oestrogen have higher risk of blood clots and strokes. The additional risk grew the longer the patients remained on hormones.

Some doctors worry about osteoporosis. Bone density rises sharply during puberty, but blockers disrupt that process. If they are followed by cross-sex hormones they are very likely to impair fertility, even if hormones are later stopped—though the lack of studies means no one knows how much, says Will Malone, an American endocrinologist and member of the Society for Evidence-Based Gender Medicine, a new group. If the cascade of intervention ends with removal of the testicles or ovaries the result will be sterility.

Despite the uncertainties, professional

bodies have endorsed the drugs. In a 2018 position paper the American Association of Paediatrics (AAP) described "gender-affirmative" care as the only ethical approach. Not everyone is convinced. James Cantor, a Canadian clinical psychologist, published a paper accusing the AAP of misstating the contents of its citations, which "repeatedly said the very opposite of what the AAP attributed to them". (Asked for comment, the AAP restated its position.) Marcus Evans, a psychoanalyst, resigned from the board that oversees GIDS over worries about "experimental" treatments.

The best way to settle such disputes is the same as in any other part of medicine: a big, well-run clinical trial. So far, despite soaring caseloads, and puberty blockers having been prescribed for decades, no one is planning to conduct one. ■

Palaeontology

Very, very long in the tooth

Million-year-old mammoth genomes push the limits of a revolutionary technique

IN THE 1966 science-fiction movie "One Million Years B.C.", Raquel Welch and John Richardson traverse a primitive landscape inhabited by dinosaurs and early humans. The film was low on science and high on fiction: by then dinosaurs were long dead and humans—at least, ones resembling Ms Welch and Mr Richardson—were hundreds of millennia away.

A more accurate picture of Earth's inhabitants at the time is now being revealed. In research published in *Nature*, a team of scientists led by Anders Gotherstrom, at the University of Stockholm, and



Watch out, Raquel!

Love Dalen at the Centre for Palaeogenetics, also in Sweden, describe sequencing DNA samples from mammoths that lived and died in north-eastern Siberia around a million years ago.

The team's work represents a new record, for their mammoth DNA is, by some half a million years, the oldest ever successfully reconstituted. Extracted from horses, bears and even Neanderthals and Denisovans, two close cousins of modern humans, such ancient DNA has proved an invaluable tool for investigating the past. Although fossils preserve the gross physical features of extinct animals, they are silent about many crucial details that even an incomplete genome can help to fill in.

The trouble with DNA is that it breaks down post mortem. The more broken-down it is, the harder it is to sequence. Scientists think that, after about 6m years, all that would be left would be individual base pairs, the equivalent of trying to reconstruct a book from a heap of its constituent letters. Under the right conditions, however, such as the extreme cold of Arctic permafrost, this decay can be slowed.

Dr Dalen and his colleagues were interested in three mammoth molars extracted in the 1970s from Siberian geological layers that suggested great age. Samples from each were sent to Dr Dalen's laboratory in 2017. Having checked they had not been unduly contaminated by bacteria or the shaking hands of awe-struck palaeontologists, strands of DNA were extracted, sequenced, and dated. Whereas DNA samples from a living animal can run to several hundreds of thousands of letters, the time-worn mammoth samples yielded strands mere dozens of letters long. This is close to the limit of what is scientifically usable, says Ludovic Orlando, a biologist at the Centre for Anthropobiology and Genomics of Toulouse.

To date a specimen, fragments of its DNA are compared to corresponding chunks from known descendants. Armed with a few evolutionary rules-of-thumb, scientists can calculate how long it would have taken for the observed mutations to arise. Analysis of this sort revealed that the youngest molar, found near a village called Chukochya, was between 500,000 and 800,000 years old. A tooth found near the Adycha river was from an animal that had died between 1m and 1.2m years ago. A third, found near another village called Krestovka, was dated at between 1.1m and 1.2m years. The previous record had been held by a set of horse DNA thought to be as much as 780,000 years old.

The teeth held other surprises. The Krestovka mammoth belongs to a previously unknown branch of the mammoth family tree, an ancestor of the Columbian mammoth which roamed North America 1.5m years ago. The Adycha mammoth was ►

► an ancestor of the iconic woolly mammoth. It appeared to possess many of its descendant's features half a million years earlier, suggesting the woolly mammoth's distinctive physiology evolved more slowly than had been thought.

These are the sorts of insights into the slow workings of evolution that very ancient DNA can offer. And, it seems, prospects for collecting more such ultra-old samples are good. Permafrost has existed on Earth for the past 2.6m years. That puts an upper limit on the age of sequenceable DNA, but one that still leaves a million years more headroom. "I'm sure that in the permafrost there are going to be samples that have survived longer," says Patricia Pecnerova of the Swedish Museum of Natural History, and a co-author on the study. Records, after all, are made to be broken. ■

Sleep research

The interpretation of dreams

Dreamers can be asked questions. Some will even give answers

DREAMS ARE clearly important. All humans have them, as do animals from cats to elephants. Neuroscientists believe they are involved in the processing of memories. Yet studying them is limited by the fact that dreamers themselves cannot talk to anyone while they are asleep. Researchers must rely on the unreliable recollections of people who have woken up. Now, though, a team of scientists led by Ken Paller, a neuroscientist at Northwestern University, think they may have found a way around that problem.

Dr Paller's starting point was the fact that lucid dreams—in which sleepers are aware they are dreaming—seem to be associated with only one kind of sleep, known as "rapid eye movement" (REM) sleep. During REM sleep, brain activity looks similar to that seen during waking hours. Past research has shown that it is possible for people to be influenced by events taking place in the outside world during REM sleep. So Dr Paller speculated that it might be possible to reach out to people in such states, and to get answers back.

As described in *Current Biology*, Dr Paller, along with colleagues in France, Germany and the Netherlands, gathered 35 volunteers. All were trained to be mindful of their mental state, and to analyse whether they thought they were awake or in a dream. In some labs (though not all) that training was accompanied by a distinctive sound. That same sound was repeated, as a cue, while the participants were in REM

Electric sailing Of batteries and boats

A new generation of electric craft take to the water

LIKE ELECTRIC cars, electric boats are not a new idea. In the early 1900s Clara Ford preferred driving her electric car around Detroit instead of one of the noisy gasoline-powered Model Ts her husband Henry had begun making. Around the same time, posh electric launches cruised silently along the River Thames in Britain, using dockside stop-offs to top up their batteries with electricity and their bars with champagne.

These days, thanks to worries about climate change, electric cars are making a comeback (in eco-minded Norway, they account for more than half of new cars sold). Now electric boats are following. A number of manufacturers are vying to become the marine equivalent of Tesla, the Californian company which builds some of the most fashionable and fastest electric cars.

Rand, a Danish firm, has developed a range of traditional-looking electric motorboats. Zin Boats, a Seattle-based company, has two electric models, a tender and a five-seater speedboat. For more leisurely cruising, Serenity Yachts, a Cayman Islands boat-builder, offers a 19.4-metre hybrid with 30 solar panels on the roof. In electric mode the panels will power the craft along at a steady pace provided, of course, the sun is shining.

Candela, a Swedish company, is taking a different approach. Its six-seater Candela Seven (pictured) uses hydrofoils to raise its hull completely out of the water. This reduces friction, says Gustav Hasselskog, Candela's founder. That, in

turn, cuts energy use by around 80%, which should help reassure any skippers with range anxiety.

The hydrofoils also operate like the ailerons on an aircraft's wing. Computer software similar to that which helps pilots fly jet fighters automatically turns the foils in different directions to stabilise the boat and prevent it from tipping over. The hydrofoils can be retracted when the boat comes into dock or runs up to a beach.

With a top speed of 30 knots (56kph) and little wake, the Candela Seven can also be used for waterskiing. So far, 20 of the 30 speedboats ordered have been delivered. At €265,000 (\$322,000) a pop, this shows early adopters of electric motorboats, like the buyers of the first Teslas, are happy to pay premium prices.



Mixing water and electricity

sleep. Participants were also trained to make distinct left/right eye movements to indicate they were aware they were dreaming, and in response to questions. They practised interpreting numbers conveyed as flashes of light, taps on their arm, or even as spoken words.

Thus prepared, the volunteers were wired up with electrodes and sent back to the land of Nod. Sometimes the researchers would initiate contact with their dreamers by playing the sound cue and waiting for an eye signal in response. At other times, the participants themselves sent an eye signal of their own accord. Once it was clear that contact had been made, the researchers asked their questions, and waited for answers.

Interviewed upon waking, the participants reported that the questions had been incorporated into their dreams. One said

an audio question was heard through a car radio; another that flashes of light sent by the researchers manifested as a flickering light. One of the numerical questions even manifested as the street number of a house. Intriguingly, participants occasionally "remembered" a mathematics problem different from the one they had been asked—despite having given the correct answer, via eye movements, at the time.

The method often did not work. Participants signalled that they were engaged in lucid dreaming in just 26% of the sessions. Of that group, 47% answered at least one question put to them correctly. But it proves a point. Dr Paller and his colleagues say their findings refute the notion that attempting communication with dreamers is pointless. And that, in turn, may help researchers shed some light on what dreams are for, and how they work. ■



Tackling climate change

The race to zero

Governments and business must work together to save the world, says Bill Gates

HOW MANY planets?" That question was posed by Mahatma Gandhi as he contemplated the environmental implications of India's following the resource-intensive path of development pioneered by Britain. The inquiry still resonates. As the World Economic Forum, a think-tank, has put it, the global "food-energy-water nexus" is in trouble. Global warming is the most alarming crisis of all. How many planets would be needed if everyone in China lived in McMansions and drove gas-guzzlers, as many Americans do?

For some tycoons, the solution is to find more planets. Fifteen years ago Elon Musk was so worried about climate change making Earth uninhabitable, he earnestly told this reviewer, that he intended to turn humanity into a multi-planetary species. He has since been funnelling the fortune he is making at Tesla, his electric-car company, into building ever-better rockets at SpaceX. This month Jeff Bezos stepped back from running Amazon, an e-commerce goliath, to spend more time on Blue Origin, his rocket venture, which he calls his most important work. The coming energy crisis, he has declared, means that "we

How to Avoid a Climate Disaster. By Bill Gates. Knopf; 272 pages; \$26.95. Allen Lane; £20

have to go to space to save Earth."

By contrast, Bill Gates, the co-founder of Microsoft, has his feet firmly planted on the ground. He is just as concerned about global warming as are those trillionaires, but in his view there is only one planet that matters. His new book, "How to Avoid a Climate Disaster", is devoted to reconciling the legitimate aspirations of billions of people for economic advancement with the environmental harm that results. If humanity is to win the great race between development and degradation, he writes, green innovation must accelerate.

Previous energy transitions—for instance, from coal to oil—took many decades. But given the pressing need to decarbonise the global economy, says Mr Gates, "we have to force an unnaturally speedy transition". He wants governments to increase funding for climate research five-fold in a decade; disclosing his own investments, he urges them to bet on such prom-

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ising but risky fields as advanced nuclear power. There should be more green procurement (a path China has followed with solar panels and electric cars) and greener regulation. But the linchpin of his argument is the introduction of a meaningful carbon price, to account for the externalities involved in using dirty energy.

Mr Gates is hardly the first to advance these proposals. Besides his status as one of the world's richest people and most generous philanthropists, two things make his endorsement of them compelling. First, he is not a reflexive environmentalist. His long-standing commitment to public health and the alleviation of poverty led him to oppose flaky green causes like Europe's unscientific bans on genetically modified organisms. In a moving chapter, he notes that Africa's poor have yet to enjoy the benefits of the first "green revolution" in agricultural science, which from the 1960s boosted farming yields and saved a billion people in Asia from starvation; they desperately need more such innovations in crop science and fertilisers. He awakened to the climate crisis as it became clear that the world's indigent, who have contributed least to the problem, are likely to suffer most from famines, droughts, rising seas and other effects of global warming.

Second, Mr Gates has long been allergic to top-down regulation. "It might seem ironic that I'm calling for more government intervention," he concedes. "When I was building Microsoft, I kept my distance from policymakers in Washington." Because he instinctively favours markets ►

over mandarins, his policy recommendations carry more weight than the common calls heard today in America and Europe for blank-cheque spending on Green New Deals. A carefully calibrated push from the top, he insists, will set off a tsunami of private-sector investment and invention.

Much of his book is devoted to a delightfully wonkish assessment of contenders in the race to solve the climate problem. In Mr Gates's view, decarbonising electricity is the "single most important thing we must do to avoid a climate disaster". This is not only because electricity accounts for over a quarter of the direct greenhouse gas (GHG) emissions caused by human activity today, but because clean power can enable a shift to zero-carbon transport (think electric cars). Greening industry is harder, he acknowledges, but he points to advances even in such unsexy areas as low-carbon cement and steel.

Mission possible

Mr Gates takes on some green shibboleths, which he clearly considers courageous, though others will detect an outmoded mindset. He is an unabashed defender of carbon-free nuclear power, despite the industry's failure to solve serious problems surrounding waste and proliferation. He chastises those who make a fetish out of wind and solar technologies, emphasising the constraints of the intermittent generation they involve.

Many environmentalists are clamouring for cuts in emissions of GHGs by 2030. Mr Gates rejects that: what matters most, he counters, is getting to a "net zero" carbon footing by 2050, which means any man-made GHG emissions are offset by absorption and sequestration. Provocatively, he claims that "making reductions by 2030 the wrong way might actually prevent us from ever getting to zero". For example, a breathless dash from carbon-loaded coal to natural gas sounds climate-friendly, as it would lead to a decline in energy-sector emissions within a decade. However, it would lock gas technology—which is not carbon-free—into the grid for decades, perhaps blocking the adoption of better alternatives. "The things we'd do to get small reductions by 2030 are radically different from the things we'd do to get to zero by 2050," he insists.

The most refreshing aspect of this book is its bracing mix of cold-eyed realism and number-crunched optimism. Mr Gates reveals that when he attended the UN's landmark Paris summit on climate change in 2015, he had serious doubts about mankind's willingness to take on this Herculean task: "Can we really do this?" Even now, after making the case for why the world must do so, and urgently, he wonders if the climate challenge will be harder than putting "a computer on every desk

and in every home".

That is a useful analogy, for the techno-Utopian vision of a global internet seemed as impossible to achieve a few decades ago as solving the climate crisis does now. Ken Olsen, founder of Digital Equipment Corporation, a pioneering computer firm, once stated flatly: "There is no reason anyone would want a computer in their home." Yet before long the digital revolution succeeded—because of a happy convergence of top-down forces and disruptions from below.

Mr Gates wants the same combination to take on climate change. He acknowledges the power of the state and a need for intergovernmental co-operation, something not often heard from techno-libertarians; but he also calls for more green ambition and risk-taking by short-termist investors and company bosses. Ultimately his book is a primer on how to reorganise the global economy so that innovation focuses on the world's gravest problems. It is a powerful reminder that if mankind is to get serious about tackling them, it must do more to harness the one natural resource available in infinite quantity—human ingenuity. ■

Britain's past and present

The sun never sets

Empireland. By Sathnam Sanghera. Viking; 320 pages; £18.99

AS BRITAIN'S GLOBAL role has shrunk, so the island's politics have become increasingly insular. But occasionally wider concerns intrude—as in the Brexit saga, or during the protests that followed the death of George Floyd in Minneapolis last year. Both led to anguished debates about Britain's place in the world, and over British identity more generally.

In these discussions, the British Empire has been fingered as the culprit for many of the country's problems and neuroses, from racism to a sense of exceptionalism that fuelled Brexit. Statues have been toppled and punches thrown. If, in the past, much of the thinking about empire was blinded and jingoistic, these days it is often lacerating. British imperialism is identified as the source not only of militarism and hooliganism, but of the irresponsibility of high finance and much besides. In contrast to such polemics, Sathnam Sanghera's new book is nuanced, intelligent and even entertaining.

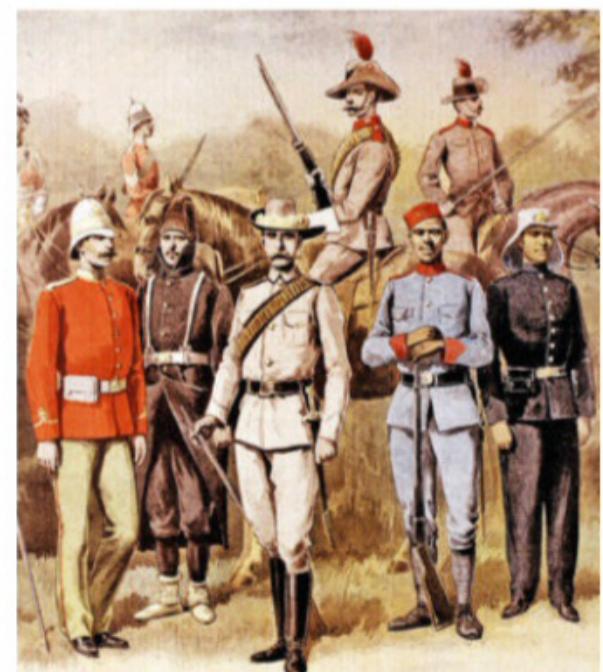
It is also refreshingly honest. The son of Punjabi immigrants, Mr Sanghera was

born in the mid-1970s in Wolverhampton, an industrial town in the West Midlands and a focal point of anti-immigrant politics. He learned nothing about the British Empire at school, he writes. But as wrangles about Brexit and racism swirled around him, he resolved to read up. "Empireland" is the result.

As well as chronicling the familiar sins of empire, particularly in India, the author gives a fair hearing to those who emphasise the more positive aspects of imperial rule, railways, courts and all. And just as Britain has an imperial past, he recognises that it also has a liberal, anti-imperialist history—of abolishing the slave trade and spreading democracy, albeit in limited form. The empire is laid bare in all its contradictory complexity.

The same goes for its legacy. Mr Sanghera, a writer for the *Times*, justifiably criticises Britons for not being more receptive to immigrants, but he is no reflexive admirer of "pure multiculturalism". He acknowledges that a laissez-faire approach to integration has sometimes allowed immigrant communities to "become isolated and myopic". He argues that immigrants themselves are sometimes to blame for this—and that the people who suffer most are families like his own: "Too much of my energy as a young adult was expended on getting my family to accept that I wanted to be more British, to change more quickly than they were."

As for knocking over more statues, he concludes that rather than trying to obliterate imperial history, which will always infuriate as many people as it pleases, Britain should commemorate more of the colonised people who challenged and reformed the empire, or indeed died for it on the battlefield. In short, more, not fewer, plinths and plaques. That would give a clearer and more textured picture of Britain's imperial past—just like Mr Sanghera's excellent book. ■



They also served

Foreigners in Berlin

Unreal city

Fake Accounts. By Lauren Oyler. *Catapult*; 272 pages; \$26. *Fourth Estate*; £12.99
In the End, It Was All About Love. By Musa Okwonga. *Rough Trade Books*; 132 pages; £11.99

BERLIN OUGHT to collapse under the weight of its past. Its 20th century was scarred by revolution, tyranny, genocide and partition, each remembered in the solemn monuments and museums that dot the city today. But there has long been a second Berlin, this one a blank slate and haven for young Europeans, Americans, Antipodeans and other free spirits seeking cheap rent, like-minded souls and perhaps a second adolescence. This is a metropolis of edgy galleries, smoky bars, empty streets and casual liaisons; of perfunctory efforts to learn German, 30-somethings serving out internships, and soul-sapping battles with the paper-pushers of the *Ausländerbehörde* (immigration offices).

This version of Berlin offers almost unlimited creative, recreational and sexual possibilities—albeit usually within a handful of gentrifying neighbourhoods in the city's east—and is the backdrop for two new books by young Anglophone writers. Neither “Fake Accounts”, a debut novel by Lauren Oyler, an American critic who once lived in Berlin, nor “In the End, It Was All About Love” by Musa Okwonga, a British writer and musician who still does, is really about the German capital. Its tumultuous history barely features in either; nor, with the odd exception, do its contemporary politics. Instead, Berlin offers the protagonists the space they need to examine and discover themselves.

The nameless American narrator of “Fake Accounts”, the more ambitious of the two, finds herself in a bind. Snooping through her boyfriend's phone, she learns he has been peddling outlandish conspiracy theories to a large following on Instagram. Before she can ditch him, though, he dies in a bicycle accident. Shocked but also frustrated, on a whim she indulges what friends dismiss as the “toolish popular fantasy” of leaving New York for Berlin, where “you could come and go from life as you pleased,” and not be “obligated to act a certain way, or at all”.

Alienated and aimless, she takes on low-wage work to support what becomes her main recreational activity: inventing fake personalities to try out on unsuspecting dates arranged online, whom she

Light Perpetual. By Francis Spufford. *Scribner*; 336 pages; \$27. *Faber & Faber*; £16.99

FRANCIS SPUFFORD's second novel has a basis in fact. His acknowledgments inform readers that in 1944 a V2 rocket destroyed a household-goods shop in south London. Among the 168 fatalities that day were 15 children. Similarly, “Light Perpetual” begins with a wartime explosion, in this case in the fictional London borough of Bexford. Here the German attack kills five children, robbing them of all their possible futures: “All the would-be's, might-be's, could-be's of the decades to come.”

Rather than sketching the aftermath of the blast and introducing new characters, Mr Spufford instead imagines a quirk of fate that intervened to save these five young lives. After fast-forwarding to



What might have been

meets in bars in Neukölln or Kreuzberg. Not a lot happens (until, in the final chapter, it does). Social media, especially Twitter, both relieve and intensify her sense of isolation. The narrative begins to flit between the virtual and the “real”, teasing out the ways one interacts with and shapes the other. Berlin leaves her in peace as she pursues her eccentric projects.

“Fake Accounts” resolves the problem of how to render the online world in fiction without falling prey to technobabble or un-readability. Indeed, it is in part a rebuttal of

British fiction

Still lives

1949 and showing Alec, Jo, Val, Vern and Ben alive and well, his alternative “reel of time” winds on, stopping every 15 years to chart the progress of each: what they have endured, where they have ended up, what challenges might lie ahead.

Bright boy Alec marries Sandra and secures a job as a typesetter in Fleet Street, but after a while both his relationship and his future “in the print” are threatened. Jo starts out as a singer in a dingy Soho club and continues her unfulfilling musical journey as a rock star's girlfriend in the Hollywood Hills. And in a series of colourful episodes, Vern graduates from school bully to dodgy property developer and makes his money (before losing it all) from “primping the city's past”.

The two other characters suffer their share of hard knocks. Ben's affecting story takes him from psychiatric hospital to hospice by way of unexpected salvation. Val is unable to leave a Nazi boyfriend who spends his days “bruising and breaking”. One section of her tragicomic tale begins with a farcical skinhead meeting (“Who'd have thought that national socialism demanded so many sandwiches?”) and culminates in a bout of sickening violence.

“Light Perpetual” lacks the exploits and twists of Mr Spufford's wonderful debut novel, “Golden Hill”, which was set in pre-revolutionary New York. Yet it develops into both a brilliant character study and a captivating ensemble piece. The doubly imagined lives of his resuscitated five are skilfully rendered: grasping Vern and his reversals of fortune provide comic relief, the others elicit sympathy as they achieve small triumphs and weather dashed hopes and failed dreams. Life, after all, is an opportunity to miss opportunities, make mistakes—and, sometimes, to put them right.

the claim that modern technology has made old-fashioned fiction obsolete—for while it grapples with the contemporary challenges of social media, it also dwells on the traditional concerns of motivation and character. In long, baggy paragraphs, the narrator scrutinises her behaviour and beliefs and invites others to join in, from a smart-alec chorus of ex-boyfriends to the reader, whose approval is sought but whose assumptions are questioned at every turn.

This playful approach, reminiscent of

► Twitter's endless loops of attention-seeking and hot takes, will not appeal to everyone. But Ms Oyler's writing is sharply observed and often uproariously funny—and behind her very-online jokes and shaggy-dog stories lies a serious account of a modern search for meaning and authenticity, in a city that can seem to offer little of either. From the unadorned harshness of its public spaces to its arresting light—which can turn “everything an eerie slate...like it had always just rained, or you had just cried”—she captures her version of Berlin.

The narrator's relationship with the city in Mr Okwonga's carefully crafted novella runs deeper. He left London to be “as innocuous as a cobblestone” in Berlin, and is as successful as “a dark-skinned black man

in an overwhelmingly white city” might dare to hope. The racism is persistent, but not disabling. Friendships are powerful, but cannot block out the loneliness. Online dating, this time earnest, turns out to be a “spectacular exercise in humility”. As for social media, the narrator's therapist recommends that he cut down to reduce his anxiety levels.

Expats in Berlin will find much to recognise in this book, from the ecstasy of the summers to the “friendships which never quite take root”. That is, until the final chapter, when the narrator makes a pilgrimage to rural Uganda, the land of his dead father. This experience, steeped in family and history, seems to fulfil his search for identity as Berlin never could. ■

bands release special editions of their latest albums on vinyl. Last year national sales of vinyl records were up by 75%; women in their 20s and men in their 30s were the biggest buyers.

The atmosphere in the bars ranges from mellow to raucous depending on the location, time and tastes (though pandemic-induced restrictions have made melancholy the dominant mood). Many requests are on the mawkish side. Kim Kwang-seok, a South Korean folk-rock singer of the Nineties, is particularly popular, says Mr Kim; so is “Hotel California”. Some places specialise: “People know I have lots of Sixties psychedelia, so they come mostly for that,” says Choi Byung-ik, who with his wife runs a bar in Hongdae, a hip studenty area. Connoisseurs like to listen to Leaf Hound, a British band that in its heyday recorded only one album, alongside better known groups such as Pink Floyd and Cream, for which the bar is named.

The USP of others is their equipment. “You won't find this sound system anywhere else, because I built it,” says a proprietor in the glitzy Apgujeong neighbourhood of his mix of state-of-the-art amps and speakers that reportedly date to the 1930s. But in a metropolis that in general has little time for sentimentality, all LP bars encourage nostalgia.

“I don't like digitisation and I don't like the isolated way people live now,” says Lee Jae-jun, who left a job in logistics to open a bar down the street from Mr Kim's. “I like remembering the Eighties and Nineties and I like playing the songs from people's youth and reminiscing.” On the best days, regulars arrive “for just one drink, and then I play a song they like, and another one, and before you know it, it's 4am and everyone goes home drunk and happy.” ■

Korean listening habits

Exit music

SEOUL

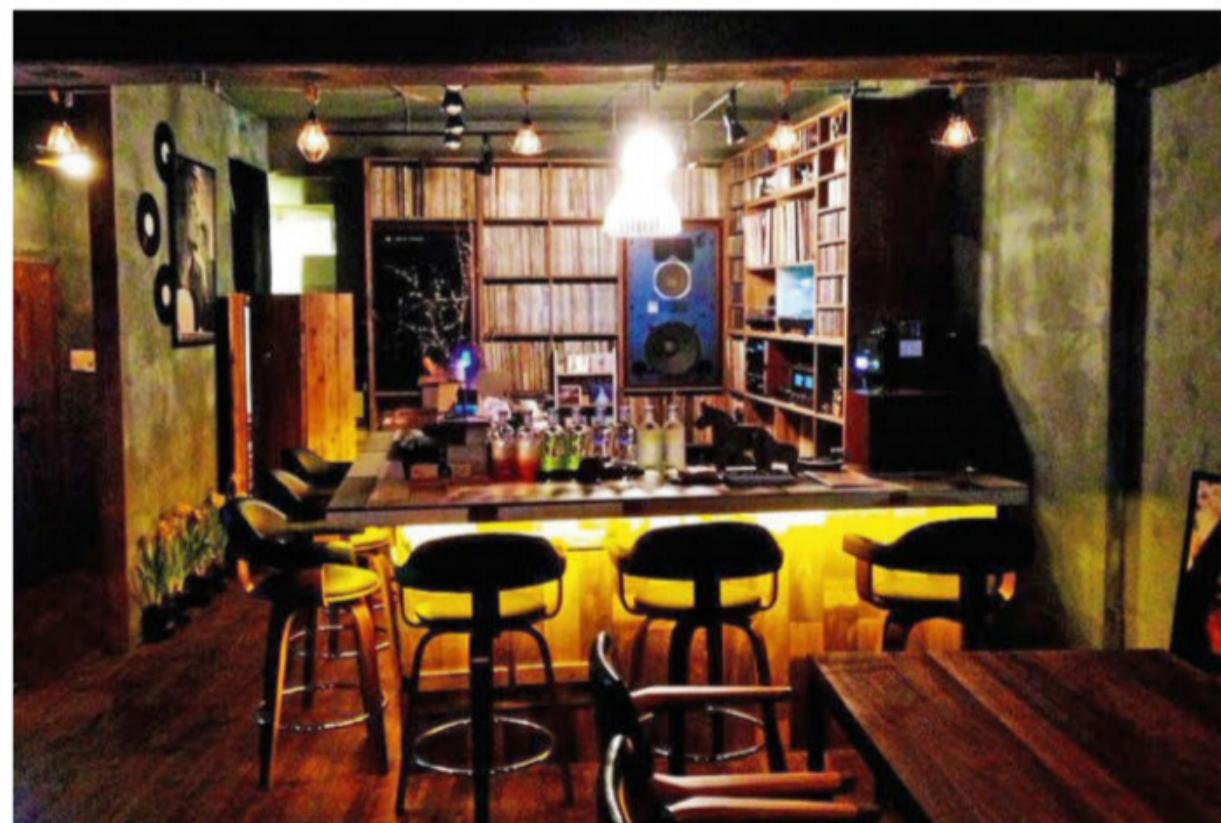
Tired of your job? Own too many records? Time to open a bar

HE DID NOT mind working in advertising, says Kim Jae-geun. “It's creative and competitive, it was fun while I was young, but I no longer had the strength for it.” So for the past seven years, instead of spending his days writing copy, Mr Kim, a softly spoken 59-year-old in wire-rimmed glasses and a dark jumper, has spent his evenings behind the counter of his bar near Seoul's government district—a venue also home to thousands of vinyl records that he began collecting as a teenager.

Stacks of scrap paper and pens on the countertop and the tables let customers request their favourite songs. Before the government introduced a curfew to fight the covid-19 pandemic, Mr Kim says the bar, Seochon Blues (pictured), used to fill up with tired office workers from the surrounding firms and state agencies during the week, and with 20-something hipsters and local artists at the weekends. “There's a bit of a retro wave,” he observes. “All the young people ask for very old songs.”

Mr Kim's is one of dozens of “LP bars” in South Korea's capital, many of which are run by men with similar stories. South Korean companies offer few opportunities for middle-aged workers who have not climbed through the ranks, or who have grown fed up with the rigid rhythms of office life. Leaving their jobs in their 50s, with music collections becoming too large for their living rooms, a few who have not taken up work as taxi-drivers or security guards have decamped with their records to softly lit basements or walk-ups in unassuming office buildings.

The first LP bars opened in the 1990s, possibly inspired by the “listening bars” that originated in mid-20th century Japan, where music aficionados would flock to listen to imported records that were otherwise hard to come by. But they have proliferated in recent years, their frequently middle-aged owners benefiting from the analogue trend that has gripped South Korea's digital natives. One established K-pop star promoted his latest single with a picture of himself posing in front of stacks of records in clothes from the Sixties; newer



Some dance to forget

Economic data

| | Gross domestic product | | | Consumer prices | | Unemployment rate | | Current-account balance | | Budget balance | | Interest rates | | Currency units | |
|----------------|-----------------------------|----------|-------|-----------------------------|-------|-------------------|------|-------------------------|--------|-----------------|-------|-----------------------------|------------------------|-----------------|----------------------|
| | % change on year ago latest | quarter* | 2020† | % change on year ago latest | 2020† | % | | % of GDP, 2020† | | % of GDP, 2020† | | 10-yr gov't bonds latest, % | change on year ago, bp | per \$ Feb 17th | % change on year ago |
| United States | -2.5 | Q4 | 4.0 | -3.6 | 1.4 | Jan | 1.2 | 6.3 | Jan | -2.2 | -14.9 | 1.3 | -30.0 | - | - |
| China | 6.5 | Q4 | 10.8 | 1.9 | -0.3 | Jan | 2.5 | 5.2 | Dec‡§ | 1.5 | -5.2 | 3.1 | 51.0 | 6.44 | 8.4 |
| Japan | -1.2 | Q4 | 12.7 | -5.3 | -1.2 | Dec | nil | 2.9 | Dec | 3.5 | -12.2 | nil | -8.0 | 106 | 3.8 |
| Britain | -7.8 | Q4 | 4.0 | -9.9 | 0.7 | Jan | 1.0 | 5.0 | Oct†† | -2.1 | -14.3 | 0.6 | -6.0 | 0.72 | 6.9 |
| Canada | -5.2 | Q3 | 40.5 | -5.3 | 1.0 | Jan | 0.8 | 9.4 | Jan | -2.1 | -13.5 | 1.1 | -25.0 | 1.27 | 3.9 |
| Euro area | -5.0 | Q4 | -2.4 | -7.6 | 0.9 | Jan | 0.3 | 8.3 | Dec | 2.6 | -9.2 | -0.4 | 3.0 | 0.83 | 10.8 |
| Austria | -4.0 | Q3 | 54.6 | -6.9 | 1.2 | Dec | 1.1 | 5.8 | Dec | 2.4 | -8.5 | -0.1 | 10.0 | 0.83 | 10.8 |
| Belgium | -4.7 | Q4 | 0.8 | -6.2 | 0.3 | Jan | 0.4 | 5.8 | Dec | -1.1 | -9.4 | -0.1 | 4.0 | 0.83 | 10.8 |
| France | -5.0 | Q4 | -5.3 | -8.3 | 0.6 | Jan | 0.5 | 8.9 | Dec | -2.3 | -10.9 | -0.2 | nil | 0.83 | 10.8 |
| Germany | -3.9 | Q4 | 0.4 | -5.3 | 1.0 | Jan | 0.4 | 4.6 | Dec | 6.8 | -4.8 | -0.4 | 3.0 | 0.83 | 10.8 |
| Greece | -9.6 | Q3 | 9.5 | -9.9 | -2.0 | Jan | -1.3 | 16.2 | Nov | -6.6 | -9.2 | 0.8 | -13.0 | 0.83 | 10.8 |
| Italy | -6.6 | Q4 | -7.7 | -9.1 | 0.2 | Jan | -0.1 | 9.0 | Dec | 2.9 | -11.3 | 0.6 | -34.0 | 0.83 | 10.8 |
| Netherlands | -2.9 | Q4 | -0.5 | -4.4 | 1.6 | Jan | 1.1 | 3.9 | Dec | 8.4 | -6.1 | -0.4 | -5.0 | 0.83 | 10.8 |
| Spain | -9.1 | Q4 | 1.6 | -11.4 | 0.5 | Jan | -0.3 | 16.2 | Dec | 0.8 | -12.0 | 0.2 | -5.0 | 0.83 | 10.8 |
| Czech Republic | -5.3 | Q3 | 1.2 | -5.7 | 2.2 | Jan | 3.2 | 3.2 | Dec‡ | 3.6 | -6.5 | 1.5 | -5.0 | 21.5 | 6.8 |
| Denmark | -3.8 | Q3 | 2.4 | -4.0 | 0.6 | Jan | 0.4 | 4.4 | Dec | 8.5 | -3.6 | -0.3 | 12.0 | 6.18 | 11.7 |
| Norway | -0.6 | Q4 | 2.6 | -1.7 | 2.5 | Jan | 1.4 | 5.0 | Nov†† | 3.2 | -1.3 | 1.3 | -9.0 | 8.53 | 8.6 |
| Poland | -1.8 | Q3 | -2.8 | -2.8 | 2.7 | Jan | 3.4 | 6.2 | Dec§ | 3.6 | -7.9 | 1.3 | -87.0 | 3.74 | 5.3 |
| Russia | -3.4 | Q3 | na | -3.1 | 5.2 | Jan | 3.4 | 5.9 | Dec§ | 2.0 | -3.8 | 7.0 | 86.0 | 74.0 | -14.3 |
| Sweden | -2.6 | Q4 | 2.0 | -3.2 | 0.5 | Dec | 0.4 | 8.2 | Dec§ | 4.8 | -3.5 | 0.3 | 27.0 | 8.34 | 16.3 |
| Switzerland | -1.6 | Q3 | 31.9 | -3.0 | -0.5 | Jan | -0.7 | 3.5 | Jan | 9.1 | -3.7 | -0.3 | 39.0 | 0.90 | 8.9 |
| Turkey | 6.7 | Q3 | na | 0.4 | 15.0 | Jan | 12.3 | 12.9 | Nov§ | -5.4 | -3.4 | 12.7 | 169 | 6.98 | -13.3 |
| Australia | -3.8 | Q3 | 14.0 | -2.9 | 0.9 | Q4 | 0.9 | 6.4 | Jan | 1.2 | -7.3 | 1.4 | 30.0 | 1.29 | 15.5 |
| Hong Kong | -3.0 | Q4 | 11.8 | -5.8 | -0.6 | Dec | 0.3 | 6.6 | Dec†† | 6.2 | -7.6 | 1.2 | -30.0 | 7.75 | 0.3 |
| India | -7.5 | Q3 | 125 | -7.9 | 4.1 | Jan | 6.6 | 6.5 | Jan | 1.3 | -7.2 | 6.0 | -36.0 | 72.8 | -2.0 |
| Indonesia | -2.2 | Q4 | na | -2.2 | 1.6 | Jan | 2.0 | 7.1 | Q3§ | -1.6 | -7.2 | 6.5 | -7.0 | 14,020 | -2.6 |
| Malaysia | -3.4 | Q4 | na | -5.3 | -1.4 | Dec | -1.1 | 4.8 | Dec§ | 4.8 | -7.4 | 3.0 | 13.0 | 4.04 | 2.5 |
| Pakistan | 0.5 | 2020** | na | -2.8 | 5.7 | Jan | 9.5 | 5.8 | 2018 | 0.1 | -8.1 | 10.0 | ††† | -127 | 159 |
| Philippines | -8.3 | Q4 | 24.4 | -9.3 | 4.2 | Jan | 2.6 | 8.7 | Q4§ | 3.4 | -7.8 | 3.2 | -127 | 48.4 | 4.5 |
| Singapore | -2.4 | Q4 | 15.9 | -5.8 | nil | Dec | -0.2 | 3.2 | Q4 | 18.2 | -13.9 | 1.2 | -46.0 | 1.33 | 4.5 |
| South Korea | -1.3 | Q4 | 4.4 | -1.0 | 0.6 | Jan | 0.5 | 5.7 | Jan§ | 3.8 | -5.7 | 1.9 | 23.0 | 1,108 | 6.9 |
| Taiwan | 4.9 | Q4 | 7.8 | 3.0 | -0.2 | Jan | -0.2 | 3.8 | Dec | 13.8 | -1.5 | 0.4 | -23.0 | 27.9 | 7.3 |
| Thailand | -4.2 | Q4 | 5.4 | -6.1 | -0.3 | Jan | -0.8 | 1.5 | Dec§ | 3.7 | -6.4 | 1.4 | 40.0 | 30.0 | 4.0 |
| Argentina | -10.2 | Q3 | 61.7 | -9.7 | 38.5 | Jan‡ | 42.0 | 11.7 | Q3§ | 0.6 | -8.6 | na | -464 | 88.9 | -30.8 |
| Brazil | -3.9 | Q3 | 34.6 | -4.4 | 4.6 | Jan | 3.2 | 14.1 | Nov§†† | -0.7 | -15.8 | 7.9 | 142 | 5.42 | -20.3 |
| Chile | -9.1 | Q3 | 22.6 | -6.2 | 3.1 | Jan | 3.0 | 10.3 | Dec§†† | 1.4 | -7.9 | 2.7 | -74.0 | 717 | 10.7 |
| Colombia | -3.5 | Q4 | 26.5 | -7.0 | 1.6 | Jan | 2.5 | 13.4 | Dec§ | -3.6 | -8.8 | 4.9 | -59.0 | 3,539 | -4.1 |
| Mexico | -4.5 | Q4 | 13.0 | -8.3 | 3.5 | Jan | 3.4 | 4.4 | Dec | 2.6 | -2.8 | 5.3 | -123 | 20.3 | -8.3 |
| Peru | -9.4 | Q3 | 187 | -12.0 | 2.7 | Jan | 1.8 | 13.1 | Jan§ | 1.0 | -8.0 | 3.9 | nil | 3.65 | -7.4 |
| Egypt | 0.7 | Q3 | na | 3.6 | 4.4 | Jan | 5.1 | 7.2 | Q4§ | -3.6 | -8.5 | na | nil | 15.6 | 0.1 |
| Israel | -1.3 | Q4 | 6.3 | -3.6 | -0.4 | Jan | -0.6 | 4.8 | Dec | 3.9 | -11.8 | 1.0 | 26.0 | 3.27 | 4.6 |
| Saudi Arabia | -4.1 | 2020 | na | -4.2 | 5.7 | Jan | 3.4 | 8.5 | Q3 | -3.7 | -10.6 | na | nil | 3.75 | nil |
| South Africa | -6.0 | Q3 | 66.1 | -7.3 | 3.2 | Jan | 3.3 | 30.8 | Q3§ | 0.6 | -16.0 | 8.7 | -16.0 | 14.7 | 2.0 |

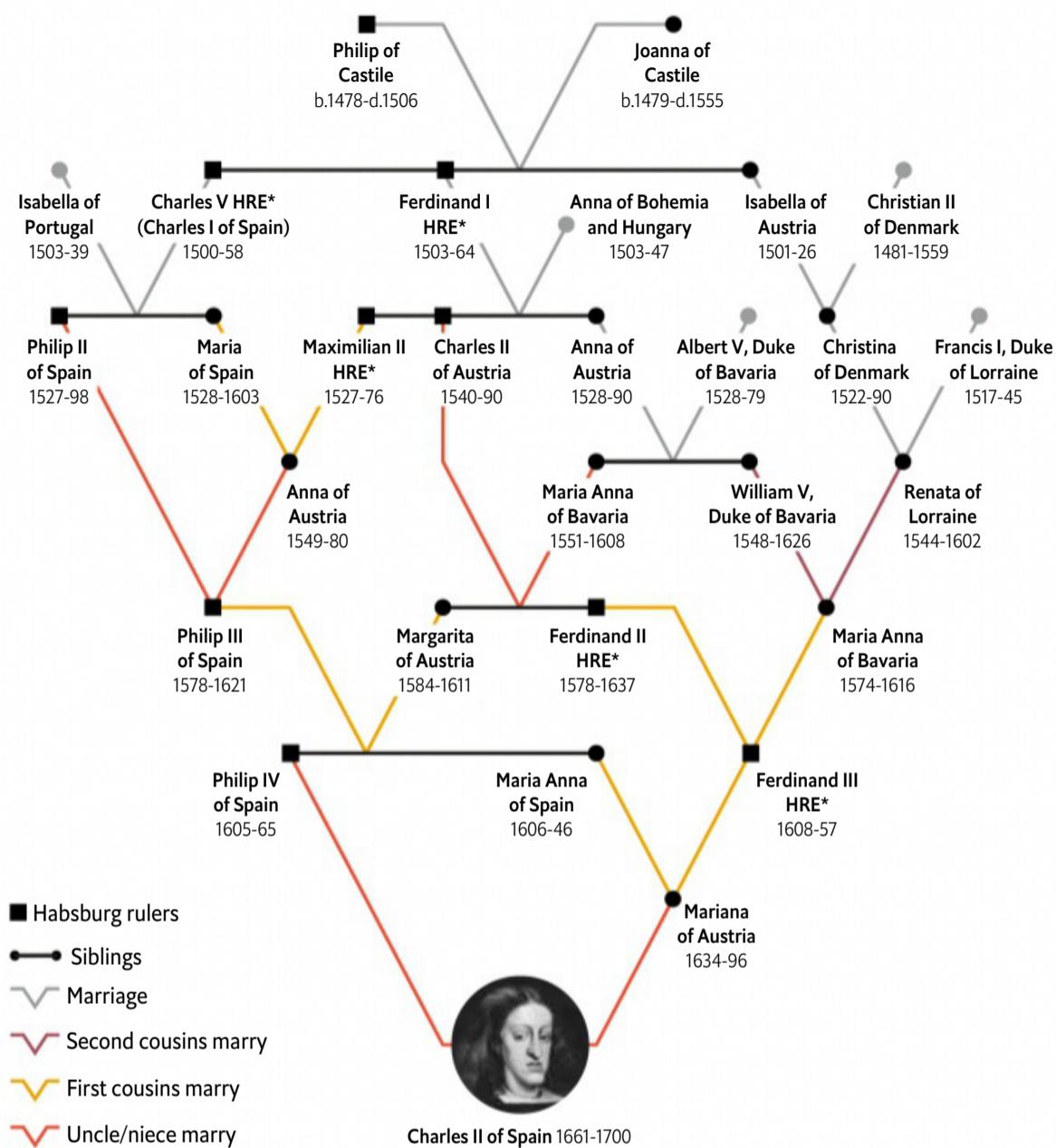
Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. #3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

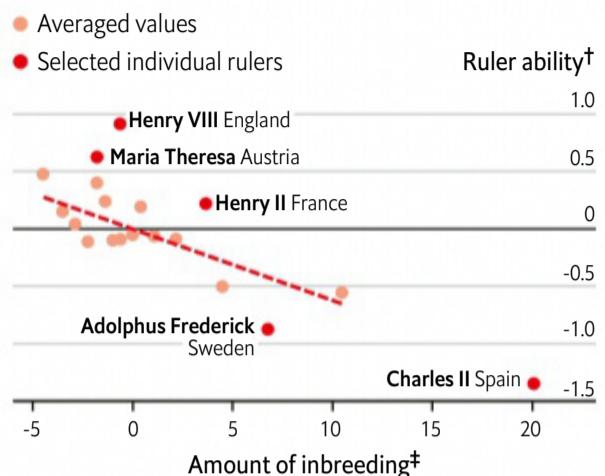
| In local currency | % change on: | | | % change on: | | | | | |
|-------------------------|----------------|----------|---------------|---|-----------|---------------|-------|--|--|
| | Index Feb 17th | one week | Dec 31st 2019 | index Feb 17th | one week | Dec 31st 2019 | | | |
| United States S&P 500 | 3,931.3 | 0.5 | 21.7 | Pakistan KSE | 46,768.1 | 0.3 | 14.8 | | |
| United States NAScomp | 13,965.5 | -0.1 | 55.6 | Singapore STI | 2,920.4 | -0.2 | -9.4 | | |
| China Shanghai Comp | 3,655.1 | nil | 19.8 | South Korea KOSPI | 3,133.7 | 1.1 | 42.6 | | |
| China Shenzhen Comp | 2,460.5 | nil | 42.8 | Taiwan TWI | 16,362.3 | 3.5 | 36.4 | | |
| Japan Nikkei 225 | 30,292.2 | 2.5 | 28.0 | Thailand SET | 1,514.9 | -0.1 | -4.1 | | |
| Japan Topix | 1,961.5 | 1.6 | 14.0 | Argentina MERV | 52,386.6 | 0.9 | 25.7 | | |
| Britain FTSE 100 | 6,710.9 | 2.9 | -11.0 | Brazil BVPSP | 120,355.8 | 1.6 | 4.1 | | |
| Canada S&P TSX | 18,374.8 | -0.4 | 7.7 | Mexico IPC | 45,062.0 | 0.8 | 3.5 | | |
| Euro area EURO STOXX 50 | 3,699.9 | 1.4 | -1.2 | Egypt EGX 30 | 11,413.2 | -1.1 | -18.3 | | |
| France CAC 40 | 5,765.8 | 1.7 | -3.5 | Israel TA-125 | 1,665.1 | -1.0 | 3.0 | | |
| Germany DAX* | 13,909.3 | -0.2 | 5.0 | Saudi Arabia Tadawul | 9,084.3 | 2.1 | 8.3 | | |
| Italy FTSE/MIB | 23,178.6 | -0.4 | -1.4 | South Africa JSE AS | 67,110.1 | 1.5 | 17.6 | | |
| Netherlands AEX | 681.0 | 3.6 | 12.6 | World, dev'd MSCI | 2,816.0 | 0.5 | 19.4 | | |
| Spain IBEX 35 | 8,122.7 | 0.7 | -14.9 | Emerging markets MSCI | 1,444.9 | 1.5 | 29.6 | | |
| Poland WIG | 59,008.5 | 4.0 | 2.0 | US corporate bonds, spread over Treasuries | | | | | |
| Russia RTS, \$ terms | 1,462.4 | 1.0 | -5.6 | Basis points | | | | | |

→ The Habsburg noble family were the kings and queens of much of Europe—and of inbreeding

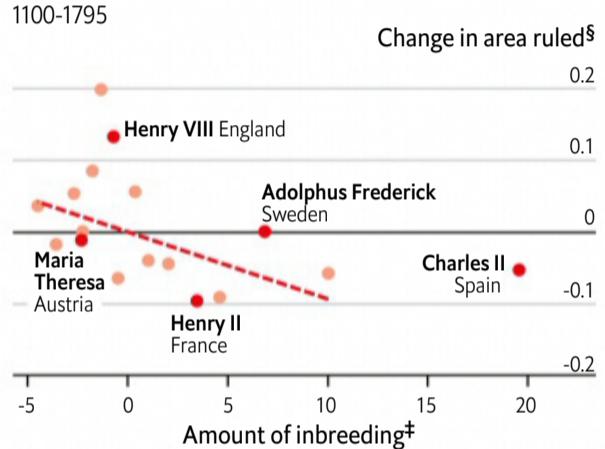
The ancestry of Charles II of Spain



Amount of inbreeding v subjective assessment of ruler ability[†], relative to country average, 990-1795



Amount of inbreeding v change in European land area controlled by ruler[§], relative to country average 1100-1795



*Holy Roman Emperor †Qualitative assessments from Frederick Adams Woods's "The Influence of Monarchs". Scored from -1 to +1 before comparison with country averages ‡Probability that both copies of any given gene are identical (offspring of siblings = 25%), %-point difference from country average §Change in natural log Source: "The effect of European monarchs on state performance", by S. Ottinger & N. Voigtländer, NBER working paper, 2020

The reign in Spain

Data on inbred nobles boost the case for a leader-driven theory of history

KING CHARLES II of Spain had an underbite so extreme he could not chew, a tongue too big to speak clearly and a body so weak he struggled to support his weight. "The Story of Civilisation", a history of the West, said he was "always on the verge of death but repeatedly baffling Christendom by continuing to live". When he died in 1700 aged 38, the coroner found his body "did not contain a single drop of blood; his heart was the size of a peppercorn; his lungs corroded; his intestines rotten and gangrenous; he had a single testicle, black as coal, and his head was full of water."

Charles was more inbred than an average child of a brother-sister pairing: his parents, both born to first cousins, were uncle and niece. And Spain fared poorly under his reign. His failure to produce an

heir set off a war that cost the country parts of modern Belgium and Italy.

Was Spain's misfortune under Charles a coincidence? Its power was already in decline beforehand. Perhaps a different king would have done even worse. Determining how much credit or blame to assign to rulers for their countries' fates has long been seen as an unresolvable debate. But a recent working paper by Nico Voigtländer and Sebastian Ottinger of the University of California at Los Angeles argues that leaders' impact can indeed be isolated—thanks to the genomes of kings like Charles.

For centuries, European nobles often married close relatives. This practice, at which Charles's Habsburg clan excelled, kept power and titles closely held. It also led to the copying of recessive genes, which can cause rare diseases and reduce cognitive ability. In theory, each round of inbreeding should have made monarchs slightly stupider—and thus worse at their jobs. This yields a natural experiment. Assuming that countries' propensity for incest did not vary based on their political fortunes, the periods in which they had highly inbred (and probably dim-witted)

leaders occurred at random intervals.

The authors analysed 331 European monarchs between 990 and 1800. They first calculated how inbred each ruler was, and then assessed countries' success during their reigns using two measures: historians' subjective scores, and the change in land area controlled by each monarch. The authors only compared each ruler against their own country's historical averages.

Sure enough, Spain's tailspin under Charles was predictable. Countries tended to endure their darkest periods under their most inbred monarchs, and enjoy golden ages during the reigns of their most genetically diverse leaders. The change in their land areas tended to be about 24 percentage points greater under their least inbred rulers than under their most inbred ones.

Incestuous monarchs and fluid borders sound remote from modern politics. Yet the study's finding—rulers who preside over setbacks tend to be relatively unintelligent—has timeless implications. Voters may overestimate governing parties' influence over what happens on their watch. But absolving leaders of responsibility entirely would probably be a worse error. ■



Music without limits

Armando "Chick" Corea, pianist, composer and pioneer of jazz fusion, died on February 9th, aged 79

THE INSTRUMENT was new and shiny, trailing black cables across the stage, and Chick Corea did not much like the look of it. Nor, as he sat down and tapped the keys in his clear, springy style, did he much like the sound of it. The year was 1968, he was in trumpeter Miles Davis's band, and he was sitting at a Fender Rhodes electric piano.

This was the future, though. He and Miles had been wondering for a while whether jazz could move authentically from acoustic instruments to electric, fuse with rock and rhythm 'n' blues, and thus bring in audiences of thousands. A few more notes and runs, and he began to like it fine. They tried it out together on an album called "Filles de Kilimanjaro"; then, by the early 1970s, he was playing a Rhodes in his own band, called Return to Forever, with Stanley Clarke and Bill Connors (later Al di Meola) on electric guitars and Lenny White on drums. They looked like any other shaggy tight-trousered rock group of the time. But when they launched into his "Hymn of the Seventh Galaxy" in 1973 he began to realise what they had done. This jazz was so new and so exciting that it made the hairs stand up on his arms. Under his wiry control at the keyboards, challenging, beaming, wriggling his shoulders with delight ("Chick" came from "Cheeky", which he was), the band became his Mothership, adventuring in the limitless space where all musical styles flowed round each other.

That adventure was to last a lifetime. Over the decades he won 23 Grammys and 67 nominations for his reinvigoration of jazz. He played to packed houses the world over, touring with barely a break. Yet he found it odd to be celebrated as a jazz-fusion pioneer, as if you could say where one sort of jazz ended and another began. He treated music more like a swimming pool, where he just jumped in and had fun.

Fusion, in any case, went on all the time. As soon as you played a piece with anyone, you exchanged ideas. As a young player in

New York in the 1960s he had learned from everyone he gigged for: from Stan Getz, who tamed his wildest side and taught him melodic simplicity, to Mongo Santamaria, who shaped his African-Cuban instincts with the beat of a conga drum. (He felt so passionately Spanish, or Cuban, by the end of his gigs in Harlem that it was odd to think his ancestry was Italian.) Even the "older guys", Mozart, Chopin, Scriabin, were still teaching him, his kindred spirits. He once wove Mozart's Sonata in F major into Gershwin's "The Man I Love", and was amazed at how well they went together.

In music, jazz especially, one exploration naturally led to another. He had only to think how he composed, hearing a tune in his head, playing off it, adding on, doodling with crayons to jog his creativity along. Sometimes he wrote phrases down, or composed at a keyboard so they were stored. All too often, though, he couldn't catch them. Music, like a waterfall, never stayed still, and nor did bands. But that was good. Every change of players brought in something fresh. An Egyptian snare drum sent his music in one direction, a flute in another. He tried duos with a vibraphone-player, Gary Burton, and a banjoist, Bela Fleck, to see what strange, thrilling sounds came through. When he set up an online academy later and asked the young to send in questions, it was at least partly to provoke new thoughts. He welcomed wrong notes, didn't much mind miscues: they could pitch him down a different path.

That encounter with the Rhodes piano had, nonetheless, been dramatic for him. It came just after he had taken up Scientology and, with it, began to wonder about the effect he could have in the world. He had never wondered about it before. Growing up in Chelsea, Massachusetts, he spent hours experimenting on the piano, alone in his bedroom into which the piano, like a spacecraft, had had to be hoisted by a crane. His father was a Dixieland trumpeter; music sang round the house, and the joy it gave him did not seem to need sharing. Now he thought it did. Music was a story he could tell, to fill people's imaginations. He noticed, too, how stars like the Beatles sold themselves as entertainers to huge crowds, while jazz-players still haunted their smoky clubs. He wanted to play innovative, heart-lifting jazz on a rock-star scale, too.

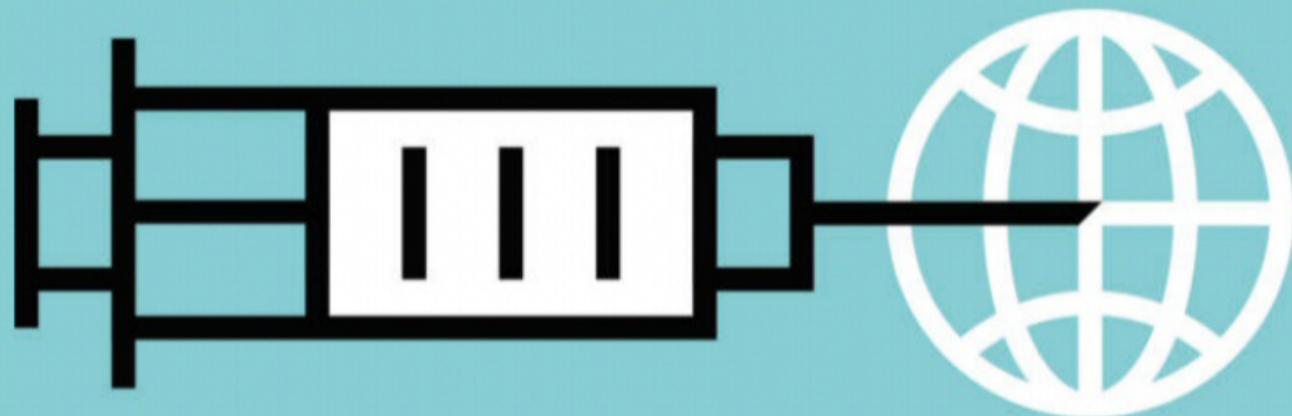
To the fury of purists (people with no curiosity, he thought) jazz fusion became a great commercial success. But he was still exploring. Even as fusion arrived he was playing avant-garde acoustic stuff, indulging his wild, atonal, piano-string-plucking side with a group called Circle. Later on, with fusion all the rage, he played sessions with his friend Herbie Hancock on a couple of concert grands, duels of improvisation on anything from Duke Ellington to Bartok's "Mikrokosmos". He loved the family rapport of bands, but also needed every so often to check out the world alone. Synthesisers quickly followed the Rhodes piano, but he seldom gave up the chance to commune with a Steinway—even if sometimes in trainers, or in one of his Hawaiian shirts.

In short, he was not to be tied down, not even to success. His most famous and popular song was a number called "Spain", from 1973. It had come to him in the usual random way, as he was trying out the second movement of Rodrigo's "Concierto de Aranjuez". He added this and that, put in other rhythms, and the piece rolled out from there. Yet its very popularity, once it was recorded, froze it in place. Anxiously he rearranged, reinvented, and in 1999 scored it for the London Philharmonic Orchestra. But in the end it was not a piece for free adventuring any more.

That was the vital thing. As late as 2014 he astonished one critic by saying, as he strolled onstage for a two-hour solo concert, that he had no plan. That was usually the case. No plan or, if he was with a band, only last-minute rehearsals. He wanted to be surprised by what would happen if, say, he started improvising from the hesitant first bars of Chopin's Mazurka in A minor. Even if he felt at home with the venue and the crowd, he wanted to approach with his sharp, searching fingers a world he had never visited before. And with his first note, like that first note on the Fender Rhodes, spring over any doubt, and take the audience with him. ■

The Jab

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