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The true cost of long covid

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A history of post-pandemic booms

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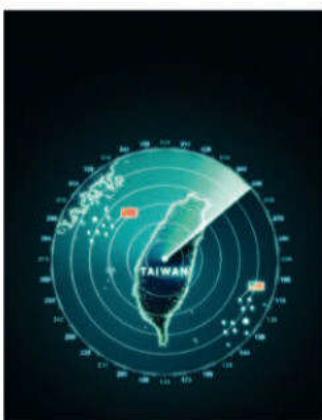


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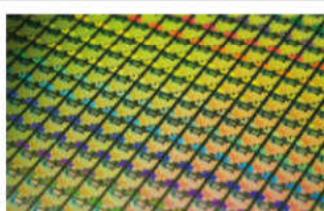
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 to take part in 'a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress.'

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India's second wave of covid-19 gained strength. The number of infections detected hit new records, with some 380,000 on April 28th alone. The official death toll surpassed 200,000, though evidence grew that many more fatalities are going unrecorded. Shortages of beds and oxygen afflicted many hospitals. The government ordered Twitter to remove posts critical of its handling of the epidemic, sparking widespread outrage. India now accounts for around 40% of the world's new recorded infections.

An Indonesian general died in a shoot-out with separatists in Papua province, in **Indonesia's** half of the island of New Guinea. Gusti Putu Danny Karya Nugraha was the first Indonesian general ever to be killed in action.

Fighters from the Karen National Liberation Army, an insurgent group, captured an outpost on the Thai border from the Burmese army. Several rebel groups have taken advantage of the chaos in **Myanmar** to seize territory.

China began construction of an orbiting space station with the launch of *Tianhe* ("harmony of the heavens"), the first of three planned modules. When finished in 2022, the station will be a fifth the size of the existing International Space Station.

Leaks from last year's census suggested that **China's population** has started to shrink, earlier than the Communist Party had hoped or expected. Official media denied the leaks, but added details that appeared to support them.

The Census Bureau reported that **America's population** stood at 331.4m on April 1st 2020. That was an increase of 7.4% since 2010, the slowest rate of decennial growth since the Depression. Texas gained 4m people, the most of any state; Utah's population grew the most in percentage terms: 18%. California remains the most populous state, but it will lose a congressional seat for the first time ever.

California's governor, Gavin Newsom, will probably face an election to recall him from office later this year, after a conservative-driven petition to remove him gathered enough signatures to qualify for the ballot.

Joe Biden used the 106th anniversary of atrocities committed by **Turkey** against **Armenians** during the first world war to define them as genocide, the first time an American president has formally done so. More than 1m Armenians were deported or died at the hands of the Ottomans. Turkey protested, but its reaction was less intense than some had feared.

Mario Draghi, the prime minister of **Italy**, laid out his government's plans for rebuilding the economy after covid in the form of a €248bn (\$300bn) spending package. Almost all the money will come from the EU, which has imposed some tough reform conditions. Fulfilling them will be tricky.

Hungary passed a law to hand control of state universities to foundations. These are likely to be run by ruling-party supporters, who can appoint their successors. This arrangement cannot be changed without a two-thirds majority in parliament. Critics griped that the ruling party had in effect given itself permanent control of higher education.

Arlene Foster said she would step down as **Northern Ireland's** first minister (or premier) in June following a revolt against her leadership in

her Democratic Unionist Party. Its members have become increasingly agitated by the post-Brexit deal for Northern Ireland, which in effect creates a border for goods crossing from mainland Britain.

Somalia's president promised to reverse legislation that would extend his term in office by two years, after fighting broke out in the capital, Mogadishu. Mohamed Abdullahi Mohamed was supposed to have stepped down in February.

More than 80 people were killed when a fire, caused by an oxygen cylinder, erupted at a hospital treating covid-19 patients in **Baghdad**.

In a leaked audio tape Muhammad Javad Zarif, **Iran's** foreign minister, said that the Revolutionary Guard dictates foreign policy and took Iran into Syria's civil war at the urging of Russia. He also said that Russia tried to stop Iran from agreeing to a nuclear deal in 2015. Talks to revive the deal, which America ditched in 2018, resumed in Vienna.

In **Israel** Benny Gantz, the leader of the Blue and White party, was appointed justice minister after Binyamin Netanyahu, the prime minister, tried to slide a member of his own party, Likud, into the position. Mr Netanyahu's move was deemed illegal by the attorney-general, as it violated the coalition agreement with Mr Gantz. The appointment is a sensitive issue: Mr Netanyahu is on trial for corruption.

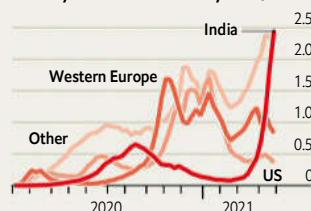
Israel recorded no new daily **covid-19 deaths** for the first time in ten months.

Thousands of people took to the streets in **Colombia**, to protest against a controversial tax reform. In the city of Cali a 1pm curfew was put in place after several buses were burned. Trade union leaders, who have been organising the protests, called for another gathering in May.

Coronavirus briefs

To 6am GMT April 29th 2021

Weekly confirmed cases by area, m



Vaccination doses

	Total '000	% of adults with 1st dose	2nd
Israel	10,468	97	91
Bhutan	480	94	0
UAE	10,336	79	50
Maldives	382	72	22
Britain	47,045	65	25
Malta	319	60	29
United States	232,408	57	36
Chile	14,324	56	45
Bahrain	1,207	52	41
Hungary	5,548	49	23

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

Japan declared a state of emergency in Tokyo and three other prefectures. Unlike previous restrictions, bars selling alcohol and shopping malls were told to close.

Chile will keep its borders closed for another month, even though the number of new covid-19 cases is easing.

America's Centres for Disease Control revised its advice on **wearing masks**. Fully vaccinated people do not need to wear one outside, it said, except in crowded venues, like sports stadiums.

Americans were allowed to receive the one-shot **Johnson & Johnson** jab again after regulators ended their suspension of the vaccine. They had been investigating claims that it caused blood clots.

America said it would donate up to 60m doses of the **AstraZeneca** jab to other countries. The vaccine has not been approved for use in the us.

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



In a speech to a joint session of Congress, Joe Biden laid out his **American Families Plan**, the most ambitious attempt to expand social programmes since the 1960s. The plan includes universal child care for three- and four-year-olds, a family-leave initiative and tuition-free community college. The \$1.8trn price tag will be paid in part by increasing the top rate of income tax to 39.6%. And for those earning over \$1m, taxes on capital gains and dividends will soar.

Fortune tallying

The family of Lee Kun-hee, **Samsung's** late chairman, are to pay almost \$1bn in taxes on his estate, one of the world's biggest-ever inheritance-tax bills. His art collection, which includes works by Salvador Dalí, Claude Monet and Pablo Picasso, will be donated to the National Museum of Korea and other institutions.

The **Ethiopian** government's auction of two licences to operate telecoms was deemed a failure, when only two bidders submitted offers. The sale of the licences was supposed to be the jewel in the privatisation drive under Abiy Ahmed, the reform-minded prime minister. Potential buyers were put off by some of the restrictions, such as excluding foreign telecoms from providing mobile-money services.

Total, a French oil and gas company, suspended work indefinitely on a \$20bn liquefied natural gas project in Mozambique, Africa's largest energy investment, because of attacks by jihadists. Total evacuated its staff from the town of Palma in March.

Apple had a bumper first quarter. Revenues soared to \$89.6bn, as did net profit, to \$23.6bn. That is more than Amazon's profit for all of last year. The tech company recorded big increases in sales of iPhones, iPads and other devices, confounding the market narrative that it is increasingly reliant on services (apps, TV and the like) for growth.

Huawei's revenues fell by 16.5% in the first quarter, year on year, the second consecutive quarter in which it has registered a hefty drop. The Chinese maker of telecoms equipment was banned from having access to some American technology under the Trump administration, which is putting its business under immense pressure.

China's competition regulator launched an investigation into **Meituan**, a shopping platform for food, entertainment and other lifestyle services. It is the latest antitrust action taken against a tech giant in China, coming soon after Alibaba was fined \$2.8bn for abusing its market power.

Lyft has followed Uber in giving up the development of **autonomous vehicles**. The ride-hailing company sold its

self-driving-cars unit to Toyota. It will be integrated into the Japanese carmaker's Woven Planet division, which is "on a mission of mobility to love".

Tesla's sales revved up in the first three months of 2021, increasing by 74% over the same quarter last year, despite problems in obtaining semiconductors for its electric cars. The company reported net income of \$438m, its best quarterly profit to date.

Panasonic made its biggest-ever foreign acquisition when it agreed to buy the 80% of **Blue Yonder** it doesn't already own in a deal valued at \$7.1bn. Blue Yonder specialises in software for supply-chain management.

More banks disclosed losses from their exposure to the collapse of Archegos, an investment fund. **Nomura** took a hit of over \$2.9bn, more than it had estimated previously, dragging the Japanese bank to its worst quarterly performance since 2008. **UBS** recorded a \$774m loss in operating income related to Archegos, overshadowing the Swiss bank's solid quarterly profit.

By contrast, **Deutsche Bank** said it had managed to sell its

assets in Archegos before it imploded, avoiding any associated damage to its balance-sheet. The German bank made a net profit of €908m (\$1.1bn) in the first quarter, its best since the start of 2014.

In one of the firmest commitments to getting workers **back into the office**, JPMorgan Chase told staff that it wants them to return to their place of employment by early July, albeit on a rotational basis to comply with a 50% cap on office occupancy. The bank recognised that for some people, returning to the office "is a change you'll need to manage". It also encouraged staff to get vaccinated, but said this would not be a requirement for entering the office.

Snappy fashion

Loved and loathed in equal measure, sales of **Crocs** footwear have rebounded, growing by 64% in the first quarter year on year and producing a comfortable profit for the company. The shoes, a cross between a foam clog and a hospital sandal, have benefited from the trend towards cosywear during the pandemic. Affirming that it's OK to go out in your slippers, they were also seen on the Oscars red carpet.



The most dangerous place on Earth

How to avoid war over the future of Taiwan

THE TEST of a first-rate intelligence, wrote F. Scott Fitzgerald, is the ability to hold two opposing ideas in mind at the same time and still retain the ability to function. For decades just such an exercise of high-calibre ambiguity has kept the peace between America and China over Taiwan, an island of 24m people, 100 miles (160km) off China's coast. Leaders in Beijing say there is only one China, which they run, and that Taiwan is a rebellious part of it. America nods to the one China idea, but has spent 70 years ensuring there are two.

Today, however, this strategic ambiguity is breaking down. The United States is coming to fear that it may no longer be able to deter China from seizing Taiwan by force (see Briefing). Admiral Phil Davidson, who heads the Indo-Pacific Command, told Congress in March that he worried about China attacking Taiwan as soon as 2027.

War would be a catastrophe, and not only because of the bloodshed in Taiwan and the risk of escalation between two nuclear powers. One reason is economic. The island lies at the heart of the semiconductor industry. TSMC, the world's most valuable chipmaker, etches 84% of the most advanced chips (see Business section). Were production at TSMC to stop, so would the global electronics industry, at incalculable cost. The firm's technology and know-how are perhaps a decade ahead of its rivals', and it will take many years of work before either America or China can hope to catch up.

The bigger reason is that Taiwan is an arena for the rivalry between China and America. Although the United States is not treaty-bound to defend Taiwan, a Chinese assault would be a test of America's military might and its diplomatic and political resolve. If the Seventh Fleet failed to turn up, China would overnight become the dominant power in Asia. America's allies around the world would know that they could not count on it. Pax Americana would collapse.

To understand how to avoid conflict in the Taiwan Strait, start with the contradictions that have kept the peace during the past few decades. The government in Beijing insists it has a duty to bring about unification—even, as a last resort, by means of invasion. The Taiwanese, who used to agree that their island was part of China (albeit a non-Communist one), have taken to electing governments that stress its separateness, while stopping short of declaring independence. And America has protected Taiwan from Chinese aggression, even though it recognises the government in Beijing. These opposing ideas are bundled into what Fitzgerald's diplomatic inheritors blithely call the "status quo". In fact, it is a roiling, seething source of neurosis and doubt.

What has changed of late is America's perception of a tipping point in China's cross-strait military build-up, 25 years in the making (see Graphic detail). The Chinese navy has launched 90 major ships and submarines in the past five years, four to five times as many as America has in the western Pacific. China builds over 100 advanced fighter planes each year; it has deployed space weapons and is bristling with precision missiles that can hit Taiwan, US Navy vessels and American bases in Ja-

pan, South Korea and Guam. In the war games that simulate a Chinese attack on Taiwan, America has started to lose.

Some American analysts conclude that military superiority will sooner or later tempt China into using force against Taiwan, not as a last resort but because it can. China has talked itself into believing that America wants to keep the Taiwan crisis boiling and may even want a war to contain China's rise. It has trampled the idea that Hong Kong has a separate system of government, devaluing a similar offer designed to win over the people of Taiwan to peaceful unification. In the South China Sea it has been converting barren reefs into military bases.

Although China has clearly become more authoritarian and nationalistic, this analysis is too pessimistic—perhaps because hostility to China is becoming the default in America (see China section). Xi Jinping, China's president, has not even begun to prepare his people for a war likely to inflict mass casualties and economic pain on all sides. In its 100th year the Communist Party is building its claim to power on prosperity, stability and China's status in its region and growing role in the world. All that would be jeopardised by an attack whose result, whatever the US Navy says, comes with lots of uncertainty attached, not least over how to govern a rebellious Taiwan. Why would Mr Xi risk it all now, when China could wait until the odds are even better?

Yet that brings only some comfort. Nobody in America can really know what Mr Xi intends today, let alone what he or his successor may want in the future. China's impatience is likely to grow. Mr Xi's appetite for risk may sharpen, especially if he wants unification with Taiwan to crown his legacy.

If they are to ensure that war remains too much of a gamble for China, America and Taiwan need to think ahead. Work to re-establish an equilibrium across the Taiwan Strait will take years. Taiwan must start to devote fewer resources to big, expensive weapons systems that are vulnerable to Chinese missiles and more to tactics and technologies that would frustrate an invasion.

America requires weapons to deter China from launching an amphibious invasion; it must prepare its allies, including Japan and South Korea; and it needs to communicate to China that its battle plans are credible. This will be a tricky balance to strike. Deterrence usually strives to be crystal-clear about retaliation. The message here is more subtle. China must be discouraged from trying to change Taiwan's status by force even as it is reassured that America will not support a dash for formal independence by Taiwan. The risk of a superpower arms race is high.

Be under no illusions how hard it is to sustain ambiguity. Hawks in Washington and Beijing will always be able to portray it as weakness. And yet, seemingly useful shows of support for Taiwan, such as American warships making port calls on the island, could be misread as a dangerous shift in intentions.

Most disputes are best put to rest. Those that can be resolved only in war can often be put off and, as China's late leader Deng Xiaoping said, left to wiser generations. Nowhere presents such a test of statesmanship as the most dangerous place on Earth. ■



Long covid

And now for the aftershock

Evidence is mounting that long covid is a real threat to global health

AS THE WORLD enters the second year of the pandemic, two crises are unfolding. The more urgent and visible one is in poor countries like India, where a surge of covid-19 cases is threatening to overwhelm the state. India is recording more than 350,000 cases a day, and many more than that are thought to be going undetected (see Asia section). The suffering is grievous. Oxygen supplies at Indian hospitals are running far short of what is needed, and crematoriums are overwhelmed.

The other crisis is more subtle. This is long covid, which is becoming apparent in rich countries like America, Britain and Israel that have largely vaccinated their way out of the pandemic, but which will affect poor ones, too (see Science section). Post-covid syndrome, to give it its formal name, is a set of symptoms affecting any part of the body that persist for at least three months after a bout of covid-19. Three stand out: breathlessness, fatigue and “brain fog”. In Britain three in every five people with long covid say their usual activities are somewhat limited, and one in five says they are limited “a lot”—which often means being unable to do even a part-time, desk-based job.

The numbers are chilling. Half a million people in Britain have had long covid for more than six months. Their chances of full recovery are probably slim. The vast majority are in their working-age prime. At the last count (which does not fully take in the country’s second wave) 1.1% of Britain’s population had had long covid for at least three months—a group that includes 1.5% of those of working age. About 15% of Britain’s population had been infected by then. Applying this rate to global covid-19 cases, numbering an estimated 1.2bn so far, suggests that more than 80m people may already have long covid.

The costs of the condition have yet to be tallied, but they will be huge. Britain’s National Institute for Health Research found that, in 80% of sufferers, the illness affected the ability to work. Over a third said it had weighed on their finances.



As yet, long covid has no cure. What scientists know so far about the disease points to it being a combination of a persistent viral infection (for which a drug may be found at some point), a chronic autoimmune disorder (which would need expensive, complex care like that for rheumatoid arthritis or multiple sclerosis) and lingering damage to some tissues caused by the original covid-19 infection. Medicines for the first two of these causes may ultimately be found. America alone has put \$1.15bn into research. At the moment, though, sufferers need months of rehabilitation to help them cope.

Health-care systems and employers must prepare to assist long-covid sufferers, including those who have no proof of past infection because they were not able to be tested. Prompt rehab-

ilitative care can prevent a downward spiral in personal health and finances. Dedicated long-covid clinics will speed things up. As things now stand, patients often bounce from one specialist to another in search of a diagnosis.

Employers, for their part, must rethink how to accommodate workers with a disability that flares up in unpredictable bouts. Governments can help, with incentives that encourage sufferers to stay in work and employers to cater to their condition. If governments miss the boat, millions of young and mid-career workers could permanently drop out of the labour force. One approach could draw on a scheme for disability benefits that is used in the Netherlands. Dutch employers and employees who are too unwell to work as normal are required to come up jointly with a plan on how the sick employee can return to work under new conditions. Remote working and flexible schedules would make it easier for long-covid sufferers to work at least part-time. Many of them will improve, though even that can take months.

Lots of mistakes were made in the pandemic’s acute phase. But that came out of the blue. There is no excuse for failing to respond to long covid. And there is no time to waste. ■

America's economy

Biden's taxing problem

How to tax capital without hurting investment

GOVERNMENTS RAISE most of their money by taxing wages, but President Joe Biden has his eyes fixed on the rich, big business and Wall Street. He proposes to fund his \$2.7trn infrastructure plan in part by raising the corporate-tax rate from 21% to 28%. And to help pay for more spending on child care and support for parents, he wants to roughly double the top rate of federal tax on capital gains and dividends. For Americans earning more than \$1m per year, he would bring levies on capital income into line with the top rate on wage income, which he wants to put up from 37% to 39.6%. That is about double the rate that is currently levied on rich investors, who are only a small fraction

of the population but a large proportion of shareholders.

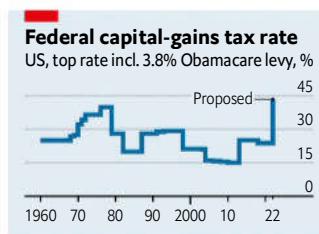
Many investors, from Wall Street to Silicon Valley, are up in arms, claiming that Mr Biden will crush economic growth. That is an exaggeration; America can bear higher rates of capital taxation (see Finance section). Yet levies on capital can have unintended economic consequences. If he is to avoid them, Mr Biden should improve the design of his plans.

Taxing savings and investment income can seem like unfair and inefficient double taxation. Those who earn today to spend today must pay only income and consumption taxes; why should someone who prefers to gain by deferring their gratifica-

tion face extra levies? Discouraging saving and investment hurts the economy in the long run, which is why a review in 2010 by the OECD, a club of mostly rich countries, ranked corporate taxes as the most harmful of four common taxes to economic growth. Economic models predict that Mr Biden's business-tax plans would cut the size of America's economy by around 1% by 2050.

Set against this is the scourge of tax avoidance. Tax capital lightly and it pays to disguise wages as capital income—a particularly lucrative pastime for the rich. One problem is the "carried interest" loophole. It lets private-equity and hedge-fund managers class their fees as capital gains rather than income. Another issue is the explosive growth in "pass through" firms, for example partnerships, which accounted for more than half of American business income by 2011, up from about a fifth in 1980. Many capital-light, labour-intensive businesses such as law firms, consultancies and medical offices are organised this way. Nearly half of the earnings that pass-through investors receive are classified as dividends and capital gains. Mr Biden is right that bringing taxes on wages and capital into line would make tax avoidance harder.

The trade-off between inefficiency and tax avoidance is painful, but two principles can help chart a sensible course. The first is to realise that taxes on capital stack up. Before they can return their profits to investors in the form of dividends and capital gains, firms pay corporate taxes. Whack up every capital levy to rates resembling income taxes and you will take a larger bite out of investment income than out of wages. Shareholders in California, for example, face Mr Biden's proposed 28% corporate-tax rate, his 39.6% federal capital-gains rate, a 13.3% state tax on cap-



ital gains, and a 3.8% levy on investment income introduced as part of Obamacare. They could, in theory, keep less than a third of their nominal returns under the Biden plan—and even less of their real returns given that some of those taxes would be paid on the illusory capital gains generated by inflation. In reality it is not as simple as compounding rates, because the corporate tax is leaky and the current system, egregiously, waives capital-gains taxes when assets are inherited. Still, after taking into account the revenues raised from closing loopholes, Mr Biden should ensure that taxes on capital do not rise above taxes on labour.

The second principle is to reduce inefficiency with allowances for investment. Exempting from capital taxation modest "normal" returns, which are usually measured by the interest rate on low-risk bonds, cuts distortions, as the normal return is in theory the minimum needed to make private-sector projects worthwhile. The idea is baked into America's tax code for many types of investment but only until the end of 2022—and Mr Biden plans a new minimum tax on firms'

accounting profits which would interfere with the carve-out for the largest companies. Individual investors should also receive exemptions for the normal rate of return—which already happens in Norway and has been suggested in Britain by the Institute for Fiscal Studies. As Mr Biden proposes, inheritances should not be exempt from capital-gains tax.

Genuine parity between capital and labour taxation, tempered by investment incentives, might not raise as much money as Mr Biden's current plans. But such a reform would still help pay for his spending and reduce tax avoidance—without making the American tax system needlessly inefficient. ■

Hungary

Viktor Orban's university challenge

The ruling party seizes control of Hungary's ivory towers

A GOOD UNIVERSITY prizes original thought. And Viktor Orban, Hungary's prime minister, is certainly an original thinker. Since 2010, when his Fidesz party won two-thirds of the seats in parliament, he has been dreaming up innovative ways to turn Hungary back into an autocracy, while maintaining a democratic façade. On April 27th his government passed a law transferring control of the country's 11 main state universities to a series of foundations that are likely to be run by his allies. The party has already asserted its grip over institutions such as the electoral system, the media, the courts and much of the economy. Now it wants total power over the ivory towers.

Like most of Mr Orban's illiberal reforms, the plan is complicated, brilliant and likely to be copied by aspiring strongmen in other countries. The universities have been placed under the control of public foundations, along with billions of euros-worth of assets (including a palace, a harbour and shares in state-owned companies) which are supposed to help finance them. The foundations' boards are initially appointed by Mr Orban's government, and those appointed so far consist mainly of Fidesz members or sympathisers. Subsequent vacancies will be filled by candidates chosen by the boards themselves.

You might think that if Fidesz loses power, a new government

could reorganise the foundations. But with its two-thirds super-majority in parliament, Fidesz has already written their governance rules into Hungary's constitution. Even if the opposition were to win next year's election, which is conceivable since the fractious parties have at last started to join forces, they would almost certainly lack enough seats to alter the constitution. In effect, Fidesz may just have granted itself control over Hungary's universities in virtual perpetuity.

The government says the new system will let universities manage their own buildings and give them stable multi-year financing in place of annual state budgets. That is deceptive. Such administrative reorganisations were under discussion for years at several universities. The new law usurps those reforms, giving the new boards unlimited authority over the schools, the foundations and their vast assets.

The fear is that Fidesz will use this control as it has used control of the media: to stifle dissenting voices and to churn out propaganda. Its hobby horses include the evils of immigration, liberalism and gay and trans rights. It also spreads loopy conspiracy theories about the European Union, and the financier George Soros's supposed plan to flood Hungary with Muslim immigrants. The government has already forced state universities ►

▶ to drop gender-studies programmes. It used legal harassment to force the Central European University, a formerly Budapest-based institution founded by Mr Soros that was a source of criticism of Mr Orbán, to (mostly) decamp to Austria. Freedom House, a watchdog, rated Hungary as a fully free democracy in 2010. Its most recent report, published this week, lists it for the second year running as a “hybrid regime” (one step up from “authoritarian”). Hungary now scores worse than Serbia.

What happens in Budapest does not stay in Budapest. Mr Orbán’s institution-nobbling ideas tend to spread. Poland’s nationalist government has already mimicked Fidesz’s takeovers of the media and of the courts. Populists in Croatia, the Czech Republic and Slovenia have attempted similar tricks. France’s Marine Le Pen is a fan of Mr Orbán, too. One reason why democracy is in decline around the world is that its enemies keep swapping tips on how to undermine it.

If a political takeover of academia can happen in Hungary, a member of a club of rich, liberal democracies, it can happen any-

where. But being in the EU also provides means of resistance. After years of debate, the EU has adopted a “rule of law mechanism”. In principle, countries that trample legal principles can have their aid restricted. Compared with the size of its economy, Hungary was the biggest net beneficiary of EU funding in 2014–20, according to Bruegel, a think-tank. True, cutting aid would be hard. The European Commission has been dragging its feet on establishing guidelines for doing so, and Hungary’s allies, particularly Poland, will try to veto any such move.

Nonetheless, it is long past time to act. For years, the EU has wearily accepted Hungary’s ever more corrupt autocracy as if it were inevitable, and bankrolled it lavishly. Instead, it should heed the words of a Hungarian academic, Geza Teleki, who warned that illiberal regimes want “to abolish the autonomy of the universities” because “every autonomous group is naturally something they must get rid of”. Teleki was testifying to America’s Congress in 1954 about how Hungary’s old communist party used to operate. Hungarians deserve better. ■

Hybrid diplomacy

The virtue of virtual

Diplomats have tried new tools during the pandemic. They should use them after it

BEFORE THE pandemic, it might have been mistaken for an elaborate April Fool. The State Department announced that Antony Blinken would “embark” on his first “virtual trip” to Africa and “engage with young people from across the continent”. On April 27th the secretary of state would “travel virtually” to Nigeria, meeting President Muhammadu Buhari, before calling on President Uhuru Kenyatta to reaffirm America’s strategic partnership with Kenya; he would then “visit” a few local renewable-energy companies. What next: summity by hologram?

But virtual diplomacy is no joke. It has kept international relations ticking over during the past year, as travel became harder and face-to-face meetings often impossible (see International section). In the process, it has enlarged the diplomatic toolkit. Diplomats can make ample use of this in the post-pandemic future, too.

Many can’t wait to get back to meeting in person, and rightly so. Over Zoom, even if the “mute” button doesn’t play up, it is harder to build trust, the currency of diplomacy. It is easy to miss the subtle signs of body language—the twitch of an eyebrow, the curl of a lip, the uneasy shuffle—that can be as eloquent as words.

Proximity often makes all the difference. Having a seat next to Russia on the UN Security Council offers an excellent channel for conveying a message to President Vladimir Putin (such as: don’t invade Ukraine). The hardest agreements tend to be thrashed out in long sessions behind closed doors, helped by ideas floated in a corridor or a walk in the woods. With the best of intentions, Mr Blinken’s virtual trip to Africa cannot have the same impact as an actual visit by a statesman taking the trouble to travel and pay respects to faraway countries.

Gradually, physical diplomacy will come back. In London on May 3rd–5th G7 foreign ministers are due to meet in person for the first time in more than two years, with the help of daily covid testing and suitable social distancing. In June G7 leaders plan to

gather in Cornwall, and a physical NATO summit will follow in Brussels. The trip to Europe is pencilled in as President Joe Biden’s first foreign foray as president.

It would be wrong to assume that diplomacy will simply return to business as usual, however. For one thing, virtual diplomacy has proved that it can be highly efficient. Mr Biden, for example, has been able to zip around the world without leaving the White House, joining European leaders on screen in Munich and Asian leaders in a cyber-summit of the Indo-Pacific “Quad”. He was able to bring together dozens of world leaders for a deep-green climate gathering on Earth Day. The UN General Assembly and other big diplomatic jamborees could happily be scaled back in future, as much of their routine business can be done perfectly well online.

Sometimes—for tricky negotiations, say—it will make sense to conduct business in person. Sometimes virtual meetings will be more practical and productive. Diplomacy will go hybrid.

That could allow it to be more inclusive. The pandemic has intensified experiments in bringing a wider range of voices to conflict resolution. In the physical world, arranging for groups of women or young people from a troubled country to meet in a safe place is a logistical nightmare. Using a digital platform, as the UN discovered in Libya and Yemen, it is relatively simple. Broad participation in “digital dialogues” can counter the criticism that a peace process is a top-down stitch-up and lend greater legitimacy to any agreement reached, giving it a better chance of working. Even old hands are excited about the promise of “industrial levels of inclusion”. This should become a standard part of peace formulas.

In the 19th century the telegraph shrank the time needed to contact envoys. In the 20th century the jet plane shrank distance. Now digital platforms are supplanting physical presence. Used wisely, diplomacy will be the better for it. ■



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Fight the good fight

The war against money-laundering is not lost; it continues, and we should not wave the white flag just when its most promising strategies are gaining ground ("Losing the war", April 17th). One such strategy is enforcement. The fact that last year banks had to pay \$10.4bn in anti-money-laundering (AML) fines could be seen as a failure to stop illicit flows, but it also reflects a greater willingness to crack down on violations outside the United States. And although forming AML teams has indeed been a Herculean task, imposing big regulatory changes on firms across the world is no easy feat. Such investments are not aimed at the problems of the past, but at the future. Technological advances, such as artificial intelligence, are only now beginning to fortify the compliance controls developed over previous decades.

More work is needed, including by governments. For one, financial supervisors should rethink punitive policies that largely leave institutions in the defensive posture of meeting technical obligations, rather than focusing solely on rooting out illicit funds. Efforts to bring together investigators, supervisors and compliance officers in mission-driven task-forces are now starting to bear fruit.

SCOTT LILES
President
Association of Certified Anti-Money Laundering Specialists
Columbus, Ohio

Big companies and big countries prefer to be judged on process over results. The leading centres of money-laundering are London, New York, Shanghai and other big financial centres. These hubs and their regulators tick the right boxes on processes and never appear on official money-laundering blacklists that trigger sanctions.

Professional money-launderers want to hide in a crowd of similar transactions. Yet countries that are labelled as threats include the likes of

Cuba, Vanuatu and Yemen. Many have exchange controls. Some don't even have an international bank. These are the last places you will find big money-launderers. They are blacklisted and do not have the political influence to get off.

The politicisation of AML lists is dangerously creating a safe tunnel for such criminals, who are good at getting around prescriptive processes. Switching the focus to heavy sanctions for actual money-laundering instead of tick-box exercises on applied process would harness the private sector's ingenuity to win this important war.

AVINASH PERSAUD
Emeritus professor of Gresham College
London

As your article noted, outsourcing policing functions to the private sector may be problematic. Instead, enhancing the powers of financial-intelligence units to monitor and even postpone suspicious transactions may be a more efficient measure and would be fully compliant with countries' legal obligations. The Parliamentary Assembly of the Council of Europe recently passed a resolution urging governments in Europe and beyond to do just that.

JAN KLEIJSEN
Director
Information Society and Action against Crime
Council of Europe
Strasbourg

Georgia's election laws

As a professional engaged in the industry of electioneering in Georgia, I wanted to provide some context to the reforms in the Election Integrity Act ("Not so peachy", April 3rd). Of notable importance is the environment in which those reforms took place. After the governor's election of 2018 (which Stacey Abrams wrongly claimed was stolen from her), Georgia replaced an election system that was dated, susceptible to security breaches and lacking a paper trail. The overhaul of equipment brought significant

change in how votes were counted, local-election officials were trained and voters verified.

Although the system was tested locally, no statewide election had occurred before the pandemic in 2020. Last year's public-health orders highlighted significant cracks in its implementation, staff training and voter verification. The system didn't anticipate millions of people voting at a distance, demonstrating the unreliability of signature-matching technology. Boxes to drop ballots in, popular among Republicans and Democrats alike, were not even legal. They only existed because of gubernatorial fiat.

None of this is to suggest that nefarious activities took place. As a Republican, I challenge anyone to prove elections were "stolen". Democrats performed meekly in state-level offices when they thought they'd win the state house. They didn't even come close. Their cries of voter suppression are naked partisan gimmicks designed to rile their base for a competitive election in 2022.

ROBERT LEE
Dallas, Georgia

Europe's tv beats the invaders

How appropriate that Charlemagne should choose "Barbarians" to illustrate his notion that Netflix is creating a common European culture (April 3rd). That show, made in Germany, portrays the efforts of Rome as a supposedly superior and sophisticated imperial invader to impose its laws and manners on apparently uncivilised barbarians (the Greeks termed *barbaroi* for anyone who did not speak Greek).

Memories are short. It has been only a few years since series like "The Bridge" hit screens through European TV networks, creating a huge internal market of European programmes, subtitled or dubbed. In addition to that Nordic triumph, some of Europe's leading networks are collaborating on high-end drama, such as "Leonardo".

Looking at Europe's public broadcasters alone, annual investment in content is just shy of €20bn (24bn) a year.

VANESSA O'CONNOR
Director of member relations and communications
European Broadcasting Union
Geneva

Ebenezer good

Your piece on Welwyn Garden City described Sir Ebenezer Howard as "a farmer turned urban visionary" ("Paved paradise", April 17th). A visionary indeed but not really a farmer. Howard spent a few months as a young man farming in Nebraska, but then trained as a stenographer in Chicago and spent his entire professional life thereafter in London as a parliamentary reporter with phenomenally fast shorthand, in essence a forerunner of today's Hansard reporters. Maybe there is something about listening intently to parliamentarians that encourages visionary thinking.

DAVID NATZLER
Clerk of the House of Commons, 2015-19
London

Clear your mind

The article on people's tendency to add things when improving something rather than simplifying them ("Less is often more", April 17th) reminded me of Lao Tzu, an ancient Chinese philosopher. He observed that "To attain knowledge, add things every day. To attain wisdom, remove things every day."

JASON GART
Rockville, Maryland

When it comes to solving problems, creating a "sub-par result" is surely an improvement for a golf course.

JOHN ALLAN-SMITH
New York

Letters are welcome and should be addressed to the Editor at The Economist, The Adelphi Building, 1-11 John Adam Street, London WC2N 6HT Email: letters@economist.com More letters are available at: Economist.com/letters

Chief Executive Officer

Malta Financial Services Authority



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Something wicked this way comes

BEIJING

America is increasingly concerned about the possibility of war in the Taiwan Strait. It has good reason

ON JUNE 29TH 1950 the *USS Valley Forge*, flagship of America's Seventh Fleet, passed through the Taiwan Strait. A battle group defended her flanks, America's first naval jets sat in her hangar, and a new vision of American-dominated Asian security unfurled in her wake.

Only a few months before, America's secretary of state, Dean Acheson, had declared that "The Asian peoples are on their own, and know it." But on June 25th Stalinist North Korea launched an invasion of its southern neighbour, and a country confronting communism could no longer leave Asia alone. America would fight with South Korea. It was to join in that defence that the *Valley Forge* was steaming north from Subic Bay.

Her route had added purpose. Containing Asian communism meant more than fighting North Korea. It also required making sure that Mao Zedong—mainland China's ruler since the previous year—did not take the island of Taiwan from the Nationalist regime led by Chiang Kai-shek, who had been forced to retreat there. On June 27th President Harry Truman an-

nounced a new Taiwan policy: America would defend the island from attack; the Nationalists must, for their part, cease air and sea operations against the mainland. "The Seventh Fleet will see that this is done," the president declared, with nicely laconic menace. Hence the *Valley Forge*'s show of strength.

From that week on, to the relief of some and the frustration of others, Asian peoples were no longer on their own. The Korean war transformed the region into a theatre of ideological struggle just as fraught as divided cold-war Europe. For nearly three decades the Taiwan Strait saw ships of the Seventh Fleet acting as a tripwire between the two Chinas. There were early battles over outlying islands, including a crisis in 1958 in which Mao's brinkmanship nearly started a nuclear war. But over time the rivals to the west and east of the strait settled into an uneasy half-peace, both adamant that they were the one true China, neither able to act on the conviction.

Over time Taiwan became the prosperous, pro-Western democracy of 24m people which it is today. While the mainland

saw traditions and social codes destroyed by Maoist fanaticism, Taiwan has a rich religious and cultural life. It has come to enjoy raucous free speech and a marked liberal streak: it was the first Asian country to legalise gay marriage.

A generation ago, it could matter greatly whether someone's grandparents had arrived from the mainland in 1949 or had deeper roots on the island. That has now changed, especially among the young. In 2020 a poll by the Pew Research Centre, a Washington-based research outfit, found that about two-thirds of adults on the island now identified as purely Taiwanese. About three in ten called themselves both Taiwanese and Chinese. Just 4% called themselves simply Chinese.

Leaders in Beijing differ; they consider them all Chinese. They tell their own people that most citizens of Taiwan agree, and that the historical necessity of national unification is being thwarted by secessionist troublemakers egged on by America.

Once, Taiwan was a point of compromise between the two powers. On January 1st 1979, the day that America recognised the People's Republic of China, the economic reformers running the mainland changed their Taiwan policy from armed liberation to "peaceful reunification", soon afterwards adding a promise of considerable autonomy: "one country, two systems". But for the past 25 years that conciliatory offer has been accompanied by an unprecedented military build up.

In recent years China's rhetoric towards ►►

Taiwan has sounded new notes of impatience. And the crushing abnegation of its promise to observe “one country, two systems” in Hong Kong over the past two years has deepened Taiwanese distrust. Last year the issue helped Tsai Ing-wen of the Democratic Progressive Party (DPP) to be re-elected president.

In principle the DPP favours the creation of a Taiwan that is formally its own nation; but to declare independence in that way would trigger massive Chinese reprisals. To keep that crisis at bay, Ms Tsai, a moderate, cat-loving academic, relies on an artful diplomatic dodge: that she governs a country which, while proudly Taiwanese, uses the legal name of the Republic of China which it inherited from the Nationalists who arrived in 1949. China's leaders detest her.

The passage of time poses a dilemma for China. Every year, China's ability to coerce Taiwan economically and militarily grows greater. And every year it loses more hearts and minds on Taiwan. Should rulers in Beijing ever conclude that peaceful unification is a hopeless cause, Chinese law instructs them to use force.

Present fears

This dynamic alarms the heirs to Acheson. Though the accord of 1979 cast Taiwan into non-state limbo, the island's security remained—as a matter of American law—a question of “grave concern”. When in 1996 China sought to intimidate the Taiwanese, about to vote in their first free presidential election, by means of missile tests, President Bill Clinton ordered the *USS Nimitz*, a nuclear-powered aircraft-carrier, and her attendant battle group to pass through the strait. The missile tests stopped.

American military commanders are increasingly open about their concerns that, in the context of Taiwan, the balance of military power between China and

Disequilibrium

Military balance across the Taiwan Strait
2020

	China	Taiwan
Defence spending, \$bn as % of GDP	252.3 1.7	12.2 1.9
Ground-force personnel	1,030,000	88,000
Tanks	6,300	800
Submarines	52	2
Aircraft-carriers	2	<i>nil</i>
Warships	131	26
Military aircraft	2,500	460

Sources: US Department of Defence; SIPRI

America has swung in China's direction. A 25-year campaign of shipbuilding and weapons procurement, begun in direct response to the humiliation of 1996, has provided the People's Liberation Army Navy (PLAN) a fleet of 360 ships, according to American naval intelligence, compared with America's 297. On April 23rd state media hailed the symbolism of a ceremony in which China's supreme leader, President Xi Jinping, commissioned three large warships on the same day: a destroyer, a helicopter-carrier and a ballistic-missile submarine. The second of these is ideal for air-lifting troops to a mountainous island, the media noted with glee. The third is a way of deterring superpowers.

America still boasts more, better carriers and nuclear submarines. It has much more experience of far-flung operations, and it has allies, too. But America's forces have global duties. China would be fighting close to home and thus enjoying the benefit of the PLA's land-based aircraft and missiles. Lonnie Henley, who was until 2019 the chief Pentagon intelligence analyst for East Asia, sees the radars and missiles of the integrated air-defence system

along China's coast as the “centre of gravity” of any war over Taiwan (see map on following page). Unless those defences are destroyed, American forces would be limited to long-range weapons or attacks by the stealthiest warplanes, Mr Henley told a congressional panel in February. But destroying those defences would mean one nuclear power launching direct attacks on the territory of another.

And the Chinese build-up continues apace. History is an imperfect guide, but offers precedents to ponder, says a senior American defence official. “The world has never seen a military expansion of this scale not associated with conflict.”

It is not just a matter of numbers. China has carefully focused its efforts on the ability to defeat American forces that might trouble it. It has missiles designed expressly for killing carriers, and others that would allow precision strikes on the American base on Guam. The defence official lists other fields in which China has worked to neutralise areas of American strength, whether that means investment in anti-submarine weapons and sensors or systems to jam or destroy the satellites on which American forces rely. Copying an American method, China has set up a training centre with a professional opposing force that mimics enemy (in this case American) doctrines and tactics.

Horrible imaginings

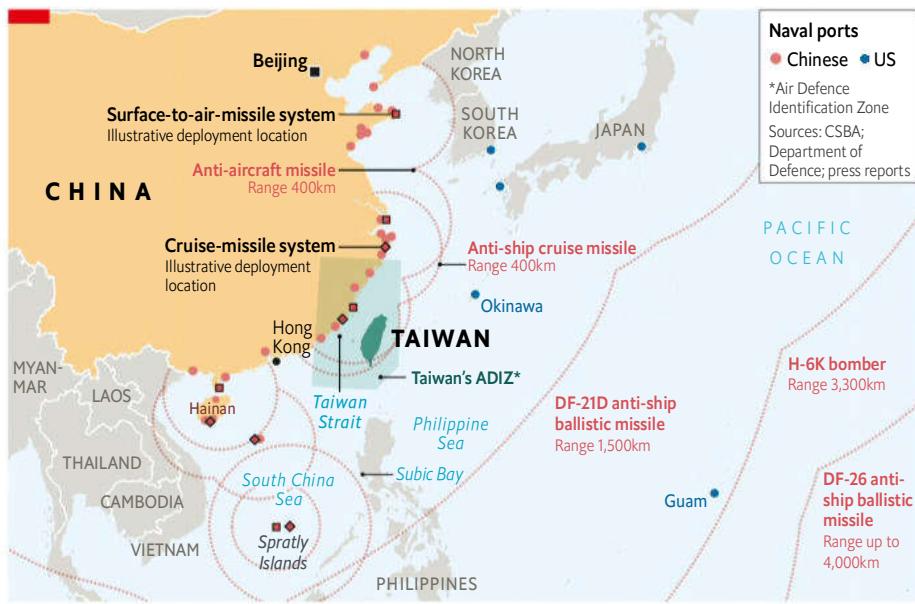
The head of Indo-Pacific Command, Admiral Phil Davidson, told a Senate hearing in March that China's fielding of new warships, planes and rockets, when considered alongside the regime's unblushing readiness to crush dissent from Hong Kong to Tibet, makes him worry that China is accelerating its apparent ambitions to supplant America and its allies from their position atop what he called the rules-based international order—a phrase that China sees as code for Western hegemony. Pondering the specific risks of a Chinese attack on Taiwan, the admiral told senators that “the threat is manifest during this decade, in fact in the next six years.”

Admiral John Aquilino, nominated to be Admiral Davidson's successor as head of Indo-Pacific Command, told a confirmation hearing in March that work to shore up America's ability to deter a Chinese attack on Taiwan is urgent. While he stopped short of endorsing his predecessor's timeline of six years, he called the prospect of a Chinese use of force “much closer to us than most think”. Anxiety has been raised further by war games involving Taiwan scenarios, both secret and unclassified, that were won by officers, spooks or scholars playing the role of China.

The admirals' worries mix judgments about China's capabilities with hunches about its intent. Bonnie Glaser of the Ger-



A man with a PLAN



man Marshall Fund, a public-policy outfit, notes that their mission is to make plans, in this case to win a war over Taiwan. Once they realise that victory may elude them, or may only be possible at great cost, panic is understandable. That does not mean they are correctly assessing China's incentives to act soon. Strikingly, some of the intelligence officers paid to analyse the world for admirals and generals are noticeably calmer. "The trends are not ideal from a Chinese perspective," says Mr Henley. "But are they intolerable? I just don't see them being in that grim a mindset."

When the battle's lost and won

A broader American angst is driven by the knowledge of what defeat would mean. Niall Ferguson, a historian, recently wrote that the fall of Taiwan to China would be seen around Asia as the end of American predominance and even as "America's Suez", a reference to the humbling of Britain when it overreached during the Suez crisis of 1956. Asked about this idea in early April Matt Pottinger, who was head of Asia policy in the Trump White House, agreed and added another reason for Asian allies to fear such a public loss of American credibility. When Britain stumbled at Suez, America had already taken its place as the leader of the Western world, Mr Pottinger told a Hoover Institution podcast. Today, he observed, "There's not another United States waiting in the wings."

For all its newfound strength China faces daunting odds. A full-scale amphibious invasion of Taiwan, a mountainous island that lies across at least 130km of water, would be the most ambitious such venture since the second world war. America has spent years nagging its Taiwanese allies to capitalise on their natural insular advantages, for instance by buying lots of naval mines, drones and coastal-defence cruise

missiles on mobile launchers to sink Chinese troop ships, rather than continuing to splurge on tanks and F-16 fighters. Randall Schriver, the assistant secretary of defence for Indo-Pacific Security Affairs in 2018-19, promoted efforts to help Taiwan disable Chinese radar and other sensors: "If we are able to just blind the PLA, that would be a huge contribution to the fight."

If a Chinese amphibious invasion of Taiwan were to fail, or military conflict to reach a stalemate, would it fight on? Outsiders offer no consensus. Mr Henley suggests that a failed invasion might evolve into a long-term blockade—a strategy to which Western defence planners are paying increasing attention. There is a much-heard view that once China starts fighting anything short of victory would mean regime-toppling humiliation. But Mr Schriver is sceptical. "This is part of Beijing's win-without-fighting strategy. To make everyone believe that they climb the escalation ladder all the way to nukes if they have to."

The risks and costs of war, even a successful one, bring home the point that capabilities in themselves are never the determining factor. Intentions matter too, and are far more opaque—especially when, as in China, they reside largely in the mind of one man. It is common to hear Western analysts state that Mr Xi has staked his legacy and legitimacy on Taiwan's return. Hard evidence for this alarming belief is in short supply. The most cited is that, in a new-year speech in 2019, he linked union with Taiwan to the ambition that he has placed at the core of his leadership, namely the "great rejuvenation of the Chinese nation". He also repeated what he had said to a Taiwanese envoy in 2013: that cross-strait differences should not be passed from generation to generation.

Having abolished the term limit on his role as president in 2018, 67-year-old Mr Xi

can hardly expect to be succeeded by another member of his generation. Following his own logic, it thus falls to him to make sure that the task is not passed on. In an October 2019 meeting in Beijing, Chinese scholars and military experts shared with Oriana Skylar Mastro of Stanford University their understanding that it is imperative for Taiwan to be recovered during Mr Xi's time as leader.

Though some semi-official Chinese commentators already say that they see no hope for unification without some use of violence, there is no agreement among foreign governments as to whether that is the settled view of China's rulers. China continues to try to shape Taiwanese opinion with a mix of sticks and carrots, which suggests that negotiation has not been abandoned. The biggest carrot, access to its vast markets, continues to be dangled in front of Taiwanese business interests. Ms Glaser notes that Mr Xi sounded a patient note in March when he visited Fujian, the coastal province nearest to Taiwan, urging officials to explore new paths of cross-strait integration and economic development.

To the sticking place

But China's carrots and sticks can clash. To punish the Taiwanese for electing a DPP government China has reduced official and semi-official cross-strait contacts to "nearly zero", says Andrew Nien-Dzu Yang, a former Taiwanese deputy defence minister, now at the Chinese Council of Advanced Policy Studies, a think-tank in Taipei. That raises the danger of misunderstandings.

So does China's increased military activity around the island. Psychological operations and "grey-zone" warfare have been intensifying. In 2020, according to Taiwan's government, Chinese warplanes made 380 sorties into Taiwan's Air Defence Identification Zone (ADIZ), a buffer zone of international airspace where foreign planes face questioning by controllers and potential interception by Taiwanese fighters. Such a tempo of operations has not been seen since 1996. On April 5th the Chinese navy promised patrols by its aircraft-carriers around Taiwan on a regular basis. On April 12th 25 Chinese planes entered the ADIZ, a record for a single day.

This may be a test of the new Biden administration, says a senior Taiwanese diplomat, or a bid to create a "new normal" in which Chinese forces are routinely present in a zone formerly controlled by Taiwan. China knows that Taiwan will not fire first, so "the Chinese will continue to push," the diplomat says. The constant incursions wear down Taiwanese defences, raise the chances of accidental collisions and would make it harder to spot a rush to real war. Beyond the constant drumbeat of military pressure, China is "trying to divide society, trying to sow the seeds of chaos," says the ➤

diplomat. "They also conduct cyber-activities and disinformation campaigns."

Wang Zaixi, a former deputy head of the Association for Relations Across the Taiwan Straits, a semi-official Chinese body, advocates a "third way" between all-out war and political negotiations, one in which a massive display of firepower cows Taiwan into submission. In Chinese media interviews he has cited the (not wholly reassuring) precedent of Red Army troops surrounding Beijing in 1949 in such intimidating numbers that the city fell with rather few casualties, an approach he calls "using war to force peace".

In some polls less than half of Taiwanese say they would fight in a war with China, or want relatives to do so (compulsory military service was sharply reduced in 2013, by a government keen on closer ties with China). If the island loses more than half of its defences in the first waves of an attack, the public's will to fight might collapse, frets Mr Yang. A swift collapse would make America's position yet harder. If American reinforcements arrive to find China's troops already on the island, asks Ms Skylar Mastro, can they start firing if no Chinese unit has shot at Americans? "I think that would be a very hard call for a us president to make."

If the Taiwanese appetite for a fight is unclear, so too is America's. Taiwan's government is painfully aware that preserving their friendly, successful democracy is not in itself a vital national interest for anyone else. Instead, Taiwanese officials stress the extraordinary importance of the island's semiconductor industry to global supply chains (see Business section). They also emphasise how grim and frightening the Asia-Pacific would feel if America ever broke its commitments and ducked a fight with China. Japan's prime minister, Suga Yoshihide, recently went further than any recent predecessor, when he mentioned

the importance of stability in the Taiwan Strait in a joint statement with Mr Biden. Japan fears Taiwan becoming a Chinese bastion just to its south, explains Michishita Narushige of the National Graduate Institute for Policy Studies in Tokyo. But it also has much to lose if America is chased out of the Pacific: "If the fall of Taiwan means the disengagement of the us from this region, that would be a vital interest."

Some in America want to make clear that maintaining its Asian role is central to America's interests, too. Senator Chris Coons of Delaware, a Democrat close to Mr Biden, is co-sponsor of the Strategic Competition Act, a bill with strong bipartisan support that would deepen ties with Taiwan—whether by offering the island trade deals, weapons sales, expanded contacts with American officials or support in its attempts to take part in international forums—as one of several measures to push back against what he calls China's growing global aggression. To explain the island's importance to voters he talks of how dependent modern life is on the chips it makes. He also cites the importance of America being seen to keep its word and linking arms with allies to counter China, rather than trying to lead the world through "bluster".

The seeds of time

It may sound a bit narcissistic for Americans to assume that China's plans for Taiwan turn on how strong America looks to China. But Chinese experts and officials are sincerely convinced that America is delighted to be Taiwan's security guarantor and thus gain a chance to meddle in China's internal affairs. Without America to help, Taiwan will surrender in an instant, they argue, rather as Mr Yang fears. Their disdain for the idea that China might try to win over Taiwanese hearts and minds can be chilling. Unification will not be decided

by Taiwan's "playhouse politics" but by geopolitical power struggles, Zhu Feng of Nanjing University told an annual forum run by the *Global Times*, a jingoistic party newspaper.

Ni Lexiong, a Taiwan expert at Shanghai University of Political Science and Law, says that bellicose commentaries in the state media must, in some limited sense, enjoy official sanction. Such commentators "would be too scared to write about such things without approval", he says. But he scoffs at Westerners who worry that Chinese leaders may feel compelled by the nationalism which such screeds stoke in the public. The views of the masses will not decide what happens, he says: "The key is military power."

There is much to be said for America's decades-long policy of strategic ambiguity. Though some American scholars believe it would usefully deter China to hear the Biden administration say it would join any war over Taiwan, it could also provoke China to rash acts or embolden some future leader on Taiwan to declare independence. Logic also supports the Pentagon's desire to spend the next ten years arming Taiwan, buying new weapons and thus increasing the uncertainty of Chinese commanders and their political masters.

The challenge of such an approach is to generate enough anxiety to stay China's hand, but not so much that Mr Xi sees Taiwan slipping permanently from his grasp. For all the alarm in Washington, China does not feel like a country on a war footing, or particularly close to one. Several sources briefed on a recent meeting in Alaska between China's top foreign-policy officials, Yang Jiechi and Wang Yi, and the secretary of state, Antony Blinken, and national security adviser, Jake Sullivan, report that the Chinese delivered shrill and inflexible talking points on Taiwan, but used no new language that showed unprecedented urgency.

China's public stance involves much sabre-rattling, to be sure. Viewers of state television are never far from their next sight of an aircraft-carrier, or gleaming jets screaming through azure skies. But calls for sacrifice to prepare the public for full-on hostilities are missing. The party's claims to legitimacy in this, its centenary year, are overwhelmingly domestic and based on order and material prosperity: they are buttressed by images of gorge-spanning bridges and high-speed trains, villagers raised from poverty and heroic doctors beating back covid-19 even as it rages around the outside world.

Nevertheless, China's visible capabilities and veiled intent are grounds for alarm. Its scorn for Western opinion, as over Hong Kong, is a bad sign. War over Taiwan may not appear imminent in Beijing. But nor, shockingly, is it unthinkable. ■



The fangs of history

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Upcoming elections

It's all happening in Hartlepool

HARTLEPOOL

Brexit is done, covid is jabbed, and the pubs are open. Sleaze is not an issue

THEY'VE BEEN more or less locked up for nearly six months, so they're just going daft," says Tim Fleming, 68, the landlord of The Cosmopolitan, up on the headland overlooking the North Sea. The beer garden has been busy since England's lockdown was relaxed on April 12th to a spell of fine weather, and weekday takings look more like those of a weekend.

Mr Fleming used to be a town councillor for the UK Independence Party, and in recent years has sat with a small independent group. On May 6th Hartlepool will hold a by-election for a new MP, and he plans to vote Conservative for the first time in his life. "The vaccine was a master-stroke. It's pulling us out, when the rest of Europe is still in the mire."

It will be an unusually busy polling day, as last year's scheduled elections were postponed because of covid-19. Depending on where they live, Britons may vote for new councillors, a regional mayor, and a police and crime commissioner. Scotland and Wales will elect new devolved parliaments. For the Tories, Hartlepool is the most glittering prize, and perhaps the

hardest. "I'd be astonished if Labour don't win it," says Robert Hayward, a Tory peer and psephologist, who notes that governments rarely gain seats in by-elections.

There are plenty of reasons for voters to shun the Conservatives and elect a Labour MP, as the town has at every election since 1964. The covid-19 pandemic has killed 127,000 Britons, including 252 in Hartlepool, a town with a population of 94,000 which has high levels of obesity and lung disease. It has created the deepest downturn for 300 years. Mr Johnson, in an ugly feud with Dominic Cummings, his former aide, is accused of saying he was prepared to "let the bodies pile high" to avoid a lockdown, and of a secret deal with party donors to refurbish his flat to the tastes of Carrie Symonds, his girlfriend.

In the 2019 general election Mr Johnson flipped around four dozen Leave-leaning seats in northern England, the Midlands and Wales, including Hartlepool's near-neighbours of Redcar, Darlington and Sedgefield. More lie still in Labour's hands, on shrunken majorities. The Conservative vote is spread thinly too, so a small shift in

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the polls in the next election could produce big gains or losses.

Hartlepool will offer a clue as to whether Mr Johnson's revolution has stalled, or still has further to run. For 12 years the town was represented by Peter Mandelson, an architect of New Labour. Its loss would mean more than half the constituencies represented by members of Tony Blair's cabinet of 1998 are now in opposition hands. Sir Keir Starmer's leadership of the Labour Party would be thrown into crisis; supporters of Jeremy Corbyn, his predecessor, itch to declare him a failure.

Tory campaigners think the result will be close, although it's hard to judge the terrain precisely, as lockdowns have prevented parties everywhere from canvassing their voters for the past year. Brexit remains an asset. Hartlepool voted 70% in favour of leaving the EU, and in 2019 Nigel Farage's Brexit Party secured 10,603 votes—three times Labour's lead over the Tories. The question is whether those voters will turn up again; if they do, polls suggest they will mostly go to the Conservatives. Tory leaflets warn that Paul Williams—the Labour candidate, a family doctor and a former MP for a nearby seat—worked against Brexit, and cannot be trusted.

Europe carries risks for Mr Johnson nationally. If he talks too little about it, the Tories' new Brexiteer voters may drift away. If he bangs on too much, those who simply wanted the divorce "done" after years of discord become aggrieved. The Tories risk re-enacting Leonid Brezhnev's Red ➤

► Square parades, imploring exhausted workers to defend the October revolution long after the last tsarist is dead. For now, Mr Johnson is getting the balance right: polls suggest he has largely held on to his Brexiteers, while winning over a handful of Remainers. "He's in the sweet spot," says Chris Curtis of Opinium, a pollster. Voters' identities as members of Brexit tribes have markedly softened since the political convulsions of 2019, but they are still stronger than party allegiances. Only one in ten think Britain's relationship with Europe is now fully settled.

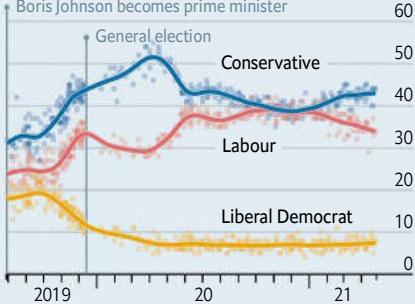
Mr Johnson has managed to persuade the public that, although the Conservative Party has been power for 11 years, under three prime ministers, he leads an energetic new administration. That feat eluded Sir John Major and Gordon Brown after similar tenures. In Hartlepool, the Tories cast themselves as insurgents taking on a neglectful Labour establishment. Money helps. Locals rave about Ben Houchen, the Tory mayor of Tees Valley, whom they credit with bringing jobs to the port to the south of the constituency.

Mr Johnson's "levelling up" agenda shows little by way of methodology, beyond pushing cash to his new seats. Tory leaflets say Jill Mortimer, their candidate, is the best person to negotiate with ministers for investment, and Mr Fleming has taken the hint. "If there's a Conservative government, and a Conservative mayor, we're not going to get any money if we've got a Labour MP," he says. Dr Williams, who has promised to reopen a closed criminal court, says his challenge is convincing voters that blame for cuts to local services lies with the government, and not Labour, which has controlled the council on and off since the 1970s.

Labour hopes sleaze and infighting ages Mr Johnson as it did Sir John. Certainly polls suggest that voters think him more corrupt than Sir Keir. But drinkers at The Cosmopolitan are unmoved, and think Mr Johnson a character, and more reliable than "bitchy" Mr Cummings.

Tories soaring

Britain, voting intention, %



Sources: BMG; Deltapoll; Ipsos MORI; Kantar; NCP; Opinium; Redfield and Wilton; Savanta ComRes; Survation; YouGov

Mr Johnson's most remarkable feat is emerging from a pandemic, in mid-term, with his polling in the low 40s—a little shy of where it stood at the general election. He is enjoying a long and deep bounce from the vaccine, says Lord Hayward: 72% of voters, and 82% of Brexiteers, approve of the government's handling of the programme. Dr Williams says credit belongs to the NHS, and finds the government's plaudits a little galling after so many mistakes. "I had to make my own PPE," he says.

Ms Symonds isn't the only one picking out curtains. "Consumers are champing at the bit to spend," says Oxford Economics, a consultancy. Clothes sales have jumped. The consensus forecast is that the economy will grow by 5.7% in 2021, the fastest annual pace in decades. Hartlepool's decayed high street is mostly shuttered, but the big retail park is busy, and there's a stream of Deliveroo drivers at McDonald's. Mr Johnson has been predictably ill-suited to a crisis, but as a good-times prime minister, who splashes a little cash and opens the pubs, he excels. "He's a positive guy trying to get things done," says Mr Fleming. "You don't get any positive vibes off Starmo. It's like he's fighting for his life." ■

Sewage

Pond dipping

BANGOR

Sewage offers a quick and cheap way to map a nation's infections

THE SOUND is that of an Alpine stream. The smell is not. On a bright spring day, Davey Jones, professor of environmental science at Bangor University, stands above a surging torrent of sewage. He holds a bucket on a stick which he lowers into the torrent then, as rich gusts of smell drift past, gingerly lifts it out. He holds the bucket up to the light and examines his catch, as a child might when pond-dipping. "Some identifiable bits of object in there." He peers closer. "Looks like some sweetcorn floating around."

Civilisation, it has been said, is the distance humanity has placed between itself and its faeces. But civilisation now needs to get a lot closer to its faeces. Because as well as sweetcorn, sewage also contains coronavirus. In every litre of wastewater that flows through Britain there are currently around 1,000 coronavirus particles. At the peak of the January wave, each litre contained between 100,000 and 10m. Take data like these, plot them on a map, and you have a snapshot of a nation's infection.

Sewage mapping—or to give it its grand name, "wastewater analysis"—is now hap-



A rich resource

pening on a large scale in Britain. When the pandemic began, it was not clear whether coronavirus particles would either be shed in faeces or survive in sewage. It was therefore not clear whether it could be mapped in this way. A preliminary trial begun in March 2020 at six wastewater treatment plants in Wales and north-west England showed that it was frequently shed—and that it could be mapped. (Similar trials on sewage have taken place across the world, and routine wastewater analysis is now being carried out in a few countries.) Now over 4,000 samples are processed each week in Britain.

Testing sewage has many advantages. For one thing, it is easier to handle than people, who require expensive testing centres, staff to perform the tests and the inclination to turn up for them. Stools are much less demanding: to get a sample from a sewer you merely need a bucket and a stick. It is cheap, quick—and pleasingly inclusive. Not everyone will go to a testing centre. Everyone goes to the toilet.

Wastewater analysis could, says Sally Davies, UK Special Envoy on Antimicrobial Resistance and an advocate of the art, "be game-changing". It has already changed things. If you know where to look, then every day across Britain you can spot people with buckets on sticks and a purposeful air, pond-dipping in the nation's excreta. In Nottingham and in Newcastle, in Liverpool and in Manchester, scores of manhole covers are being lifted; hundreds of buckets dipped; thousands of samples removed. (More expensive automatic samplers are also widely used.)

These samples, their colour ranging from a discreet eau de Nil to rat's-back dark, are then bottled. The colour depends on many factors, from contamination with industrial effluent, to rain (which dilutes samples), to the time of day. Samples taken at lunch—which reflect the post-breakfast rush filtering through the system—are ►

► some of the richest. All samples are analysed in labs, including one which Dr Jones runs in Bangor, to produce a map of the nation's infection. If a surge in infection is spotted, surge testing can then be conducted in the area. Wastewater analysis is not sufficient in itself. But it is, says Dr Davies, "a cheap way of raising a flag and saying 'There might be something going on here, let's have a look."

Tracing diseases along water systems is not new. Epidemiology was spawned in the sewer when in 1854 John Snow, a London doctor, plotted cholera cases on a map and realised that the disease was being caused not by airborne "miasma" but by a water pump contaminated with sewage. Nor will it end with this pandemic: before 2020 wastewater analysis was already being used to monitor illegal drugs and polio. Now, it is hoped it will expand to include not just coronavirus but everything from the next potential pandemic to antimicrobial resistance.

Given how long the power of sewage has been understood, it feels surprising that this rich data-stream was, until recently, merely being flushed down the toilet. Partly the problem was size. Dr Snow was counting corpses, which are at least easy to spot. Modern analysts are counting coronavirus particles, which are tiny: it would require at least 2,500 coronaviruses to span the full stop printed at the end of this sentence. The other problem is inertia. The knowledge to run a national programme of analysis might have been there before, but the money to roll such things out can rarely be found. "Until," says Dr Jones, "literally the shit hits the fan." ■

Scotland

Peely-wally

DUMBARTON

Enthusiasm for the SNP does not reflect its performance in government

IN THE BRIGHT afternoon sun, local residents trickle out of Dumbarton's Concord Centre. The ramshackle exterior belies a smooth operation inside. Each has received a second covid-19 jab (or "jag" as it is known locally). Who deserves the credit?

In truth, the government in London, but that is not how many locals see it. As Billy, a just-vaccinated pensioner, puts it, referring to Scotland's first minister: "Nicola Sturgeon has done a fantastic job." Ipsos MORI, a pollster, finds that while 27% of Scots think Westminster has managed the pandemic well, 64% think the Scottish government has. Rare dissent comes from a man angry that his pub remains closed.



Sturgeon gets some love in Dumbarton

Still, he says from behind a saltire face mask, he will vote for the Scottish National Party (SNP) in elections on May 6th.

The SNP has long married the fight for independence with the promise of effective, social-democratic government. Dumbarton, the country's most marginal constituency, could tip the balance between success (the most seats in the Scottish Parliament) and triumph (a majority). Either way, the party will head an administration responsible for public services, and with sway over taxation, as it has for the past 14 years. It is a perch from which to sketch a vision of an independent Scotland—or as Ms Sturgeon, Scotland's first minister, has put it, invoking Alasdair Gray, a local writer, "to work as if we are indeed living in the early days of a better nation."

Part of this is about exhibiting the sort of good governance not always found in Westminster, as when the SNP tweaked universal credit to ease its introduction in Scotland. Yet the party hopes to offer more than mere competence. The idea, Ms Sturgeon has said, is of a Scotland "where we look out for one another in a spirit of solidarity" (the unspoken contrast is with a more red-in-tooth-and-claw England). One way the SNP has done this is by making tax and benefits a bit more progressive. Its trademark, though, is the provision of universal services. The Barnett formula distributes funding to Scotland's advantage, allowing Ms Sturgeon's government to spend £7,612 (\$10,579) per person each year. That is 27% more than in England—enough for free university, adult personal care, prescriptions and, soon, primary school meals and dentistry.

Such universalism is popular on the doorstep, says Toni Giugliano, the SNP's candidate in Dumbarton. "People who have made Scotland their home from south of the border...are more likely to say to me, 'Gosh, we don't have to pay £9,000 for tuition fees. We don't have to pay £10 for pre-

scriptions,'" he reports. The downside of putting the universalist principle into practice is that the state ends up spending a lot of money on rich Scots.

The SNP hints at radicalism after independence. Its manifesto supports a universal basic income and commits to study a four-day week. But when it comes to things in the party's gift, it is less willing to sweep away the old order. Over the past decade, spending on most public services has risen relative to England. This generosity has, though, been funded by slower growth in spending on the health service, rather than taxation. The Institute for Fiscal Studies, a think-tank, finds tweaks to income tax will raise just £117m more in 2020-21, equivalent to 1% of the additional covid-19 funding Holyrood received.

Higher funding means there are more teachers and doctors north of the border, but self-government has not led to great improvements in standards. Before the last election, Ms Sturgeon asked to be judged on whether she had improved schools. She promised legislation to transfer power from local councils to head teachers—only to shelve it in the face of opposition. She has pulled Scotland out of two big international tests, citing "teacher workload". Having dropped considerably, performance in PISA tests, in which it remains, shows little sign of improvement.

On waiting times, NHS Scotland performs a bit better than England's version. But patient satisfaction is similar, health outcomes are worse and the government has been slow to respond to a drug-death rate higher than anywhere in Europe, and even than America's. Throughout the pandemic, Ms Sturgeon has sought to draw attention to differences between London and Edinburgh when, for instance, keeping restaurants closed for longer in the summer. Polling shows this has worked for her. On the big calls, though, such as when to lock down, the two administrations took similar decisions. Scotland's death rates are lower than England's, but higher than Northern Ireland's. SNP politicians criticised Westminster's decision to skip the EU's vaccine-procurement scheme.

In another age, the SNP might suffer from what Jane Green and Will Jennings, two political scientists, call "the costs of government"—the gap between campaign promises and perceptions of achievements—but there is little sign of that now. In Dumbarton Jackie Baillie, Labour's MSP, says that it is hard to draw voters' attention to the state of public services. One reason is covid-19. "Anything that happened before March...is being scrubbed out of the reckoning," suspects Sir John Curtice of the University of Strathclyde. The other is independence. When elections become referendums on the future of a country, voters do not pay attention to much else. ■

Scotland and England

Bordering on nervous

COLDSTREAM

Scots living near England worry about the prospect of independence

ON THE BANKS of the River Tweed, the English hamlet of Wark and the Scottish village of Coldstream used to play football each year for control of a two-acre field, according to medieval rules which placed no limit on the number of players. Coldstream grew and gained the upper hand. The victory is etched on Ordnance Survey maps: a part of Scotland that would otherwise belong to England. The border is a wooden fence swallowed by grass.

Even along the stretches decided by more conventional means, the border is similarly invisible. But if the Scottish National Party wins a big majority in elections to the Scottish Parliament on May 6th, it may become the most prominent question in British politics, for Nicola Sturgeon, Scotland's first minister and the SNP's leader, will seek a second Scottish independence referendum.

Unlike many of their fellow countrymen, voters in the borders are likely to back the Conservatives next week. The region leaned more heavily against independence than the rest of the country in the first referendum in 2014. At the last election in 2016, the Tories won all three Scottish Parliament seats abutting England, and they seem on track to hold them, forming a fat collar of blue across the bottom of a mostly yellow electoral map.

To avoid passport checks after Scottish independence, the SNP aims to join the Common Travel Area, an agreement between Britain and Ireland that allows citizens to travel freely in each other's countries. But if Scotland rejoined the EU, it would have to impose controls on English goods entering Scotland. Lorry parks and inspection sheds would have to be set up on at least some of the 25 road crossings on the 96-mile border, cutting through a region with a shared history and a distinctive identity that spans the border.

The quickest route between Scottish villages is often via England. There is no clear geological or geographical division between the two countries: Berwick-upon-Tweed has changed hands at least 13 times, and both sides launched border raids. Many border Scots reckon they are ignored by both governments, which impose unpopular projects on the region: nuclear plants, reservoirs and mass forestry. "They really will feel that they're at the very end of the world if a hard border emerges," says Rory Stewart, a former Tory MP for Penrith and



the Border, on the English side.

The economy of southern Scotland is built on the assumption of easy access to England. Businesses draw on suppliers, stock stores and serve customers sprawled

across the border. "Since the troubles were quelled in the 1700s we've all been bouncing back and forth perfectly happily, marrying, doing business and going on holidays without any impediment whatsoever," says John Fordyce, a distiller in the town of Hawick, 12 miles into Scotland. England is 60% of Scotland's export market, and the EU is 19%.

Some of those who live near the border are unfazed by the idea of restrictions on trade with England, but the uncertainty weighs on others. Sheila Robertson, financial director of Stewart Technology, an electronics firm, says her company hopes to build a second factory but is awaiting the outcome of the election. Andrew McEwan, who runs a digital marketing business near Kelso, points to the potentially infinite nature of separatism. "If Scotland voted for independence, surely we should have a vote on whether the borders could leave Scotland." ■

Northern Ireland

Foster falls

BELFAST

The Irish Sea border has claimed its first victim

IN 1979 EIGHT-YEAR-OLD Arlene Foster was in the kitchen while her father, a reservist in the Royal Ulster Constabulary, was outside shutting his animals in for the night. She later recalled hearing gun shots: "I didn't know what they were until my father came in on all fours crawling, with blood coming from his head." Her father survived, but the family had to leave their home.

That was the political world in which Mrs Foster, who has been leader of the Democratic Unionist Party (DUP) for five years, was raised. It is less violent now, but still pretty brutal. On April 28th, after four-fifths of Mrs Foster's colleagues in the Stormont assembly signed a letter of no confidence in her leadership, she said she would step down as DUP leader and first minister.

Mrs Foster's star has fallen a long way since 2017, when despite holding just 1.5% of seats in the House of Commons, she kept Theresa May, and then Boris Johnson, in power. Mr Johnson then betrayed her, imposing a border in the Irish Sea, which has divided the United Kingdom, as part of his Brexit deal.

That calamity for unionism is key to the dismay at Mrs Foster's leadership. But in truth her position has for four years been far weaker than her influence in Westminster implied. She has been vulnerable ever since the exposure of her role in the "cash for ash" scandal—a botched £1.2bn (\$1.7bn) green energy

scheme—four years ago.

Mrs Foster has no clear successor as DUP leader. Sir Jeffrey Donaldson, the party's leader in Westminster, would represent a more polished continuity candidate, while Gavin Robinson, the 36-year-old MP for East Belfast, would be more liberal. But neither can be first minister because they are not in Stormont. Some in the party are considering a split leadership between Stormont and Westminster.

Edwin Poots, a veteran DUP minister, is favourite to become first minister. He is steeped in the party: his father was a hardline associate of Ian Paisley even before the Protestant cleric founded it 50 years ago. Mr Poots is a creationist, who has said he believes the Earth is about 6,000 years old. In 2011, when he was health minister, he refused to follow the rest of the UK in relaxing the ban on allowing gay men to donate blood. But he can be pragmatic and has worked quietly behind the scenes with Sinn Fein. That relationship will be crucial if the 1998 Good Friday Agreement which brought peace to the province is to survive.

Dealing with the consequences of the Irish Sea border will be the big challenge facing whoever takes over from Mrs Foster. "It isn't going to go next year," says a DUP assembly member. "This will define politics here for a generation but the current leadership hasn't been able to look even two days in front."

Salmon and Brexit

Fishy statistics

Norway shows the scale of salmon farmers' Brexit problems

BRITAIN'S SALMON farmers are not having a good year. Pandemic-related restaurant closures have hit the industry hard. Salmon is a fancy dish, the kind of food people often order when dining out rather than cook at home.

Then came Brexit. As recently as December Scottish-farmed fish could move seamlessly to plates the length and breadth of the European Union (EU) but now they are subject to sanitary and phytosanitary (SPS) checks at the border to ensure they meet EU standards. In January British salmon exports to the EU fell to just £0.5m (\$0.7m), a 98% drop from January 2020. Figures published on April 26th showed that February brought some relief, with the value of salmon exports recovering to £25.6m, but they were still down by more than 10% on the year before.

Disentangling the effects of the pandemic and Brexit is far from straightforward, but a clue lies across the North Sea. Norway is not a member of the EU but is inside the European Customs Union, and its salmon are not subject to SPS checks. The Norwegians take their salmon exports seriously, publishing weekly export data. When the value of British exports fell by 98% in January, Norway's were down by just 23%. In February the value of Norwegian exports fell by just 5% year on year, half the drop experienced in Britain.

January's catastrophic fall in salmon exports reflected the difficulties of moving from a seamless border to a much knottier one. Customs officials and hauliers strug-

gled to get to grips with new procedures and untested IT systems took time to bed down. Exporters complain that different EU states are applying the rules with varying degrees of stringency, further complicating the task of complying. Those teething problems have begun to ease but there is still structural friction. The new checks add cost and bureaucracy, discouraging customers from buying produce they can get elsewhere.

That helps explain the contrasting fortunes of salmon and whisky. Britain's whisky exports to the EU rose by 9.3% year on year in February. Scottish distilleries have much stronger brands than Scottish fish farms and a product that rises in value with age is less vulnerable to short delays than one that must be fresh out of the sea. Norwegian salmon is a perfectly good substitute for the Scottish variety; Scandinavian whisky, less so. ■

City jobs

Remainders

Very few jobs have left the City as a result of Brexit

SPEAKING TO THE Treasury select committee in January 2017, Xavier Rolet, then chief executive of the London Stock Exchange, warned that a sufficiently deep divorce could cost Britain 232,000 financial services jobs. Such gloom was common, as was the expectation that Britain's loss would be others' gain. Frankfurt and Paris got ready to welcome hordes of bankers ejected from London.

Four years on, the version of Brexit for which the government opted has been harder than that in most City bosses' nightmares. An industry that contributes 7% of Britain's GDP and 11% of its taxes was excluded from the trade deal signed with the EU. Almost immediately, Amsterdam's stock exchanges unseated London's as the primary venues for European share trading. Over the course of January, London's derivative-trading platforms lost three-quarters of their euro volumes to Amsterdam and New York. In the ensuing months, hopes that the EU would grant Britain "equivalence" status for various financial activities faded. British firms are left with two financial functions—settlement and clearing—that they can perform for EU clients, out of around 40. And these exemptions are temporary, expiring in June 2021 and June 2022 respectively.

So far, however, the jobs exodus has been tiny. According to EY, a professional-services firm, financial-services compa-

nies have moved 7,600 roles from Britain to the EU since 2016. New Financial, a think-tank, puts the figure at 7,400. EY looked at 222 firms, New Financial 441. That compares with the 190,000 financial-services jobs in the City, and the 67,000 in Canary Wharf, and 1.1m in the sector as a whole. Why have so few gone?

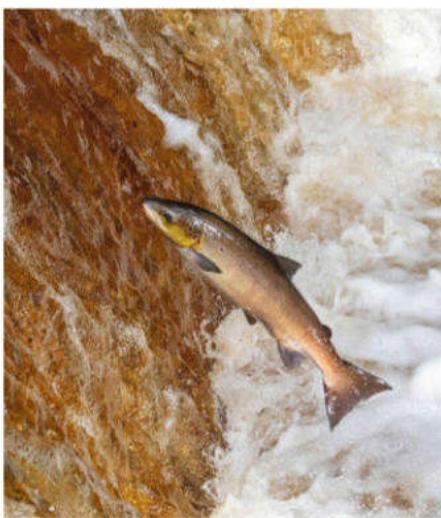
Start with what the changes to Europe's financial plumbing actually involve. The movement of share-dealing venues evokes an image of open-outcry traders vacating City exchange halls en masse and heading for the Netherlands. In reality, London's exchanges and Amsterdam's bourses have long been online platforms. The computer mainframes hosting transactions may now be outside Utrecht rather than in the Home Counties, but traders tapping at keyboards do not need to move.

Meanwhile, banks are mostly moving as few jobs as they can to satisfy regulators. That includes some senior staff, salespeople, traders, risk managers and compliance. But of the ten banks asked by *The Economist* about their plans, none said they intended to shift people in numbers greater than the low hundreds. JP Morgan, whose parent company's chief executive warned in 2016 that Brexit could cause the bank to cut 4,000 of its British jobs, will have moved fewer than 400 by the end of 2021. Morgan Stanley, which spent the aftermath of the referendum denying reports that it had started moving 2,000 staff to Dublin and Frankfurt, has moved 150.

In the run-up to Brexit, both Paris and Frankfurt made a play for London's business, but they do not have its attractions as a place to live. In a survey by the Boston Consulting Group and The Network, a group of online recruiters, published in March, respondents from 190 countries named London as the place they were keenest to move to. Convincing lots of well-heeled bankers to abandon the city's cultural life—and, more important, posh schools—turns out to be a difficult task.

The competition also lacks critical mass. The north of England exports more financial services than France does, while Frankfurt's whole financial sector employs fewer workers than London's fintech companies. And while the French and German governments are keen to attract business, the EU's more modest aim is to reduce its reliance on Britain, and to deepen its own "capital-markets union". As a result, firms are sceptical that the bloc will be a driver of future growth.

That is not to say that it will be plain sailing for the City. A spat over clearing is likely when its temporary-equivalence designation expires next year. A question-mark also hovers over British asset managers' permission to oversee EU-domiciled investment funds. But waves of job losses are not yet on the horizon. ■



Struggling to get to Europe

Bagehot | Domestic politics

The best way to avoid Downing Street sleaze may be to pamper the prime minister a bit more



SENSIBLE COUNTRIES recognise that a leader's time is a precious national resource. American presidents have everything laid on: expansive living quarters, Air Force One, a personal doctor, cooks galore, along with a theme-park's-worth of entertainment, including a swimming pool, a tennis court, a bowling alley and a cinema. French presidents have the Elysée Palace, an ample domestic staff, a personal doctor and chef—and, back in François Mitterrand's time, a conveniently located flat paid for out of the public purse to house the presidential mistress and love-child.

Britain is equally sensible when it comes to the prime minister's public role: from the moment he wakes up he is surrounded by officials to help him conduct the business of state. But when it comes to his private life the taps are turned off. The accommodation is cramped. The domestic staff consists of not much more than a cleaner. The most powerful person in the country has to queue up for lunch in a tiny cafeteria or else go upstairs to make a sandwich in his kitchen. After a day running the country he closes the door of his flat only to be faced with all the domestic duties—laundry, cooking and personal admin—that fall to those unburdened with the cares of state.

Should the prime minister wish to lighten his domestic load, he must do so at his own expense, which is particularly hard on the current occupant of Downing Street. Not only has he had more to deal with of late than most—the split with his wife, a new baby with his girlfriend, his near-death from covid and a long convalescence alone in his flat—but he is also probably less flush than most. He has had to finance an expensive divorce (his second) and six children (probably) on the relatively modest prime ministerial salary of £160,000 (\$220,000), while having lost his sizeable income as a writer and speaker.

Britain's wariness about spending money on the prime minister's personal needs stems from an admirable instinct: that politicians should be treated as normal citizens rather than as a privileged caste. The country is right to rejoice in the fact that Mr Johnson was treated for covid-19 in a National Health Service hospital rather than in the presidential suite of a military hospital, as Donald Trump was. Wariness also stems from the reasonable belief that frugality should start from the top. William Gladstone, Brit-

ain's greatest liberal prime minister, prided himself on "saving cheese parings and candle wax in the cause of the country". British prime ministers have no need to embody the majesty of state: that's the queen's job.

Whether the prime minister really needed to spend £58,000 on redecorating his Downing Street flat is doubtful. He is entitled to an annual allowance of £30,000 for refurbishment, but the work was carried out by Lulu Lytle, one of Britain's most fashionable designers. (The previous decor is said to have smacked of John Lewis, a department store popular with the British middle classes but not, apparently, with the prime minister's household.) How closely he was involved in browsing the rich colours and Moghul-inspired fabrics in which Ms Lytle specialises has not been revealed; though since he does not have the look of a man who spends a lot of time thinking about sofas and side-lamps, his girlfriend, Carrie Symonds, is assumed to have taken charge.

The prime minister seems to have managed the financing of the redecorations with his usual cavalier shiftiness. They were paid for last year by the Conservative Party, which had been given money for the purpose by a donor, Lord Brownlow. There was talk of setting up a trust for the purpose, but Simon Case, the cabinet secretary, told Parliament that "a charitable trust can't cover private areas of Downing Street". Mr Johnson is now said to have paid for the work himself. Mr Case is reviewing the matter, and the Electoral Commission conducting an investigation, which could end up with a criminal prosecution.

Mr Johnson has already wasted a lot of his valuable time dreaming up financial schemes to pay for a redecoration which, by the standards of most leaders' makeovers, is rather modest. When Barack Obama and Donald Trump were in office \$1.5m and \$1.75m, respectively, was splashed out on the White House. He is now going to be wasting even more time answering questions about these schemes. Given the importance of keeping the prime minister's attention on the job in hand—which, as anybody who has ever worked with him will attest, is a challenge at the best of times—none of this is doing the country much good.

Game of sofas

Britain's prejudice against looking after its leaders properly also has a dark side, for it is of a piece with the enjoyment the nation derives from pillorying those with the temerity to succeed. There are times when the British public bears a worrying resemblance to the citizens of Westeros, who pelt their queen, Cersei Lannister, with excrement when she is forced to walk the streets of the town naked. This is hardly a recipe for encouraging the nation's best people to go into politics, let alone for allowing them to focus on the business of statecraft.

Britain's system of government has become increasingly presidential: exhaust or distract the prime minister and the whole thing freezes. But it still bears the imprint of the old days when the prime minister was no more than *primus inter pares* and work ceased when he closed the door of his flat at night. The country needs to pay less attention to the arcane details of Mr Johnson's furnishings and more to the challenge of modernising the system that supports him: to create a blind trust to look after Downing Street, to staff his residence so that he can focus on the state of the nation rather than that of his shirts, and to raise his salary so that he does not need to worry about money. All this would provoke jeers and fury, but the country will benefit if it does a better job of looking after the man who is supposed to look after it. ■



Turkey and Armenia

Caucasian knot

BAKU, ISTANBUL AND YEREVAN

The genocide a century ago is just one reason the two countries cannot reconcile

BOTH PAST and present haunt relations between Turkey and Armenia. A century ago, Ottoman troops carried out a genocide of Armenians. A few months ago, Turkey helped Azerbaijan defeat Armenia in a war. For decades, the border between Turkey and Armenia has been closed.

Yet in December Turkey's president, Recep Tayyip Erdogan, held out hope of "a new era" in Turkish-Armenian relations. The unlikely setting was a military parade in Azerbaijan celebrating victory over Armenia. Using Turkish arms, Azeri forces had just recaptured parts of Nagorno-Karabakh, an enclave populated and controlled by ethnic Armenians, and some adjacent districts that had been occupied by Armenia for three decades. Army convoys rolled past Mr Erdogan and the Azeri president, Ilham Aliyev, displaying the wreckage of Armenian tanks, as well as the Turkish drones that had pounded them into the ground. Mr Erdogan hinted that Armenia might have learned a lesson from its defeat, and later suggested that Turkey could open its border with Armenia.

Nothing of the sort has happened. On the contrary, tempers flared again on April

24th, when President Joe Biden formally declared the killings and deportations of over a million Armenians by Ottoman forces in 1915-17 to have been a genocide. Most historians agree with Mr Biden, but previous American presidents have usually avoided saying so to avoid upsetting Turkey, which furiously denies that the killings were as widespread or systematic as the evidence suggests they were. Turkey's foreign ministry called Mr Biden's statement "a vulgar distortion of history".

Turkey's ties with America may not suffer much. With its shaky currency, Turkey cannot afford another crisis with its NATO ally. But Turkish officials suggest their country's offer of detente with Armenia may be a casualty. Ilnur Cevik, an adviser to Mr Erdogan, says the end of the Nagorno-

Karabakh war removed obstacles to reconciliation. (Turkey backed Azerbaijan's territorial claims, and now deems them more or less settled.) However, he says, "if Armenians continue to antagonise Turkey, forcing the Americans to recognise genocide, then this is not going to go anywhere."

Turkey closed its border with Armenia in 1993, out of solidarity with Azerbaijan. Reopening it would relieve tensions with Armenia "in a dramatic way", Nikol Pashinyan, Armenia's prime minister, told *The Economist* in March. Armenia, he also said, would be ready to establish relations with Turkey "without preconditions". Mr Pashinyan, who was pilloried for losing the war, resigned on April 25th in order to trigger early elections.

If there were a broad regional settlement, "everybody would win", says Ahmet Davutoglu, a Turkish former prime minister. Opening borders would help stabilise the entire Caucasus, offer Armenia, the region's poorest country, access to markets in Turkey and beyond, and connect Turkey to the energy-rich Caspian Sea and Central Asia. Mr Davutoglu, who now heads a small opposition party, was foreign minister when Turkey and Armenia came close to normalising diplomatic ties in 2009. The process foundered after a backlash from nationalists in both countries. Those in Turkey blocked any deal unless Armenia withdrew from Nagorno-Karabakh. Those in Armenia demanded that Turkey recognise the bloodshed of 1915 as genocide.

Western diplomats have long believed that a settlement between Turkey, a NATO ➤

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power, and Armenia would diminish Russia's influence in the Caucasus. Today the opposite may be true. Instead of pulling Armenia into the West's orbit, normalisation could draw Turkey deeper into Russia's. "Russia's plan is to have an open border between the Eurasian Economic Union and Turkey," says an Armenian ruling-party MP, referring to a Russian-led trade bloc Armenia joined a few years ago. Turkey itself, having learned to cut deals with the Kremlin, does not look keen nowadays to help Western interests in the Caucasus.

Russia may have as big a say in the conciliation process as Turkey and Armenia themselves. Russian troops have patrolled the Armenian side of the border with Turkey ever since the fall of the Soviet Union; Armenia would doubtless insist that they continue to do so. "Armenia is more locked in Russia's orbit than ever before," says Richard Giragosian, an analyst. "Normalisation with Turkey will only deepen this."

As good as it may look on paper, a regional settlement seems as elusive as ever. Some Armenian officials cautiously welcome the prospect of direct trade with Turkey. But much of the political class and society at large seem unready for any kind of engagement. Some also fear that detente with its powerful neighbour would force Armenia to relinquish its claims to Nagorno-Karabakh. In a country of barely 3m people, which remains shaken by the war, fear of Turkey is greater than in recent memory. "This was a war that was triggered by Turkey, instigated by Turkey and managed by Turkey," says an Armenian official. "There is no confidence."

Turkey and Azerbaijan have not exactly sounded reassuring. During that victory parade in Azerbaijan, Mr Erdogan praised Enver Pasha, one of the architects of the genocide. Mr Aliyev recently presided over the opening of a ghoulish "Spoils of War" theme park, featuring mannequins of wounded Armenian soldiers with hooked noses and grotesque faces, along with neatly arranged helmets of Armenians killed in the war. How to square such displays with Azerbaijan's offers of peace is a puzzle. What Mr Erdogan and Mr Aliyev are offering Armenia looks less like an olive branch than the short end of the stick. ■

Poland

The rule of Law and Justice

WARSAW

A divided opposition lets the governing party dominate

TWENTY YEARS ago, in January 2001, Donald Tusk co-founded the centrist Civic Platform party. It governed Poland reasonably well for eight years from 2007, with Mr Tusk as prime minister for seven of them. Its winning streak ended in 2015 with the victory of the populist Law and Justice party, which was also founded in 2001. Since coming to power, Law and Justice has tightened its hold on Poland's institutions. It now controls the presidency and the lower chamber of parliament (the opposition has a slim lead in the upper chamber) and has taken over the public media and key courts, provoking a conflict with the European Commission over the rule of law.

It has also imposed a socially conservative agenda. In October the constitutional tribunal dominated by Law and Justice ruled that women could no longer cite severe fetal defects as a reason for an abortion. Massive protests erupted. Yet, to liberals' dismay, the opposition keeps losing.

Mr Tusk appealed to Poles by offering what he called the policy of "warm water in the tap", a focus on gradually raising living standards with the help of EU funds, of which Poland has been the largest net beneficiary, rather than on grand ideological projects. Yet its appeal wore thin. Law and Justice won the parliamentary elections in 2015 by courting voters, especially those outside cities, who felt left behind by the social and economic changes since the collapse of communism in 1989.

Since Mr Tusk left Poland in 2014, initially to head the European Council in Brussels, his party has failed to find a leader capable of delivering similar victories. Eyes have been on Warsaw's liberal mayor, Rafal Trzaskowski, one of Civic Platform's deputy leaders, who narrowly lost last year's presidential election to Andrzej Duda, the incumbent. Liberal mayors of cities across Poland have rallied around an emerging movement headed by Mr Trzaskowski called Shared Poland.

Yet Civic Platform faces a new rival for centrist votes: Szymon Hołownia, a former television-show host who came third in last year's presidential election with 14% of the vote. A Roman Catholic, Mr Hołownia is courting Poles frustrated with the church's ties to politics. His movement, Poland 2050, proposes to separate the church from the state. In April it was formally registered as a party. Recent polls suggest it has overtaken Civic Platform.

Partly, this may be because Civic Platform is split. The recent focus on abortion has exposed deep divisions. Some of its politicians want to return to the previous ban on abortion that was slightly less draconian; others want to loosen the rules much more.

Still, Law and Justice faces challenges of its own, not limited to the pandemic. Relations with the ruling party's coalition partners, the even more socially conservative United Poland and the economically liberal Agreement, remain strained, prompting speculation about early elections. Jarosław Kaczyński, Law and Justice's veteran leader, says he is determined to keep a coalition going until the end of the current parliamentary term, though he "does not rule out" early elections. If the coalition survives, the main parties still have time to get their house in order before the next general election, which is due in 2023. Will they? ■

Religion in Spain

Empty pews, big pulpit

MADRID

The church's influence lingers but a changing society is weakening it

DESPITE PANDEMIC restrictions and damp weather, on Good Friday evening several hundred people queued to enter the Basilica of Jesús de Medinaceli in the centre of Madrid to pay their respects to a 17th-century image of Christ. Most of the worshippers were over 40, but there were some younger couples. The Christ of Medinaceli is "very important for *madrileños*", said Magdalena, a regular worshipper. She added: "They say Spain is not a Catholic country any more, but it's a lie." ■



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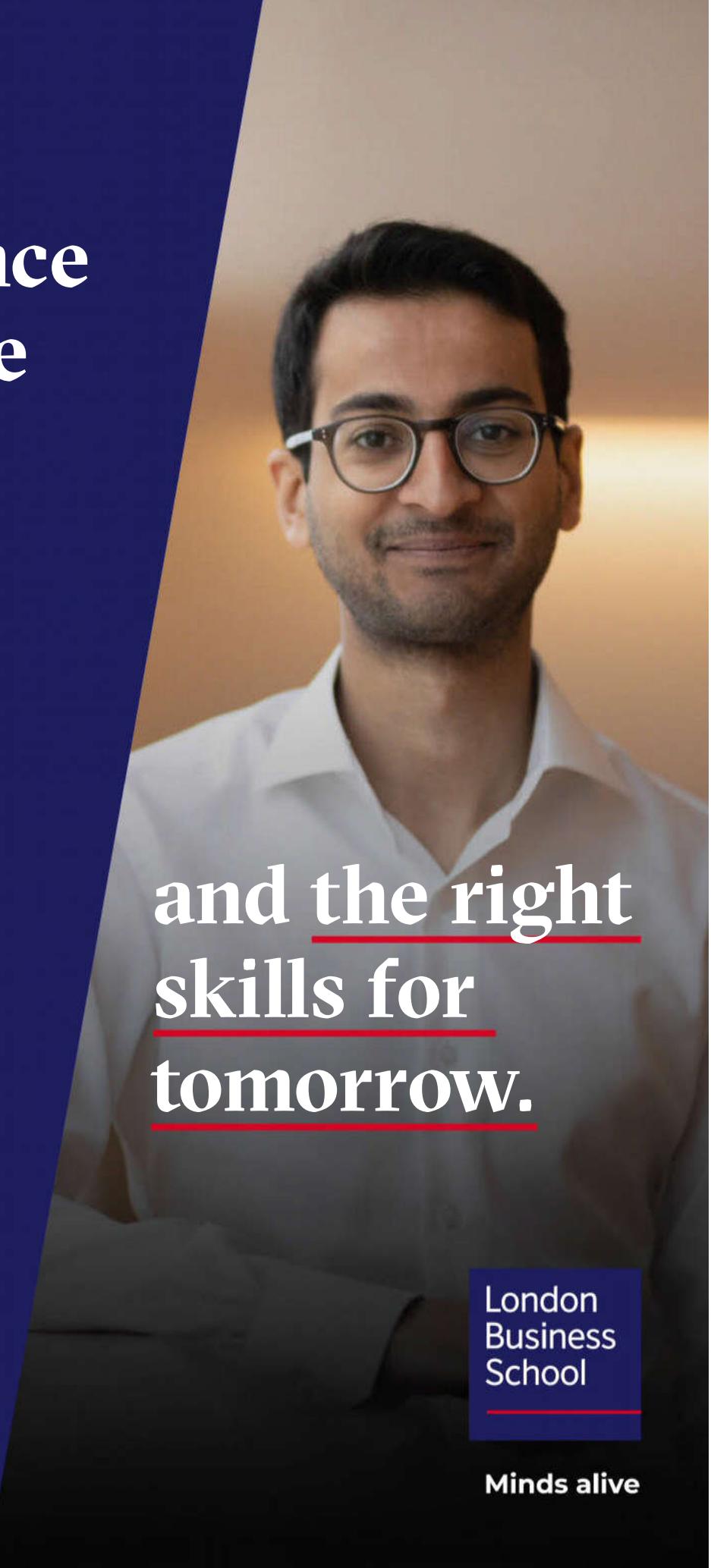
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Certainly it is a paradox. In the past four decades of democracy Spain has become a secular society with astonishing speed, perhaps faster than anywhere else in Europe. But the Roman Catholic Church retains considerable influence in some areas of national life. In fact, that is unsurprising. In no country in Europe was the church as powerful for many centuries as it was in Spain. Its power provoked militant anti-clericalism in a cultural conflict that was one of the roots of the Spanish civil war. Not coincidentally, the dictatorship of Francisco Franco embraced "national Catholicism" as its official ideology. But after the Second Vatican Council of 1962-65, sections of the church began to oppose the dictatorship. Agreements linked to the constitution of 1978 separated church and state, but acknowledged Spaniards' religious faith.

Since then, public attitudes have changed fast. Religious observance has declined steeply, especially among the young. Surveys find that although 82% of respondents identified as Catholic in 2001, only half do now. Only around a fifth of Spaniards go to mass regularly—though that still amounts to almost 10m people. Not only has the number of marriages each year declined in the past decade, despite a growing population, but in 2019 only a fifth of weddings were in a church.

The church has lost its grip over public morality, too. Divorce was legalised in 1981. Thereafter, Socialist governments legalised abortion, gay marriage and stem-cell research. In March Spain became only the fifth country in the world to legalise euthanasia, by a parliamentary vote of 202 to 141. Although conservative parties opposed these steps, many of their voters do not, notes Julia Martínez-Ariño, a sociologist.

And yet in some ways Catholicism remains woven into the fabric of Spanish life. Although there is no longer a Catholic party, "it is what feeds Spanish political culture", says Pablo Hispan, an MP for the conservative People's Party (PP). Almost every Spanish town has its religious processions, and an annual "patronal festival" with an official mass in which the mayor joins the priest. It is not rare to find crucifixes in public buildings. The church wields particular influence in social welfare, education and the management of heritage. Caritas, a Catholic charity, has helped to feed hundreds of thousands during the pandemic. Church-run (but publicly subsidised) schools still educate around a quarter of Spanish children. And the church manages thousands of historic buildings. All this may be why a third of taxpayers choose to donate 0.7% of their income tax to the church, without increasing their total tax bill. The church's haul from this was €284m (\$318m) in 2019.

It is an apparently stable compromise,

France and covid-19

Geeks v bureaucrats

PARIS

France's data scientists upstage its administration

WHEN THE pandemic broke out, a 23-year-old French data scientist was working in his bedroom at his parents' house in a Savoyard valley. Guillaume Rozier began to plot, and tweet, cases of covid-19 in Italy against those in France. His data analysis swiftly became a popular covid-19-tracking site. This April it spawned "ViteMaDose" (Quick-MyJab), a website that in two clicks scans disparate French health sites for scarce vaccination slots. It now draws 2m-3m views each day.

France's geeks are taking on its mighty bureaucrats. Armed with simplicity, clarity and algorithms, they are defeating the administration's fondness for complexity, confusion and rules.



Other new sites, such as Covidliste or Covid Anti Gaspi, match unused vaccine doses in fridges to willing takers nearby. "How", an astonished talk-show host asked Mr Rozier, "have you managed to create this system that the French administration hasn't?"

Mr Rozier, whose site is non-profit, says he saw the need when struggling in March to get an appointment for a relative. France's health system is fragmented, with no centralised booking; vaccine deliveries are patchy. He crowdsourced help to refine the algorithm and design. "Lots of people contact us to say thanks for helping find appointments," he says. "That's really cool."

France's 5m bureaucrats are masters of the art of convolution. When the government started a new lockdown in March, they devised a two-page permission form to leave home, with 15 different justifications, before shelving it in the face of ridicule. Current rules mix precision with farce. The French can buy alcohol, for instance, but not underwear.

President Emmanuel Macron is trying to overhaul the administration. He is abolishing the elite École Nationale d'Administration. Cédric O, his digital minister, is piloting the European Union's first digital health certificate, for travel to Corsica. But bureaucrats are generally better at devising rules and collecting information than making either comprehensible. *Allez les geeks.*

but one that is sometimes questioned. "The church invades the public space, laws, budgets and education," says Juanjo Picó of Europa Laica, a pressure group. Education is the most neuralgic issue. Campaigners on the left want religious instruction dropped as a curriculum subject; it is optional, but around half of children in state schools take it. Conservative parents are alarmed at "gender ideology", sex education which they think encourages homosexuality, transgenderism and feminism, although not much of this actually takes place. A law that was approved by Pedro Sánchez's left-wing coalition government last year makes it harder to set up new church-run schools. That prompted demonstrations. The PP defends "freedom of choice" in schooling.

Campaigners for a lay state say the place for religion is church, not school. They complain that the church has registered its ownership of some 20,000 buildings, in

some cases without legal title. In France and Portugal church buildings are owned by the state. "There's an entente cordiale" between church and state, says Mr Picó. "We have to move to a real separation."

The scandal of paedophile abuse by priests has had less impact in Spain than it has in some other countries. *El País*, a newspaper, has tracked down 364 cases involving 872 victims. The bishops have carried out no official investigation.

Some in the church fear a new anti-clerical assault. Its critics "don't see the church as a religious entity but as a political entity", says José Francisco Serrano, a Catholic journalist and historian. That may be so, but appetite for the battle is restrained. A new generation of bishops is seeking a less public profile, concentrating on strengthening ties with the faithful. And the governing Socialists show little desire for an open confrontation with the church. "The road is a long one," sighs Mr Picó. ■

Charlemagne | Shh! A silent centralisation

The European Commission is becoming more powerful, albeit quietly



B RUSSELS IS at its noisiest when things are at their worst. Ursula von der Leyen, president of the European Commission, clangs from crisis to crisis. The year began with a botched ban on vaccine exports that triggered a row over Northern Ireland and scuttled the EU's free-trading reputation. Her office sent a bizarrely dismissive message to the president of Ukraine after he invited Mrs von der Leyen to an independence day celebration while Russian troops massed on the country's border. Those with kind words about the president's leadership keep quiet; those who think she is not up to the job are loud. Beneath the brouhaha, a change is afoot. Under the maligned Mrs von der Leyen, the commission is becoming more powerful.

Some new powers stem from crisis. A plan to dish out cash to struggling governments has left the commission as a proto-treasury, signing off economic policy and handing out money. In exchange for a share of €750bn (\$895bn) in grants and loans, EU governments must overhaul their economies in line with Brussels-approved plans. It is a familiar scheme. During the euro-zone crisis, the commission demanded wrenching reforms from stricken countries in exchange for bail-out cash. Except that now all countries are in the same boat. In a development that would make the psychological conditioners in "A Clockwork Orange" cheer, those countries that had experienced such a programme knew exactly what to do. Efforts from Spain and Greece, both bail-out veterans, were highly praised. Draft proposals suggested by the German government, which is more accustomed to prescribing economic medicine than taking it, were initially knocked back.

Brussels has long begged countries to reform. Yet outside a bail-out programme, it has never had the clout. Each year, the commission comes up with well-meaning suggestions for national governments, which are almost always ignored. Now the commission can in theory turn the cash taps off if planned reforms are not done. Although the €750bn recovery fund is a one-off, commissioners such as Paolo Gentiloni, the Italian overseeing the scheme, suggest that the mechanism could be used again. Temporary measures can easily become permanent, as anyone who pays income tax will appreciate. At that point, the proto-treasury becomes a real one.

Even where the commission messes up, it manages to emerge more powerful. The commission took the lead in ensuring that the supply of vaccines did not descend into an undignified brawl among EU countries. Although it avoided a fight, it was less successful in securing supplies. When vaccines did arrive, Europeans watched as America—whose health system is seen in Europe as barbaric—jabbed its citizens more quickly. Diplomats fault the execution, but not the idea of having the commission in charge of such a situation. Angela Merkel, still the most influential leader even as she leaves the stage, wants the EU and by proxy the commission to have a bigger role in health care. Health crises—by their nature, life-and-death issues—are now dealt with at the European level, in a shift that may well continue.

Longer-term plans will see more power handed to Brussels. It is easy to dismiss the EU's "green deal" as a gimmick. In fact it is a three-decade project that will up-end the continent, in much the same way that the single market did from the 1980s. To make Europe climate-neutral by 2050, the commission will overhaul entire markets and industries. This shift is already happening. Decisions such as whether nuclear or gas technology will qualify as "green" will be taken by the commission, sometimes with only a supermajority of member states able to overrule it. Whether France can splash out on another generation of nuclear-power plants will be settled in Brussels as much as Paris. Environmental policy was shunted to the EU level in the 1970s and 1980s when it was a fringe issue; now it is an existential problem facing every government. But it is Brussels rather than the 27 national capitals that will lead the continent's response for the next 30 years.

Slapstick integration

A powerful centre has emerged under ostensibly weak leadership before. When Jacques Delors was the commission's president, he oversaw the introduction of the single market and set the path to the euro between 1985–95. Little was expected of the Frenchman when he took office. The then European Economic Community (EEC) was stuck in a rut. (A few years before, *The Economist* had published a front cover with a gravestone marked "EEC Born March 25th 1957/ Moribund March 25th 1982.") Like Mrs von der Leyen, he had not run a government before. And like Mrs von der Leyen, Mr Delors was shunted to Brussels only after his domestic political career had been written off by a powerful ally: François Mitterrand in the case of Mr Delors and Mrs Merkel in the case of Mrs von der Leyen, who had once been tipped as a possible future chancellor. Mrs von der Leyen was chided for being too close to Paris; Mr Delors, to Berlin.

After ten years of Mr Delors, a radically different EU had emerged. Luck rather than leadership has always been more helpful in running the European Union. Mr Delors benefited from national leaders willing to cede power to the burgeoning centre. Likewise, circumstance rather than political skill has led to Mrs von der Leyen's commission taking more power. National leaders are, once more, happy to hand over sovereignty to Brussels, if it means prosperity and health. Mr Delors was loud and proud about his plans for a deeper EU. Indeed, he was often too noisy, giving speeches about his dreams of a federal Europe that made Mitterrand splutter, never mind Margaret Thatcher. Today, EU leaders—whether in Brussels or in national capitals—are altogether more shy about the realities of European integration. Yet it is still happening, *sotto voce*. Integration by stealth is never healthy. Better, it seems, to shout about it. ■



Biden's beginning

100 days of aptitude

WASHINGTON, DC

Joe Biden has gone from boring candidate to drawing breathless comparisons to Franklin Roosevelt. Are they justified?

IM SICK AND tired of reading how we're planning another 'hundred days' of miracles," griped John F. Kennedy before assuming the presidency. The sentiment made its way into his inaugural address, albeit in a more stirring manner: "All this will not be finished in the first 100 days. Nor will it be finished in the first 1,000 days, nor in the life of this administration."

A recurrent trope of American politics is to scour the actions of the first 100 days of a new president's administration and compare it, usually unfavourably, with the productivity of the first 100 days of Franklin Roosevelt's presidency (in which he managed to pass 76 pieces of legislation, 15 of them country-changing). The exercise is both arbitrary and imperfect: presidents with early legislative successes tend to have more later on in their term, but it is hardly a guarantee. Nonetheless, it is still a test that White Houses past and present torture themselves over. Lyndon Johnson ordered his congressional liaison to "jerk out every damn little bill you can and get them down here by the 12th". "On the 12th

you'll have the best 100 days," Johnson boasted. "Better than [FDR] did!" Joe Biden's administration is no different.

One year ago, when enthusiasm was difficult to detect from even his keenest supporters, the comparisons with Roosevelt would have seemed absurd. And yet here they are. "Biden is off to an excellent start—arguably, one of the best since Roosevelt," writes David Gergen, a former adviser to four presidents of both parties.

Mr Biden assumed power at an awful time, with crises in democracy, public health and racial grievance to address. Yet crises can be auspicious. More than 230m Americans have been partially vaccinated—more than the 100m he set out at the

start of his term. The post-covid-19 economy is forecast to grow by 6.5% in 2021. Both of these would probably have occurred no matter who won the election in 2020. But the confluence of crises at his inauguration, plus a competent cabinet cribbed from the Obama years, has carried along ambitious plans. Mr Biden has already signed a \$1.9trn covid-19 rescue package into law, spending that dwarfs even Roosevelt's initial outpouring of cash (see chart 1 on next page). Unlike past crisis presidents, Mr Biden does not start with vast majorities in Congress; a lukewarm mandate gave Democrats only the barest majorities. Yet he has wielded the tools at his disposal—a budget measure known as reconciliation to surmount the threat of a filibuster—to pass laws all the same.

Transformational presidents often arrive as curious avatars. Johnson, who ascended to the presidency by the historical accident of Kennedy's assassination, was a creature of the Texas political machine. Walter Lippmann, a renowned American commentator, wrote dismissively of FDR during his first presidential campaign: "He is no tribune of the people. He is no enemy of entrenched privilege. He is a pleasant man who, without any important qualifications for the office, would very much like to be president." Many Democrats would have cribbed those words a year ago to describe their party's nominee. Yet apathy now seems an asset. Mr Biden does not stir the same ire that Mr Obama did within the ➤

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conservative media, which sometimes seems to dwell more on his supposed aphasia and diminished mental faculties than his objectionable policies. "Boring but radical," is how Senator Ted Cruz tried to put it. All the same, Mr Biden is pursuing a muscular policy of state intervention in the economy and race relations that should delight progressives. He is far to the left of Mr Obama on both counts.

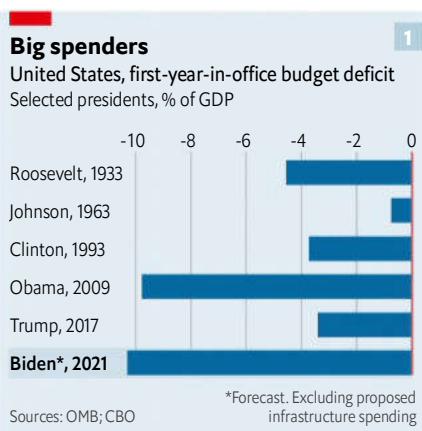
This method comes with risks. In the absence of a reliable negotiating partner, with the Republican Party still unable to exorcise itself of Trumpism and its anti-democratic fantasies, Mr Biden has no responsible opposition to save his administration from bad ideas and excess. Securing bipartisan legislation with the filibuster in place requires ten Republican Senate votes—which look so far out of reach that the White House barely goes through the motions of trying to attract them. The bad Democratic habit of throwing mountains of money at malfunctioning sectors of the economy and hoping for the best—like a largely unexplained proposal for \$400bn of elder-care spending, or the \$225bn to be spent on subsidising child-care centres and their poorly paid workers—thus goes unchecked.

The theory of the Biden presidency thus far is that extraordinary levels of spending, only partially matched by raising taxes on corporations and the rich, can enrich America indefinitely without triggering inflation. And that direct government intervention, not creative destruction, is a powerful force to spur innovation. This is a remarkable gamble.

Try something

What spurs most of the Roosevelt comparisons is the American Rescue Plan, the \$1.9trn behemoth of legislation that Democrats managed to pass in Congress without Republican votes and with few edits. It spends a huge amount of money rather diffusely: cheques for \$1,400 distributed to most Americans (at a cost of \$400bn), and \$350bn in aid for states and communities whose budgets did not appear to be in dire need of it. Though double the size of the stimulus measure that Mr Obama was able to pass in the aftermath of the financial crisis, it does not signify a permanent transformation of the welfare state just yet. Even child tax allowances, the most significant measure, which are expected to halve child poverty, are only temporary.

That means that although Mr Biden has outdone his hero (FDR's portrait now hangs over the fireplace in the Oval Office) in size, he has not yet done so in scope. Roosevelt managed to stabilise the careening banking sector, pass the Glass-Steagall Act, establish a federal system of deposit insurance, take the dollar off the gold standard, create the Civilian Conservation Corps and



the Tennessee Valley Authority, besides passing other public-works and relief legislation. Mr Biden would clearly like to effect a transformation on the Rooseveltian or Johnsonian scale. But that cannot simply be bought.

Instead, the great transformation, should it ever arrive, will come in the next 100 days. Throughout his presidential campaign, Mr Biden promised that after immediate relief, which he has provided perhaps over-generously, he would "build back better". That promise will arrive only with Democratic unanimity in Congress—which will be even harder to achieve than for the American Rescue Plan. The next plan aims to spend more than \$4trn on mobilising all of government to fund infrastructure of various kinds and arrest the progress of climate change.

Presidents, at least Democratic ones, measure their success by the number of landmark acts and enduring governmental programmes left behind. Social Security, food stamps and modern unemployment insurance are among Roosevelt's innumerable contributions. Beyond sweeping health-care and poverty-reduction programmes, Johnson's include major civil-rights legislation on anti-discrimination, voting rights and fair housing. Mr Obama

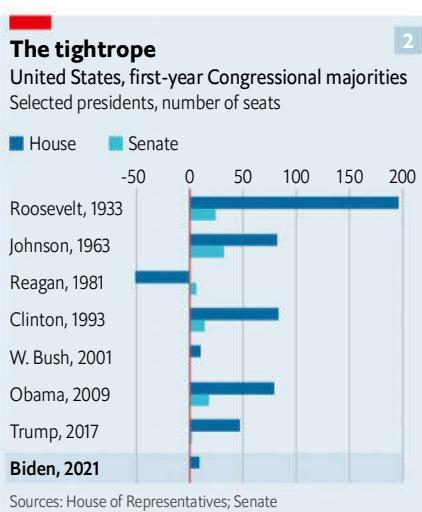
left his health-care plan. Mr Biden's best chance of entering this pantheon would be to start the decarbonisation of America.

Before he assumed office, Mr Biden pledged that America would decarbonise its economy (meaning no net carbon emissions) by 2050. To get there, he aims to make power generation entirely carbon-free by 2035. He aims too to reclaim the mantle of global climate leadership tossed away by Mr Trump and his administration's know-nothingism. At a summit of world leaders held (virtually) in late April, Mr Biden announced that America would aim to reduce its emissions by about 50% from 2005 levels by 2030. If the country realises these ambitious targets sometime after Mr Biden has left office, he could lay claim to the title of most consequential president of the century—remarkable given his slim margin of victory, lacklustre oratory, and the tepid enthusiasm he inspires even in his own party.

Were he to get his way, hundreds of billions of dollars would be spent putting Americans to work (preferably within unions): not just in green jobs, but in building roads and bridges, repairing sewers and power lines, and laying down broadband fibre cables. There is even a Civilian Climate Corps—deliberately recalling Roosevelt's Civilian Conservation Corps, which employed 3m men who, among other things, planted 3bn trees. Other expansions to the welfare state, like permanent child allowances, paid family leave, extra subsidies for child-care centres and expanded health-insurance programmes, were revealed on April 28th at an estimated cost of \$1.8trn. Mr Biden aims to raise these immense sums from much higher taxes on corporations and the wealthy, who did well under Mr Trump's tax reform (see Finance and economics section).

These plans have been sketched by the White House. Making them happen would require all Mr Biden's skill at arm-twisting and back-slapping in the Senate, given that Democrats hold the chamber by the thinnest margin possible. So far, he has proposed starting a clean-energy revolution by spending close to \$1trn over the next decade on basic research, subsidies for renewable energy and a jobs programme for "millions" put to work building new infrastructure, such as 500,000 electric-vehicle charging stations (there are only 115,000 petrol stations in the whole country) and retrofitting and weatherising existing infrastructure.

But enacting change so quickly cannot be accomplished through subsidies and direct employment. Mr Biden would need to rapidly shake up a cocktail of regulations that would force such a transition. More executive orders are among the ingredients, but legislation would be required, too. The trade-off between good policy and ►



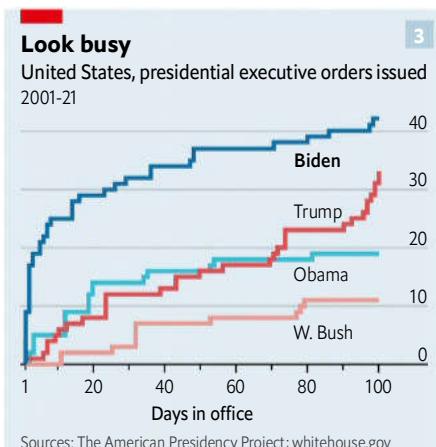
winning elections is clear here. A clean-electricity standard is politically palatable, but limited compared with the scale of the problem. The bolder, more effective option of a carbon tax is going nowhere.

Senate rules mean that the budgetary portions of the Biden agenda—like expanded social safety-net spending—stand a good chance of passage because they can avoid the risk of a filibuster, a minoritarian stalling tactic that holds up legislation unless 60 senators agree to move forward. Many of Mr Biden's plans, like green spending, the trillions in safety-net expansion and the raising of taxes on businesses and rich Americans, are engineered to get around this threat through reconciliation, which only requires a simple majority.

Other sweeping reforms contemplated by the administration, which principally change regulation rather than government spending, will be casualties of the filibuster for as long as Democrats keep it. This applies to immigration reform, a boosted federal minimum wage, or greater voting-rights and civil-rights protections. Even if the filibuster were to be ditched, which seems unlikely now, the time limit on such reforms is also shorter than a four-year term would suggest. Even small losses during the mid-term elections in 2022, which first-term presidents often suffer, would flip Democratic control of one chamber of Congress and therefore probably doom future legislation (as Mr Biden will remember from his vice-presidential days). Perhaps that is why the focus has been squarely on economic policy.

Politics is not the only constraint on Mr Biden. The White House seems to relish eye-popping spending proposals. That is a departure from the Clinton-era Democrats, who cared about fiscal rectitude. Even Roosevelt began his presidency with the intention of balancing the budget, and only later turned Keynesian. The Congressional Budget Office estimates that the budget deficit of 2021 will be 10.3%, after a covid-induced shortfall of 14.9% in the previous year. The national debt is on track to be 102% of GDP by 2021 and 202% of it in 30 years' time. Yet Mr Biden is blasé about the problem and keen to spend trillions more, which may only partly be covered by rising taxes. While interest rates are low, the spending may be sustained. But they will not stay low indefinitely. Already, inflation expectations have risen; if they do so quickly and unexpectedly, and Mr Biden's economic experiment comes undone, it would badly damage the Democratic Party at a time when the other lot are unfit to govern.

If dealing with Congress and the bond market may be a headache, Mr Biden can at least issue directives. He has already taken some 60 important executive actions—more than any president since Roosevelt. Many of these revoke the actions of Mr



Trump on immigration, like building a wall on the Mexican border, or climate change, by re-entering the Paris accord to reduce emissions. Because Mr Trump was singularly unsuccessful at passing major legislation (his only one, a tax cut in 2017, also stands a good chance of rollback), these revocations signal the end of a permanent Trump policy agenda in Washington. Others sketch the beginnings of causes Mr Biden aims to pursue through legislation: defining racial equity, relaxing immigration enforcement, mandating "buy American" rules, even forming a commission to study possible expansion of the Supreme Court. This all implies a muscular executive branch that will unilaterally seek to rewrite environmental, immigration and civil-rights rules to the maximum permitted by the courts.

Mr Biden may have plainly modelled himself on Roosevelt at the start of his presidency, but on race he aims to differ from the New Deal. Local administrators of Roosevelt's innovations explicitly excluded African-Americans. Mr Biden's plans, by

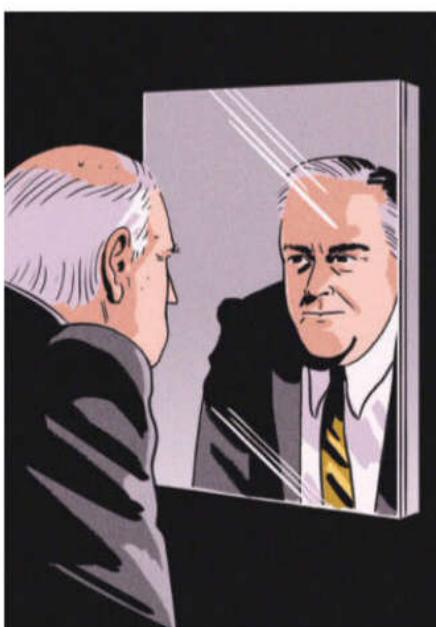
contrast, are avowedly anti-racist. So far the racial-equity agenda of the first "woke" administration has been pursued in ways that look a bit like reparations. The covid-19 relief bill included a \$5bn relief fund for minority farmers alone. The infrastructure package maintains that, somehow, 40% of the benefits of clean-energy investments will go to previously disadvantaged communities.

This too may perhaps be a quirk of the reconciliation procedure used to circumvent the filibuster. Spending targeted towards minorities alone can pass through the Senate more easily than consequential legislation that would reform policing, prisons, immigration and voting rights. Formal reparations (an issue which Mr Biden supports the study of by another commission) are deeply unpopular; policymaking that resembles reparations may not be much more warmly received. The politics of this racial-equity agenda is worse for the White House than the politics of big spending, which is broadly popular. Should progressives grow discontented with the signalling on racial equity, and instead demand that Mr Biden pushes harder, his party's showing in the 2022 elections could suffer.

Government is ourselves

The Trump administration suffered from a severe form of attention-deficit disorder. Under Mr Biden, Washington has mercifully receded from global headlines. "Boring but radical" gets fewer clicks than "fascinating but incompetent". This has led many to underestimate the scale of change currently under way in the relationship between the people and their government.

Mr Biden is a Rooseveltian revisionist, who seeks to reclaim the trust Americans once placed in government. His proposals for muscular industrial policy, autarkic supply chains and massive publicly-funded employment will be inefficient. But economic rationality is not their point. They are the results of a complicated balancing act between idealist left-liberal policy, centrist caution and what Congress can pass through reconciliation. The first 100 days of the Biden presidency have shown that he will pursue that philosophy in surprisingly maximalist fashion for a supposed moderate, even with such slim margins of Democratic control in Congress. The daunting tasks he has laid out for himself—averting climate change and rectifying racial injustice—will, in Kennedy's words, not be finished in the first 1,000 days or even in Mr Biden's lifetime. But he has already done more than seemed possible when he was sworn in. ■



For more on what America makes of Joe Biden's start, go to www.economist.com/WhatAmericaThinks

SCOTUS and free speech

Sidelined

NEW YORK

The justices ask whether schools can punish students for social-media posts

IT HAS BEEN a half-century since the Supreme Court came to the defence of Mary Beth Tinker, a 13-year-old student who had been suspended for wearing a black armband to school as a protest against America's role in the Vietnam war. Neither teachers nor students "shed their constitutional rights...at the schoolhouse gate", the justices ruled then, but speech that could cause a "material and substantial" disruption falls outside the umbrella. The question in *Mahanoy Area School District v. B.L.*, which the justices struggled with for nearly two hours on April 28th, is whether schools can punish uncouth expression made on the other side of the school gates, too.

Many of America's wrangles over what can be said involve students asking administrators to curtail speech. *Mahanoy* is the other way around. In 2017 Brandi Levy sought solace in Snapchat when she learned she hadn't made the top cheerleading team. Over the weekend, she posted an image of her upturned middle finger captioned with the message "fuck school fuck softball fuck cheer fuck everything". This did not amuse the coaches: they booted her from the squad for a year. The jilted teen sued and two courts ruled that the punishment violated her freedom of speech. Schools may discipline students for disruptive or vulgar speech during class, in the hallway or on school trips, the Third Circuit Court of Appeals held. But they cannot discipline students for intemperate expression outside the schoolhouse gate.

The oral argument was a clash of two highly skilled lawyers. David Cole, national legal director of the American Civil Liberties Union, spoke up for Ms Levy's right to vent on Snapchat without having to answer to school administrators. If purportedly disruptive off-campus speech could get students in trouble, kids "would be carrying the schoolhouse with them wherever they go", he told the justices. That would leave no "breathing space" for students to exchange ideas and hamper discussions of matters related to their schools. Chief Justice John Roberts seemed to share this worry, wondering whether off-campus criticism of teachers or school policy should be subject to regulation.

Justice Brett Kavanaugh showed empathy with Ms Levy, noting that even Michael Jordan was sore about being cut from his varsity basketball team as a high-school sophomore. But he echoed Justice Stephen

Classics at Howard Finis

The only classics department at a historically black college is closing

HAD YOU lived in America in the late 1700s and been fond of a rhyming couplet, you may well have read Phyllis Wheatley, the literary sensation of her day. Her status made her work more remarkable: she was a slave, named after the ship that had transported her from West Africa as a child. And she wrote the first book published by an African-American. Many dismissed her authorship because the poems were so dense with classical references. "She uses these texts as a way to express her pain about being enslaved, to express her desire to overcome her oppression, and her desire to be free," says Anika Prather, who teaches the course "Blacks in Classical Studies" at Howard University.

Many other names crop up during the course, from Frederick Douglass, the abolitionist who read Cicero's speeches in secret, to Huey Newton, a Black Panther with a liking for Platonic imagery. Yet after a long review, the Howard Universi-

ty classics department is being dissolved. Staff with tenure will be absorbed into other departments. Thus vanishes the last classics department at a historically black college, which has existed since the university's founding and numbered Toni Morrison among its students.

Eric Hairston, a classicist and professor of humanities at Wake Forest University in North Carolina, calls the decision "appalling". He blames the un-Roman notion that African-American students need more vocational subjects, an "industrial education" instead of a liberal one. Classics "is something I fell into and fell in love with", says Alexandria Frank, a 21-year-old Howard student. "People assume that if you know Latin you've got some like genius brain going on," she says, "but it really is just an interesting puzzle-solving language." Ms Frank's petition to save the department has over 5,000 signatures.

Classics departments have long recognised, and agonised over, their discipline's decline. Student numbers are falling (as has been the case for all the humanities since the financial crisis), and a number of American universities and colleges have closed their departments. Classics has an image problem: fusty, elitist and too white. In 2019 Daniel Padilla Peralta, an associate professor at Princeton, suggested the subject might be too racist to be taught.

Howard has always offered a counterpoint to that view. One of its renowned professors, Frank Snowden junior, specialised in the representation of black people in the classical world. He found many, and also found they were free of modern racialised hierarchies. There were warriors, emperors and comedy writers. Even so, his *universitas* has given classics the thumbs down.



Eheu!

Breyer's sentiment that the court was ill-equipped to "write a treatise on the First Amendment" concerning the boundaries of student speech in the internet age. Perhaps the best the justices can do, he suggested, is to erase the bright line between on-campus and off-campus speech and send the matter back to the lower court to ask whether Ms Levy's rant amounted to a substantial disruption worthy of punishment. Justice Breyer said that he was "frightened to death of writing a standard", but noted that if off-campus swearing counts as a material disruption, "every

school in the country would be doing nothing but punishing."

That hesitancy may favour the school's position, argued by Lisa Blatt, owner of a fearsome 37-3 record in her Supreme Court appearances. There is no "talismanic significance to students' location" when schools confront disruptive student speech, she wrote in a filing. And Ms Blatt countered Mr Cole's cautions with warnings of her own. If schools cannot address student speech uttered just across the street, or posted on social media, they will be unable to fulfil their role of *in loco parentis*.

►
tis guardians of students' well-being.

Mr Cole countered that schools are free to address threats, harassment, bullying and cheating when they happen off campus. But he said it would be a "dangerous proposition" if schools could punish anything posted over the weekend that they deem disruptive. Ms Blatt says worries about such "schoolhouse tyranny" are a red herring: principals cannot punish students just because they are offended by what they have to say.

The Supreme Court's ruling, expected in June, could affect not only public schools and their 50m students but the contours of free speech at public universities. An amicus brief siding with the cheer-

leader from the Foundation for Individual Rights in Education cites the "pervasive form of administrative scrutiny" governing college students' everyday online speech. Satirical Instagram posts and Facebook criticism of administrators have landed university students in hot water. That may change if the Supreme Court gives three cheers to freer expression for student speech online. But given the reticence emanating from the bench, such an expansion of youngsters' free speech seems unlikely. Ms Blatt's closing warning may stay with the justices: circumscribing school authority over student expression, she said, would bring "madness, confusion and chaos". ■

propriate, says Lawrence Gostin of Georgetown University. Albert Fox Cahn, head of the Surveillance Technology Oversight Project, a New York group that campaigns to regulate surveillance technology, likens the policy to receiving TSA PreCheck, a credential provided by the Customs and Border Protection agency that allows people who have voluntarily provided information to keep their shoes on and bypass other annoying procedures while going through security at some airports.

State bans that affect private businesses could face legal challenges, however. One state, New York, has implemented a voluntary passport system for entrance into venues. Called Excelsior Pass, this provides proof of vaccination or a negative covid-19 test for entry to basketball games and other large gatherings. But Montana, Texas and Florida have tried to prevent private businesses from requiring vaccine passports, via executive orders from the governor. This goes too far, says Mr Gostin. "It's unlawful for a governor of a state to ban vaccine passports," he says, speaking specifically about the orders by Texas and Florida for private businesses.

Florida's policy seems particularly shaky. As written, the order aims to prevent private businesses from requiring proof of vaccination, but it does not explain which laws give Florida's governor this authority. "If he had good authority, why didn't he put it in [the executive order]?" asks Walter Olson, a legal scholar at the Cato Institute, a libertarian think-tank. Mr Olson says that Florida's executive order is written like a statement intended to be read by the public, not a legal document meant to be defended before a judge. According to Mr Cahn, Texas's order is similarly vague.

Other states have enacted more successful bans. Utah's legislation, which prevents only the state government and its public universities from requiring a vaccination passport, is probably legal, says Mr Gostin. "[The law is] basically telling the governor that the governor is not permitted to launch a governmental vaccine passport system. That's not the same as saying that no business can do it." Arizona's and Idaho's executive orders prevent state and local governments from requiring vaccine passports, so they also seem legally sound.

Florida, Texas, Montana and several other states have bills banning vaccine passports currently moving within their legislatures. Several states are just weeks away from legally forbidding vaccine passports. Jeffrey Singer, a doctor and a fellow at the Cato Institute, thinks these legislative bans should exempt private businesses. "Private entities have a right...to request proof of vaccination," Dr Singer explains. "They have a right to be concerned about their safety and the safety of their employees and customers." ■

Escaping from the epidemic

Overproof

NEWARK

Republicans want to ban businesses from requiring proof of vaccination

AS CASES OF covid-19 in America are falling and the fourth wave subsides, states are again wondering how and when to loosen the remaining rules on travel between them. Six states, all led by Republican governors, have banned covid-19 vaccine passports. Three (Florida, Texas, and Montana) even prevent private businesses from requiring proof of vaccination. These bans may be politically advantageous for Republicans catering to a base angered by mask mandates (which changed this week after new guidance from the Centres for Disease Control and Prevention). Only one state, Democratic-led Hawaii, is publicly planning to use vaccination credentials for in-bound travel.

Vaccine passports come in three colours. The first and least controversial form is a vaccine passport for international travel, similar to the Yellow Card implemented by the World Health Organisation to prove inoculation for diseases like yellow fever and childhood illnesses like rubella. The second form is a one-time proof, such as those currently required by some schools for childhood vaccinations. The third is a transactional pass required for entrance into establishments. Denmark, Estonia and Israel have launched passports that grant vaccinated individuals access to restaurants, salons, large events, and more. The European Union plans to roll out a vaccine passport in June. The Republican state bans address the last two types of passes.

Utah, Arizona, Idaho, Montana, Texas, and Florida all currently ban vaccine passports. Hawaii is the only state that has pub-

licly announced a covid-19 vaccination requirement for travel, between islands. Governor David Ige, a Democrat, announced on Twitter that, from May 11th, fully vaccinated people will be able to bypass current state requirements to provide proof of a negative covid-19 test or quarantine for 10 days. While other states have been lax with covid entry requirements, Hawaii has rigorously enforced its policies, even arresting people who break quarantine rules.

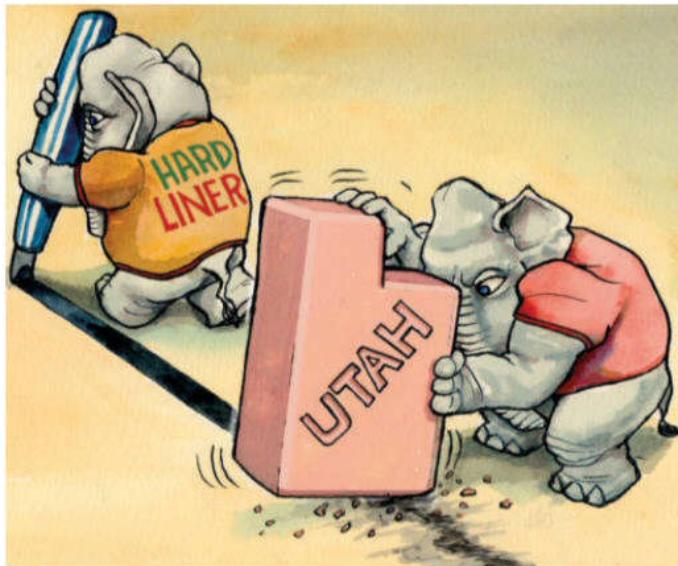
Its new rule is probably legal. States cannot prohibit citizens from travelling between them. But Hawaii's policy allows for reasonable alternatives for those without vaccination proof, so it is probably ap-



The promised land

Lexington | In praise of the Mormon right

Utah offers a lesson in pragmatic conservatism that the Republicans badly need



ONE OF THE few uplifting notes of last year's election season was struck by the candidates for Utah's governorship. "Win or lose, in Utah, we work together," said Christopher Peterson, the Democrat, in a humorous ad featuring him and his Republican opponent. "So let's show the country that there's a better way," said that rival, Spencer Cox.

Now Utah's governor, Mr Cox seems to be keeping his pledge. The upbeat 45-year-old is winning plaudits for his pragmatism and evenhandedness. After Utah's Republican legislature demanded an early end to its mask mandate, he negotiated a month-long extension, with exceptions for schools and businesses. He issued his first veto of a bill sponsored by his brother-in-law (it was an attack on social-media firms and probably unconstitutional).

He is popular with Democrats as well as Republicans—as Utah's governors tend to be. Gary Herbert and Jon Huntsman had similar records. Though Utah is one of the most conservative states, the relative moderation of its Republican leaders has helped make it one of the less polarised. "We have a history here of wanting to bring the other side to the table," says Mr Cox.

An illustration of that was a deal between gay-rights and religious-liberties activists known as the Utah compromise. A textbook legislative trade-off, which recognised the rights of gays in employment and housing while permitting churches not to marry them, it has been cited approvingly by both sides in a budding row over Joe Biden's support for new LGBT protections.

Another sign that Utah conservatives are different is their aversion to Donald Trump. The former president did better in the state last year than he did in 2016; but worse than any other Republican candidate in a two-horse race since Barry Goldwater in 1964. Though some leading Utah conservatives have warmed to him—including Senator Mike Lee—Mr Cox is among the many who remain opposed to Mr Trump and his grievance politics. "We've created something that we used to criticise, the victim culture that now exists on the right," said the governor, more in sadness than anger.

The results of Utah's functional conservatism are impressive. The state is as welcoming to immigrants as it is to investors—and one of the fastest-growing in both population and output. The

main explanation for it is signified by the needle-like spires that pierce the Salt Lake City skyline. Over 60% of Utahns, and a bigger majority of Utah Republicans, are Mormons. This makes them members of a church imbued with little of the pessimism evident elsewhere on the religious right. To the contrary, where white evangelicals—the Republicans' biggest constituency—harbour the wounded sense of entitlement of a group hurtling from cultural primacy to the margins, Mormons exude the confidence of a once reviled but now thriving minority. Founded in upstate New York in 1830, by a 24-year-old visionary called Joseph Smith, their religion is one of the world's richest and fastest-growing. It claims to have almost 17m members in 160 countries.

The church, to which most Utah Republicans belong, is deeply conservative yet sometimes adaptable. It was behind the Utah compromise, a concession that ended up reaffirming some of its architects' Mormon faith. "If you're a true Christian, you want to love your neighbour," concluded the leader of Utah's Senate, Stuart Adams, who had previously opposed gay rights.

Sadly, a comparison between the Mormon and evangelical churches also suggests how hard it will be for evangelicals to follow the Latter-day Saints' lead. The big difference between the two is psychological and rooted in their divergent histories. "My great-great-great-grandparents' home was burned to the ground by a mob in Illinois," said Mr Cox. "You don't forget stuff like that." That past not only explains Utah's openness to immigration. It represents for Mormons a parable of existence as a sacred struggle, demanding humility and accommodation with a hostile world. Unlike aggrieved evangelicals, says Richard Mouw, a leading evangelical theologian, "Mormons are not angry, they don't want to win, they just want a place at the American table."

Mormons' and evangelicals' distinct perspectives are also a product of their churches' organisation. The decentralised nature of evangelical America has allowed worshippers to sort themselves into racially and otherwise homogeneous congregations. This has in turn led them to elevate cultural over spiritual concerns. By contrast, Mormons' centralised institutions underpin their greater pragmatism and openness to diversity.

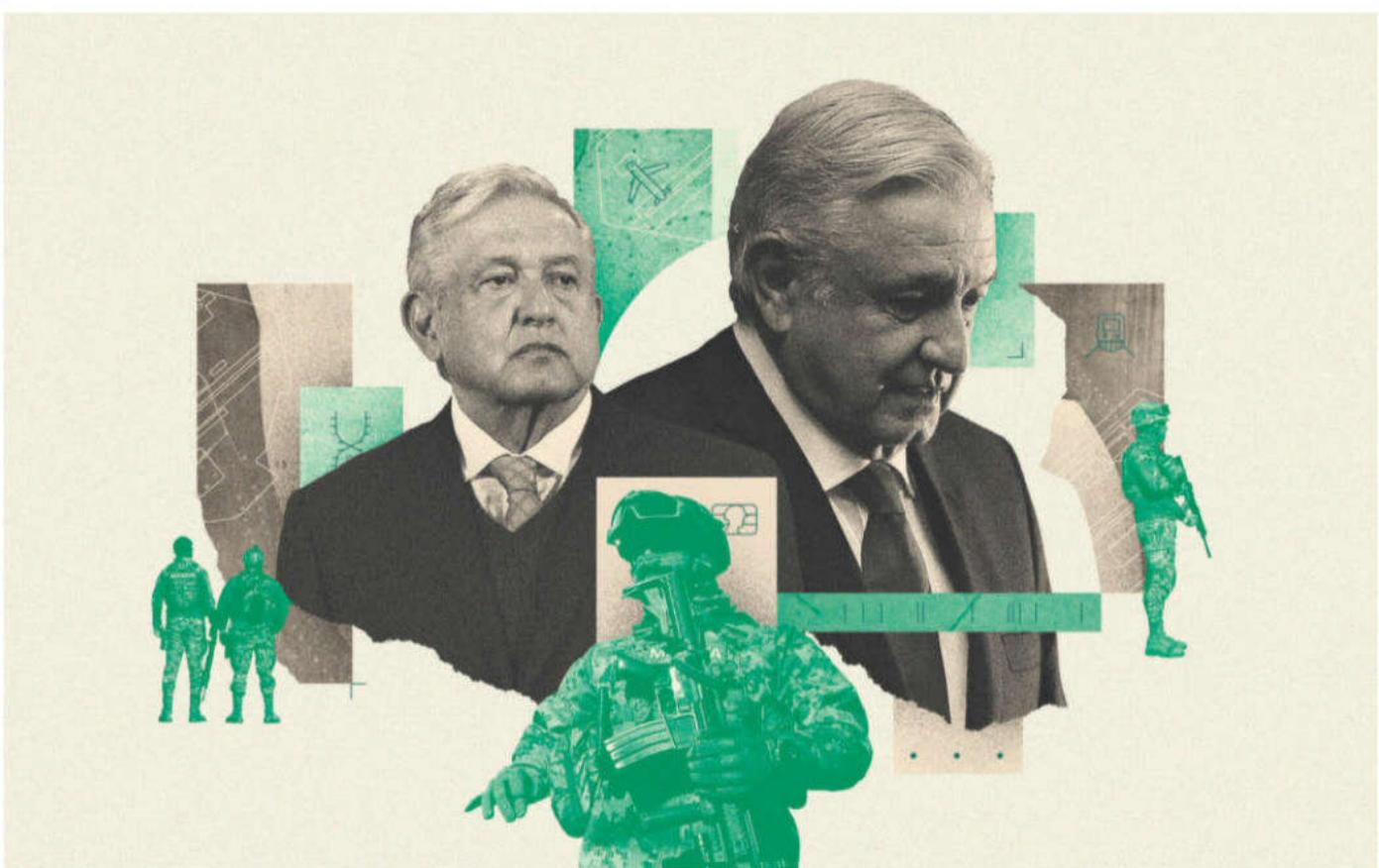
They must worship at their local church and are urged to provide alms and other support to poorer neighbours. This helps explain why Utah has the lowest wealth inequality of any state. It also promotes empathy over righteousness; the church's missionary tradition does the same. To that end, Mr Cox did a stint in Mexico; Mitt Romney in France. And this structure is overseen by one of America's tightest, and more enlightened, church hierarchies.

Senior Mormons are considered to be "prophets, seers and revelators". The current ruling trio were formerly a pioneering surgeon, a justice of Utah's Supreme Court and a Stanford business professor. Their example in getting promptly inoculated against covid-19 helps explain why Mormons, who tend to be more observant than white evangelicals, are also likelier to get vaccinated.

Saints alive

For the literary critic Harold Bloom, a fan of Mormonism, it was the "authentic version of the American religion ... [which] yet may prove decisive for the nation". Something similar could be said for the pragmatic politics the church endorses.

Utah conservatism is a reminder to the American right of its more expansive, optimistic past. It also offers a warning of where Republicans' current pessimistic course may lead. Almost half of Mormons under the age of 40 voted for Joe Biden. ■

**AMLO's military ambitions**

Sergeant López Obrador

MEXICO CITY

Mexico's president is giving the armed forces new powers

THE MAYA train, a 1,500km-long railway that is due to run through the Yucatán peninsula, is one of Andrés Manuel López Obrador's pet projects. But rather than entrust the job to world-class architects or engineers, Mexico's president has given it to military men. Last year he said the armed forces would build several sections of track, later adding that they would also operate part of the line. In March it was revealed that the army would not only construct and run the railway, but also keep all the profits from it, too.

The story of the Maya train hints at the rising influence of the armed forces under AMLO, as he is known. During his campaign in 2017 he promised to remove soldiers from the streets and criticised the army for human-rights abuses. But since becoming president he has given them more and more power. They have not held such sway since the end of Mexico's military-led government in the 1940s.

As well as building shiny projects, such

as the Maya train and the new international airport in Mexico City, the armed forces fight drug gangs, control migration, guard fuel pipelines, administer ports and run hospitals—all tasks previously carried out mostly by government agencies or the police. Before AMLO, the army controlled some parts of the border with the United States; it now controls all of it. The navy used to monitor ports; from this year it administers them. Last year AMLO also handed customs, previously run by a government agency, to the armed forces.

They have always played some role in public security in Mexico. Shortly after Felipe Calderón, the president from 2006 to 2012, was inaugurated he launched a campaign against drug traffickers, dispatching

some 20,000 troops across the country. What started as a temporary measure intended to restore order continued under Enrique Peña Nieto, AMLO's predecessor. Similarly, the armed forces have long had a hand in some big infrastructure projects. But according to Javier Oliva of the National Autonomous University of Mexico, under AMLO "a very quick evolution" has taken place, and the armed forces now have an unprecedented level of involvement in national affairs.

For a start, the president has rendered civilian policing all but obsolete by dismantling the federal police and creating a new National Guard. In theory this is a civilian organisation. In practice that is "a very big pretence", says Eduardo Guerrero, a security analyst. Neither the former federal police nor new recruits wanted to join it in large enough numbers, so members of the army and navy were drafted in. Of the 100,000 or so National Guard members as of February, three-quarters are from the army or navy. It is commanded by a recently retired general.

Moreover, AMLO has put the militarisation of public security on a firmer legal footing, says Catheryn Camacho Bolaños of the Mexico Autonomous Institute of Technology (ITAM). In May last year he issued an executive decree expanding and formalising the role of the armed forces in public security, including the authority to ➤

→ Also in this section**38 Venezuela's covid-19 chaos****39 Bello: Tricky fiscal decisions**

detain suspects and secure crime scenes. And whereas other ministries face funding cuts, the army is flush with cash (see chart). The ministry of defence, which covers the army and air force but not the navy, received \$5.6bn in 2021, a 40% increase on 2018 in nominal terms.

The president's increasing tendency to lean on the armed forces appears to stem from a desire for quick results. Mexico's civilian bodies are weak. AMLO distrusts them, along with the private sector, and has alienated or weakened both further. Mexicans rate the armed forces more highly than any other state institution, seeing them as comparatively professional and free of corruption. The military has around 216,000 active personnel who obey the orders of the president as commander-in-chief, without the buffer of a Pentagon-style civilian bureaucracy.

By promising speedy action—whether through building infrastructure or doling out covid-19 vaccines, as they have done this year—the armed forces are likely to boost AMLO's support base. At 63%, he has one of the highest approval ratings for a president at this point in his term of office. But with important state, local and legislative elections in June he is keen for it to be even higher.

With a little help from his friends

This desire for efficiency could have unintended consequences. There is a tacit understanding between the government and the armed forces that they are not to get involved in politics. That is potentially under threat, thinks Jorge Castañeda, a former foreign minister. The armed forces, now emboldened, "may start to get opinions on things, and temptation lies down that road", he warns.

The case of Salvador Cienfuegos, a retired general and a former defence minister, is seen by some as a worrying example of the armed forces meddling in politics. In October 2020 the United States arrested Mr Cienfuegos in Los Angeles on charges of working with the H2 criminal group to traffic drugs. The Mexican government was angry it was not informed in advance. A month later the US prosecutors dropped the charges, allowing Mr Cienfuegos to return to Mexico. The circumstances around his release are murky. Some think the prosecutors made a mistake, or decided that Mr Cienfuegos was not worth the diplomatic fallout. But for others, Mr Cienfuegos's repatriation, and his lack of a subsequent trial in Mexico, was a sign of the army's new clout.

Some observers also worry that greater militarisation will bring more human-rights abuses. The armed forces are thought to be responsible for some disappearances of Mexicans. According to Amnesty International, an NGO, the killing of



22 people by soldiers in Tlatlaya in 2014 was not properly investigated by the federal attorney's office. So far the National Guard has not behaved terribly badly, as some feared it might. Even so, some of its members have been accused of extorting money from an alleged drug trafficker in Sonora, while others allegedly transported marijuana and amphetamines from the state of Mexico on its way to Quintana Roo. An investigation by Animal Político, a local outlet, in March found that 90% of already-deployed members had not passed the evaluations to prove that they are qualified for the job.

Paulino Jiménez, a retired general who is now at ITAM, says that concerns about potential corruption in the armed forces are exaggerated, and points to the army's strong internal justice system. Others say the idea that the army is cleaner than any other institution is at best wishful thinking. At worst it is "bullshit", says Marco Fernández of Tec de Monterrey university.

Indeed, from data that are publicly available, it appears that the army's record on openness is chequered. Some 41% of the money spent by the defence ministry in 2020 was through contracts awarded without tender. In other areas they do not fare much better. Military involvement in policing has also not brought a reduction in violence. Instead criminal groups have splintered, resulting in more conflicts. Crime has plateaued at horribly high levels: there were 27 murders per 100,000 Mexicans in 2020, 6.3 times the rate in the United States.

Meanwhile the infrastructure drive by the armed forces has hit potholes. Parts of the Maya train have been suspended while local courts decide if the consultation process excluded the local indigenous community. The defence ministry is running behind on building bank branches, according to *Expansión*, a magazine. Mr Guerrero says that the army can build an airport in Mexico City that will "not be a disaster". But, he says, "it will be an airport of the Third World." ■

The pandemic in Venezuela

Thyme, the great healer

CARACAS

Another despot touts a herbal quack cure for covid-19

THE BLACK market in Venezuela has taken a dark turn in recent weeks. In online chat groups, where weary Caracas residents trade everything from detergent to US dollars, covid-19 is the dominant theme. Emotional pleas for medicine are commonplace. The price of oxygen tanks and masks is soaring. So too is rental space for the large refrigerators needed to preserve bodies in the tropical heat, as waiting lists for burials and cremations grow.

Switch on state television and it is another world. Every Sunday Nicolás Maduro, the dictator, addresses the nation. Wards of pristine unused hospital beds are displayed. Venezuela's relatively low official death count is contrasted with carnage elsewhere. Mr Maduro labels the variant that is spreading across South America the "Bolsonaro mutation", blaming an uptick in cases on Brazil's populist president.

Mr Maduro's hubris is misplaced. For the first year of covid-19 Venezuela was largely spared. But this was mostly luck. With the economy tanking and sanctions from the United States biting, the number of foreign visitors had already started tumbling. Before the pandemic, at least a dozen big airlines stopped flying there. But since March cases have been rising. Even by the government's improbably low figures, there were around 1,000 new infections nearly every day in April, a record.

The country is ill-prepared. In 2019 fully 70% of public hospitals did not have reliable running water, according to Doctors for Health, a nationwide medical network. Morgues are now full, says Douglas Leon Natera, president of the Venezuelan Medical Federation. Health workers who give out detailed statistics which contradict the government's claims risk imprisonment, he warns.

Instead of introducing clear lockdowns, Mr Maduro has imposed a bizarre one-week-on, one-week-off procedure, whereby non-essential shops are closed for a week and then allowed to reopen. "He seems to think the virus disappears every other week," quips one sardonic *carequeño*. Mr Maduro has also touted a "miracle" cure for covid-19, which he claims was developed by Venezuelan scientists. The quack concoction appears to be made from an extract of thyme. His claims prompted Facebook to freeze his page for a month.

Vaccines are a long way off. Mr Maduro received his first jab on March 6th. But al-

most everyone else could be waiting months. Less than 2% of the country's 18m adults have had their first dose, by far the worst roll-out in South America. The vaccines that are available (around 880,000 from Russia and China) are politicised. They have been restricted to those with a state loyalty card known as the *carnet de la patria*, which is mostly held by people who get state aid and so back the government.

In January up to 2.4m AstraZeneca jabs were reserved for Venezuela as part of the WHO's COVAX scheme. The catch is paying for them. Venezuela is poor enough to

qualify for free shots, but absurdly it still ranks as a "wealthier nation", because Mr Maduro's government has refused, since 2014, to provide accurate economic data to the World Bank.

In March Juan Guaidó, the leader of the opposition and recognised by many democratic governments as the legitimate president, was working on a deal whereby \$30m of Venezuelan government funds frozen in the United States would be released to pay for them. Mr Maduro appears to have scuppered the arrangement, claiming that local "technical reports" found that the Astra-

Zeneca jab had undesirable side-effects.

Weeks later, however, the government joined COVAX on more expensive terms. In April it said it had made two down-payments for 11m vaccines, understood to total around \$120m. It is refusing to specify the origin of the funds. But assuming the government continues to refuse AstraZeneca's jab, the vaccines may not arrive in the country until July. "You get the sense that there's no rush," says Miguel Pizarro, a politician representing Mr Guaidó at the UN. "Everyone is scared, and that is what a dictatorship wants." ■

Bello How will the covid-19 bill be paid?

Colombia is a test case of the fiscal decisions Latin American governments face

THE TIMING could hardly be more awkward. Colombia is suffering a third peak of covid-19, even more deadly than its predecessors. Almost all intensive-care beds in the main cities are full, and oxygen tanks are running short. Bogotá, the capital, is under a red alert, with the working week cut to four days and a curfew at 8pm. Yet in April the government of President Iván Duque sent a bill to Congress proposing stiff tax rises. Although the increases would be phased in, the government thinks it must signal now its intention to raise more revenue, particularly if it is to provide emergency aid to its people until the pandemic is over. Many of the country's politicians disagree, and the bill was the target of a large national protest on April 28th.

Colombia is an early example of the fiscal dilemmas Latin American governments will soon face. The region has suffered grievously in the pandemic. Its economy shrank by 7% last year, more than double the average contraction around the world. As lockdowns eased a couple of months ago, there was optimism that recovery might exceed the 5% growth of most forecasts. But then the P.1 variant of the virus, first detected in Brazil, began to run wild. Like Colombia, other South American countries have been forced to restrict movement yet again. Meanwhile vaccination is happening slowly. The result is that 2021 is shaping up to be another difficult year.

Matters would be even worse had governments not been able to soften the blow with aid to poorer households and to firms. Though not on the generous scale of many rich countries, this fiscal stimulus was much more than the region managed in past slumps. According to a study by the IMF, it averaged about 4.5%

of GDP. With revenues falling because of the recession, fiscal deficits ballooned and public debt rose last year from an average of 64% of GDP to 72%.

That would once have been seen as a dangerously high figure. But low international interest rates make it more affordable. Nonetheless, several governments are scaling back aid even as the pandemic continues. Many economists think that is a mistake. Investors will tolerate deficits and debts provided governments set out—and preferably approve—credible measures to curb them once economies have recovered.

"It's right to spend during the pandemic," argues Alejandro Werner, the IMF's outgoing director for Latin America. "But it's also right to start thinking about tax and spending reforms." In a typical Latin American country, paying for the better health care and social assistance citizens are demanding while at the same time servicing higher debt requires a rise in government revenue of between 1.5% and 3% of GDP. (Some countries would need instead to trim ineffective spending.)

If recovery turns out to be slower, tax rises could be postponed.

This is the path Colombia's government wants to follow. Its bill raises around 2% of GDP in additional revenue, mainly by widening the net of income tax and removing exemptions in VAT. Mr Duque says that would allow the government to continue to make emergency payments of \$44 per month to over 3m poorer households, compensate them for levying VAT on basic goods and continue a furlough scheme. It would also safeguard Colombia's investment-grade credit rating, which makes borrowing cheaper for firms and the government.

The bill is praised by tax specialists but, with a general election due next year, it has prompted political uproar. Wounding for Mr Duque the critics include Álvaro Uribe, a conservative former president who is his political sponsor. Mr Uribe has submitted an alternative bill that would cut the revenue gains in half.

Other countries will soon face similar decisions. The region is not facing a debt crisis—or at least not yet. But the credit-rating agencies are flashing an amber light. Joydeep Mukherji of Standard & Poor's, one agency, notes that with 13 downgrades since the pandemic began and nine "negative outlooks", Latin America's credit score has been hit harder than that of any other region.

If Colombia's tax reform is thwarted by short-term political considerations, that sends the wrong message to other governments. The risk is that "we'll end up with not enough stimulus and problems with the financial markets," says Mauricio Cárdenas, a former finance minister in Colombia. That would mean Latin America would have to say *adiós* to a robust economic recovery.





Israel and Palestine

Past their sell-by date

DUBAI AND JERUSALEM

Two long-serving leaders desperately try to hold on to power

BINYAMIN NETANYAHU and Mahmoud Abbas (pictured, right and left) have ruled for so long that it is hard to imagine other people in their places. Yet neither is looking very secure at the moment. Mr Netanyahu, the prime minister of Israel since 2009, is struggling to form a new government, as the opposition inches closer to a deal that would unseat him. Mr Abbas, the Palestinian president since 2005, is increasingly unpopular. Were he to hold a free and fair election, as he promised to do this year, he would probably lose. Could both men soon be out of a job?

Neither is giving up. Consider Mr Netanyahu, whose party, Likud, won the most seats in an election on March 23rd, but whose right-wing coalition lacks a majority in the Knesset, Israel's parliament. For the past three weeks he has tried—and failed—to convince other parties to support his bloc. Mr Netanyahu even reached out (via intermediaries) to Ra'am, an Islamist party. His main target, though, has

been Naftali Bennett, the leader of Yamina, a nationalist party that is similar to Likud. Mr Bennett, who was once Mr Netanyahu's chief of staff, says "the door to a right-wing government is open."

But Mr Bennett has also begun negotiating with parties opposed to Mr Netanyahu. They, too, lack a majority—and they have little in common, apart from their contempt for the prime minister. In order to form a government they would need the support of at least one Arab-Israeli party. Mr Bennett doesn't like that. He is being wooed by Yair Lapid, leader of the centrist Yesh Atid party and architect of the anti-Netanyahu coalition. Mr Lapid, whose par-

ty holds many more seats than Yamina, is willing to let Mr Bennett serve as prime minister first if they form a government.

With his leadership on the line, Mr Netanyahu is flailing. He has called for a direct election of the prime minister, while his supporters attack Mr Bennett. On April 27th Mr Netanyahu tried to appoint a member of Likud as justice minister, a move that was deemed illegal by the attorney-general as it violated the agreement that created the current government. After Israel's Supreme Court suspended the appointment, Mr Netanyahu backed down and gave the post to Benny Gantz.

As leader of the centrist Blue and White party, Mr Gantz agreed to team up with Mr Netanyahu after the last election, in 2020. Their deal gave Blue and White control of the justice ministry. It would also make Mr Gantz prime minister later this year if no new government is formed and no new election is held. Mr Gantz now wants to get rid of Mr Netanyahu one way or another.

Mr Netanyahu had two big reasons for seeking control of the justice ministry. First, he is on trial for corruption, charges he would like to see go away. Second, by provoking a showdown Mr Netanyahu was able to renew his criticism of the Supreme Court. It acts like an unelected "super-government", he says. He may have thought this would make it more difficult for Mr Bennett, a critic of the court, to work with ►►

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► parties that support it. But the move seems to have spurred those trying to unseat the prime minister. "Israel has reached the edge of anarchy" and "needs a functioning and stable government," said Mr Bennett, without singling out Mr Netanyahu.

As for the Palestinians, stability is not a problem: they have held fewer elections in the past three decades than Israel has in the past two years. Mr Abbas was elected to a four-year term in 2005 and has since fiddled the maths. A parliamentary vote in 2006 saw Hamas, a militant Islamist group, gain a majority of seats. It subsequently took control of Gaza and remains estranged from Mr Abbas's Fatah, the nationalist party that rules the West Bank. There have been no elections since.

This long democratic drought was meant to end on May 22nd, when Palestinians would finally choose a new legislature. Presidential elections would follow in July. To no one's great surprise, though, those elections now seem likely to be shelved. As *The Economist* went to press, Mr Abbas was preparing to cancel the ballot.

He will blame Israel. The Oslo accords oblige it to let Palestinians vote at post offices in East Jerusalem, the Arab part of the city Israel captured in 1967. Less than a month before the vote, Israel has not confirmed it will allow this. On April 17th police arrested three Palestinian candidates who tried to hold a news conference in East Jerusalem. Tensions are also running high between the city's Jewish and Palestinian residents. Israeli police and young Palestinian protesters clashed on April 22nd after a march of Jewish supremacists organised by far-right groups aligned with Mr Netanyahu's coalition.

Mr Abbas declares Jerusalem a "red line": if there cannot be elections in the city, there will be no elections at all. If this is a legitimate grievance, it is also a convenient pretext. Proposals have been made to hold elections in Jerusalem without Israel's help. Mr Abbas does not wish to hear them. He is grateful for an excuse to cancel a ballot he may lose.

The president once said he would shoot anyone from Fatah who broke away to join a new party. He will need lots of ammunition. Two splinter factions have emerged in the run-up to the election. One of them, the Freedom party, is led by Nasser al-Qudwa, a nephew of the late Yasser Arafat, a revered Palestinian leader. Mr Qudwa joined forces with Marwan Barghouti, a veteran Fatah leader serving five life sentences in an Israeli prison. A second splinter group, the Future party, is affiliated with Muhammad Dahlan, a former Palestinian security boss now living in exile in Abu Dhabi.

A survey in March by Palestine's leading pollster found that Fatah would win no more than 32% of the vote for parliament. It could be eclipsed by both the breakaway

parties and Hamas. The numbers look equally grim for Mr Abbas in a presidential ballot: he would lose in a landslide against Mr Barghouti, should the latter run from prison, and it would be a toss-up against Ismail Haniyeh, the leader of Hamas.

Israel has no desire to see Hamas win another election (they have fought three small wars since 2009). Its interests align with those of Mr Abbas, who sees the group as a threat to his grip on power. Even if the

vote is cancelled, though, that grip is weakening. He is 85 and recently flew to Germany for unspecified medical tests. The run-up to the elections exposed fractures within his ruling party; cancelling them would validate criticism of his self-interested authoritarian style. Both he and Mr Netanyahu have come to seem permanent fixtures of politics in the Holy Land. Their desperate eleventh-hour stunts are a reminder that they are not. ■

Iraq

The enemy of my enemy

NAJAF

Former foes find their interests converging. For how long?

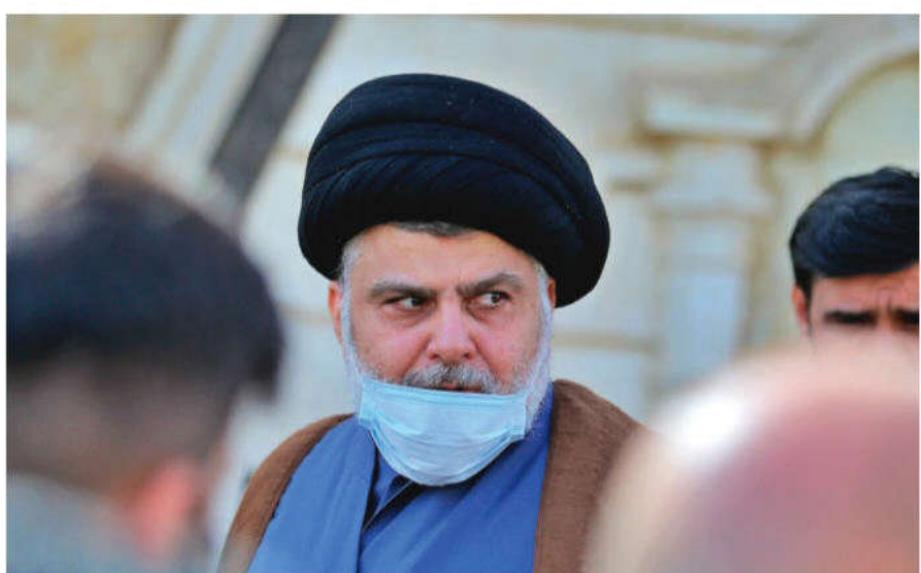
IRAQ'S HEALTH ministry did not think to install smoke detectors or a sprinkler system when it renovated the Ibn al-Khatib hospital in Baghdad last year. So when oxygen tanks for covid-19 patients exploded on April 24th, the fire spread fast, killing at least 82 people. The blaze also singed the reputation of Muqtada al-Sadr (pictured), the volatile Shia cleric whose political party, Sairoun, controls the ministry. Rivals accuse him of siphoning funds that should have gone to the hospital.

Mr Sadr's evolution from warlord to protest leader to pillar of the establishment has been remarkable. Having once led demonstrations against corruption, he is now the target of them. And his relationship with the public is not the only one transformed. As his power has grown, his interests have changed. Lately that has moved him closer to America, a former foe.

Saddam Hussein was "the little ser-

pent", but America "is the big serpent", said Mr Sadr not long after America toppled Iraq's most homicidal dictator in 2003. During the ensuing years Mr Sadr's militiamen attacked the American troops who occupied Iraq, killing hundreds of them. But today, as America draws down its forces (only 2,500 remain), Iran poses a bigger challenge to Iraq's independence. It wields influence through local militias and the politicians it backs. America sees Iran as a threat and, increasingly, so does Mr Sadr.

The cleric's relationship with Iran is complicated. He has spent years of his life in Qom, Iran's holiest city, studying and seeking protection from armed rivals in Iraq. Iran has at times seen him as a useful ally. But he has also championed Iraqi nationalism. When protests against corruption and Iranian influence broke out in Iraq in 2019, Mr Sadr's forces backed them—at least at first. When it seemed as if ►



Pious cleric seeks fruitful relationship with big serpent

the protesters sought to sweep him aside as well, his forces helped violently to quash the protests. Some Iraqi officials hold Iran responsible for a drone attack on Mr Sadr's home in 2019.

Mr Sadr seems to view Iranian influence in Iraq as a threat to his own power. That helps explain why he recently welcomed a statement by the American and Iraqi governments reaffirming the presence of American forces in Iraq. He also denounced rocket attacks by Iranian-backed militias on America's embassy in Baghdad and on an airfield in the north used by American forces. He has even offered to deploy his own militia, the Peace Companies, to guard Western embassies. Iraq's ties with Saudi Arabia and the United Arab Emirates, America's allies and Iran's enemies, should be strengthened, he says.

Mr Sadr rejects direct talks with America, but they share many interests. Both backed Daewoo, a South Korean conglomerate, in its bid for a multi-billion-dollar contract to develop the port of Faw in the south-east. It beat a Chinese firm supported by a rival Shia militia leader. Mr Sadr is also mulling an electoral pact with Sunni Arab and Kurdish politicians who are close to America. He already lends his support to Mustafa al-Kadhimi, the prime minister, who is backed by America and who has tried to limit Iranian influence. Mr Kadhim has faced opposition from Iranian-backed parties. But Saïroun, which is the largest party in parliament, protects him from a vote of no confidence.

"Iraq is in chaos, Iran is filling the vacuum and Sadr's is the only strong force that can resist," says an Iraqi official. Some in the West agree. Mr Sadr was spared when America placed sanctions on Iraqi militia leaders with ties to Iran in 2019. Under President Donald Trump, American officials tried to engage the Sadrist through Iraq's ambassador in Britain, who is Mr Sadr's brother-in-law. President Joe Biden is still formulating his Iraq policy and may seek to ease tensions with Iran. But some in the administration are encouraging America's political allies in Iraq to align with Mr Sadr before an election in October. "Ride Sadr while you destroy the Iranian-backed elements, and then in eight years think again," says a Western analyst.

Others think that would be a mistake. "You can't trust him," says one of the protesters whom Mr Sadr turned against. The loudest warnings come from Mr Sadr's former confidants. Sheikh Assad al-Nassiri, a cleric now in hiding, thinks Mr Sadr's aim is to capture the state. Ghaith al-Tamimi, a cleric who was defrocked for disobedience to Mr Sadr, says Western backing for him would be "a monumental strategic blunder". He worries that "it will end democracy in Iraq and surrender the country to a dictator worse than Saddam Hussein." ■

Crisis in Somalia

Villa-squatting

NAIROBI

Somalia's power-hungry president has taken his country to the brink

MOHAMED ABDULLAHI MOHAMED, better known to his people as Farmaajo, was once a popular figure. Residents in Mogadishu, the capital of Somalia, welcomed him to the presidency in 2017 with celebratory gunfire. They saw him as a reformer who would fight corruption. There were indeed some reforms, enough to secure promises of debt relief from the World Bank and IMF. But Mr Mohamed's chief interest seemed to be the accumulation of power, so much so that, when his term expired in February, he refused to give it up.

Setting off a political crisis is always a risky business. Unleashing one in a country that has known little peace for 30 years, and where your opponents are at least as well armed as you are, seems doubly foolhardy. On the evening of April 25th violence duly broke out in Mogadishu. This time there was nothing celebratory about the gunfire. Somalis were shooting not into the air but at each other.

A ceasefire has since restored calm, but Somalia remains in a more precarious position than it has been for years. Mr Mohamed's opponents have retreated to their strongholds in the north of the capital, where they are protected by armed clansmen. Many of these fighters are army defectors. Fragmented to begin with, Somalia's security forces look close to disintegrating along clan lines. Mr Mohamed, a Darod clansman in a city dominated by the rival Hawiye, is thought to have full control of just five of Mogadishu's 16 districts. Somalis talk gloomily of civil war.

Whether such a disaster can be averted depends in large part on how Mr Mohamed responds. In a bid to defuse tension he has promised to ditch a law, forced through parliament in April, extending his term by two years. He has also agreed to return to talks on how to hold elections.

Neither offer is likely to placate his opponents in the National Salvation Council, an alliance between Mr Mohamed's main challengers for the presidency and the leaders of the two federal regions most hostile to him. The council regards Mr Mohamed not as president but as a squatter in the Villa Somalia, the official presidential home. As a condition for returning to negotiations, it is likely to demand the resignation of Mr Mohamed, or at the very least that he should be reduced to the nominal head of a caretaker government until an election is held.



Source: Polgeonow.com

Mr Mohamed's choices appear to be narrowing. His power grab has cost him most of his remaining political capital abroad. Western powers, the UN and the African Union, guilty of dithering and sending mixed messages in the past, all opposed his attempts to extend his presidency. He is struggling financially, too. His finance minister recently called on Somalis living abroad to help pay the country's public-sector wage bill by depositing money in government bank accounts.

Mr Mohamed could yet opt to settle things on the battlefield. Officially he still commands the loyalty of foreign-trained special-forces brigades, as well as units within national intelligence and the army. Yet even here clan loyalties are straining cohesion, says Matt Bryden, director of Sahan Research, a Somalia-oriented think-tank. Diplomats hope Mr Mohamed will be sensible and capitulate rather than risk a civil war he may well lose.

If he goes, his departure may not be the end of the story—indeed, it could be the easy part. His opponents are presently united by their loathing for Mr Mohamed. His absence could cause them to turn on each other, as happened in 1991, when the dictator Siad Barre was ousted, only to unleash a civil war fought along clan lines. Lessons have since been learned and more recent elections have passed off peacefully enough, but they were not contested in so febrile an atmosphere.

As Somalia's latest crisis worsens, only one faction is enjoying the show: al-Shabab, the al-Qaeda affiliate that controls much of the countryside (see map). The lust for power and the tawdry squabbling that presently grip Somalia's politicians play into the jihadists' hands. Only the establishment of a rules-based system that brings genuine benefit to the people will thwart them: a sadly distant prospect. ■

Africa's unfinished buildings

A room without a roof

DAKAR

Capital is scarce in many countries in Africa. So why is so much cash tied up in unfinished buildings?

LIKE AN ENORMOUS grey skeleton, a six-storey apartment building looms over a quiet street in Dakar, the capital of Senegal. Concrete balconies and bedrooms are discernible. But there are no windows, doors or lights. And the only painting is of the scatological variety from the sole residents: crows. How long has it been like that? "Five or six years," says the guard. Property in Senegal has been booming, but concrete is frequently poured into buildings only for construction suddenly to stop, often for many years.

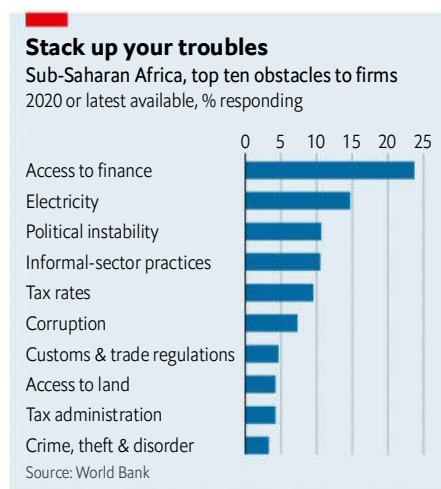
Half-made buildings are everywhere in African cities. In Abuja, Nigeria's capital, the government last year said it would take over 600 of them because they had been unfinished for so long. Dakar's skeletal structures illustrate many of the reasons why unfinished buildings are so common—and the costs of this problem.

Putting up walls is not cheap. The concrete and materials for a five-storey apartment building cost hundreds of thousands of dollars. Senegal is desperately short of finance. Around 40% of firms say access to cash is their biggest obstacle, compared with 14% in the rest of the world. Across sub-Saharan Africa it is businesses' largest problem (see chart). Savings are low and bank lending is limited. Yet money is still poured into buildings which earn nothing for years. Whatever the pop star Pharrell Williams says, few prospective tenants feel like a room without a roof.

What is going on? Start with the lack of finance. Many Senegalese developers struggle to obtain loans without hefty collateral. Instead, some start building, hoping to tempt buyers to put down deposits on flats and then use that to help finance the rest of the building. But buyers are wary of making a commitment based on a construction site. These unfinished projects often tie up prime land, too.

For Senegalese hoping to build their own homes, mortgages are rare. In all they cover only about 20% of the need. Across many African countries even the cheapest newly built house is unaffordable for most people. Instead, people break ground knowing they do not yet have the funds to finish. When they earn a little more money they add more bricks.

The shortage of finance makes a vicious circle. Many Africans, in effect, save in concrete. Thus money gets tied up for years in unfinished buildings earning nothing,



rather than being put into a business or bank where it could earn a return which could allow would-be homeowners to build more rapidly later. The lack of liquidity in the financial system then further limits what banks can lend to builders.

Only 33% of sub-Saharan Africans had a bank account in 2017. Many are suspicious of financial instruments. "Here it is mine, it is more secure," says Mansour, a resident of Dakar, pointing to the house he is building. In countries with high inflation, saving in concrete is particularly appealing. And investments in buildings often escape the notice of African tax collectors, since enforcement is weak.

Pouring concrete makes sense for other reasons, too. When you start building the neighbourhood respects you, says Cheikh Abdoul Fatty, who has been trying to finish the second floor of his home in Dakar for a decade. "If you have millions in the bank, people do not see it," points out Mamadou Diagne, a consultant. If you just start building they "appreciate you more". Relatives are also more likely to pitch in to help you finish, once construction has started.

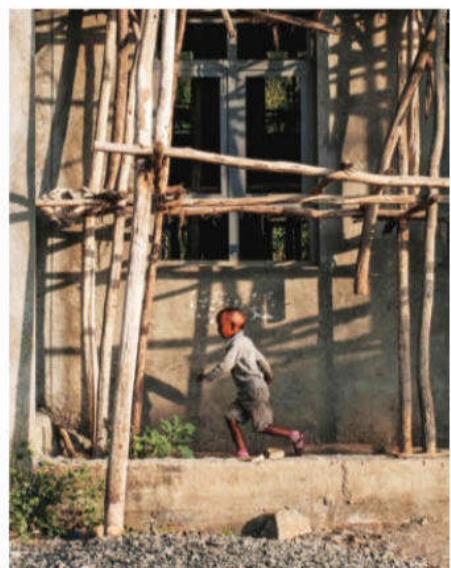
Half-built walls also offer protection from grasping cousins. In much of Africa, social pressure to help even distant kin is high. Mr Fatty sends money to his mother every month. However, by putting the rest of his spare cash into plaster and tiles he sidesteps some requests from other relatives. "If you have money in your pocket, under your bed or in the bank you have to go and take it and help them," explains Mr Diagne. "But if you put it in your concrete," he says, "you can say you have no money."

Weak property rights also matter. In Kampala, Uganda's capital, the predominant land-tenure system often gives both the occupant and the owner rights to the land. That can gum up land markets, hampering new developments. But it can also spur people to pour concrete to try to strengthen their claims. Similarly, in the suburbs of Dar es Salaam, Tanzania's commercial capital, formal land titles are rare, so people start building to try to secure their rights.

Bigger building projects tend to stall for other reasons. Many developers are caught short by the fluctuating prices of materials or by flaky contractors who spend the budget but don't finish the job. Still, some want to turn cash hastily into concrete, regardless of whether they can finish the building—because they are laundering money.

In Dakar property is a "target", says Khady Dia Sarr, who advises the mayor. "A lot of people are investing behind [fake] names." In a recent case a Guadeloupean drug-trafficker with multiple aliases is accused of stashing cash in edifices. Many other African countries are affected, too. In 2019 Leilani Farha, then the UN's special rapporteur on housing, fretted that in Nigeria the thousands of buildings that stood empty were used to launder money.

More money in the financial system and less idling in unfinished buildings would help business and aspiring homeowners alike. That would require improvements to taxes and regulations, expanded access to banking services, and clearer property rights. In Senegal the government is starting by trying to make borrowing more affordable by giving banks guarantees on home mortgages. Meanwhile, few Senegalese can predict when their homes will be finished. "That depends on God," says Mansour, as he places one more cinder block in the wall. ■



When you grow up, son, this may be done



Japan's foreign relations

Panda power

TOKYO

A powerful faction in Japan's ruling circle strives to keep China sweet

THREE ARE no fewer than seven pandas at the Adventure World zoo in Wakayama, a mountainous region in central Japan. After the latest cub was born in November, Zhao Lijian, a spokesman for China's foreign ministry known for his pugnacious tweets, went all gooey: "It will be a witness of the friendship between China and Japan." That may be wishful thinking. But the prevalence of the rare bears in Wakayama certainly bears witness to the clout of Nikai Toshihiro, one of the prefecture's representatives in the Diet and one of China's best friends in Japan.

Mr Nikai is the secretary-general of the ruling Liberal Democratic Party (LDP), second in rank only to its leader, Suga Yoshihide, who is also the prime minister. He wields immense influence over the party's candidates, legislative agenda and budget. He has held the job for longer than anyone in the party's 65-year history.

Mr Nikai is also Japan's most prominent advocate of friendlier ties with China. The two neighbours have a series of long-sim-

mering disputes, over everything from Japan's half-hearted contrition for its atrocities during the second world war to a territorial dispute over some tiny specks in the East China Sea. But plenty of powerful Japanese, especially among business people, would prefer to be on better terms. China buys some 22% of Japan's exports, more than America's 18%. Hong Kong absorbs another 5%. Japan needs "a more harmonious relationship with China", says Nakaniishi Hiroaki, the head of Keidanren, Japan's biggest business lobby. As Seguchi Kiyoyuki, a former head of the central bank's office in Beijing, argues, "The US is father and China is mother—we cannot choose."

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Mr Nikai tends to echo such sentiments. Born in 1939 in Gobo, a small city in Wakayama prefecture, he came of age in an era when backroom dealmaking was the norm in Japan. He is a skilled practitioner of "*ryotei politics*", says Nakabayashi Mieko of Waseda University, referring to the posh restaurants where Japanese powerbrokers gather in private rooms to resolve matters of business and state out of the public eye.

Whereas younger politicians focus on public relations, Mr Nikai concentrates on human relationships, says Iio Jun of the National Graduate Institute for Policy Studies in Tokyo. He used to run the powerful Ministry of Economy, Trade and Industry, which helped him not only to build ties with big business, but also to gather a loyal following within the LDP. In 2016 the prime minister of the day, Abe Shinzo, tapped him to become its secretary-general, in part to keep him from throwing his weight behind a rival candidate for leadership of the party.

That perch helped make Mr Nikai a kingmaker when Mr Abe unexpectedly resigned owing to ill health last year. Mr Suga was not seen as a successor, but Mr Nikai marshalled support for him. "He feels that he made the Suga administration, so he feels perhaps equal to Suga, or even higher than him," says Shinohara Fumiya, a commentator close to Mr Nikai. His continued backing is essential to Mr Suga's survival, though deference to Mr Nikai has also ➤

► damaged Mr Suga's standing. Mr Nikai promoted an ill-considered subsidy for domestic tourism that helped spread the pandemic. In an embarrassing reversal, Mr Suga had to scrap the idea.

Among Mr Nikai's causes, none counts for more than relations with China. For many Japanese of his generation, a sense of guilt about the war bred an eagerness to help China develop. Ancient cultural ties serve as another impetus to get along. "It's China's cultural power that first bought Nikai," reckons Miura Lully, a political scientist in Tokyo.

Yet it is China's economic power that has kept Mr Nikai enthralled. He began taking big delegations of businessmen to China as early as 2000. His long-term relationships with Chinese leaders make him a "rarity" these days, says Yu Tiejun of Peking University. "Diplomacy depends on human relationships to a great extent; trust is the most important thing. We cannot find many people like him who could be trusted by this side."

Those ties proved useful when Sino-Japanese relations hit a nadir in the early 2010s. As tension over the disputed islands threatened to flare into open conflict, China banned exports of important industrial materials to Japan and angry mobs ransacked Japanese car showrooms in China. But Mr Nikai kept talking and travelling. "We need to be able to talk to the Chinese, and Mr Nikai is an asset," says Miyake Kunihiro, a former diplomat and special adviser to Mr Suga. When Mr Abe moved to calm relations in 2017, Mr Nikai delivered a letter from him to Xi Jinping, China's president. "He played a role as the bridge between Abe and Xi," says Kawashima Shin of the University of Tokyo. In the trip's wake, bilateral trade flourished and the number of Chinese tourists visiting Japan leapt. Mr Abe made plans to receive Mr Xi on a state visit to Tokyo.

But tensions between the two countries are rising again, testing the limits of Mr Nikai's influence. China's recent abuses in Hong Kong and Xinjiang and its growing hostility to Taiwan have made moderation harder to sell. Separating business from security is becoming trickier, too, as the line between them becomes more blurred. Calls are growing in Japan for Mr Xi's visit (which was postponed because of covid-19) to be cancelled and for Japan to adopt Western sanctions on China.

After a recent summit, President Joe Biden and Mr Suga issued a joint statement supporting Taiwan, which the two countries have never before done. Mr Zhao has complained that Japan is acting as a "vassal" of America. "Nikai has hot lines to the Chinese side, but even such hot lines cannot solve territorial issues," says Mr Kawashima. The pandas in Wakayama are not gifts, he notes, but merely on loan. ■

South Korea's economy

Chips and blocks

PYEONGTAEK

The pandemic has deepened a stark economic divide

TWO ENORMOUS grey buildings decorated with blue, red and yellow rectangles meant to resemble a painting by Piet Mondrian dominate an industrial park south of Seoul. Inside, the world's largest production lines for semiconductors churn out chips for Samsung Electronics 24 hours a day. Robots zip along rails on the ceiling, carting stacks of silicon wafers from one step in the process to the next. Few humans are allowed anywhere near the machinery, and only in protective suits, to prevent stray hairs or specks of dust from contaminating their output.

These buildings and others like them have been at the heart of the South Korean economy's resilience throughout the pandemic. It shrank by just 1% in 2020, as global output fell by 3.5% and many rich countries suffered much deeper recessions. It is projected to grow by about 3.5% this year—its best pace in a decade. It has already regained its pre-pandemic size. That is a function mainly of exports, which are dominated by semiconductors and other manufactured goods, and were up by 16.6% year-on-year in March. Samsung made more money in 2020 than the year before, despite the pandemic.

Combined with South Korea's success in limiting infections, this has meant that parts of the economy have hardly noticed the pandemic. Employment in manufacturing in South Korea stayed roughly constant between January 2020 and March of this year. Frantic construction of gleaming shopping malls and apartment blocks

around the industrial park in Pyeongtaek is testament to the area's dynamism. At lunchtime cars are double-parked outside the rows of new restaurants.

A barista in a coffee shop reports business as usual, except for a few weeks in the winter when she was allowed to serve only take-away. Two young men at an outside table who work for semiconductor firms say the pandemic has made little difference to their lives over the past year. "It's factory work, not something you can do from home, so we've been going to work and taking our breaks here the whole time," says one.

Near Ewha University in north-western Seoul, however, the picture is strikingly different. The grid of small streets which used to bustle with local and international students and Chinese tourists is mostly deserted. As university seminars have moved to Zoom and quarantine rules have kept foreigners away, the bulk of the area's cafés, restaurants and cosmetics shops have closed down. The few that remain open are struggling. "I've been here for 30 years and this is the worst it's ever been," says the owner of a shop selling cut-price clothes. She expects that she can hang on for a few more months, but she has had to fire her part-time sales assistant. A restaurant around the corner stayed in business by making deliveries but has had to lay off most of its staff.

Unemployment, which hit a 22-year high of 5.4% in January, was back to pre-pandemic levels by March. But the number of people employed in retail, food or entertainment was still 6.6% below the level of 2020, suggesting that many had dropped out of the labour force altogether rather than registering as unemployed. Whereas export-focused businesses are benefiting from the recovery in global demand, these industries will suffer for longer, says Park Seok-gil of J.P. Morgan, an investment bank. The slow pace of vaccinations, he argues, will act as a drag on services in the middle of the year.

Some economists worry that the prolonged slump may exacerbate the already gaping divide between high-tech manufacturing and low-productivity services. "If the crisis is prolonged, it will leave scars on fragile sectors and poorer, less well-educated workers," says Park Chang-hyun, an economist at the Bank of Korea, the central bank. Some small service firms may not rehire everyone they have laid off, so some of those who lost their jobs in the pandemic may find only badly paid, precarious part-time jobs. If they find no work at all, the pandemic-related shrinkage of the labour force may become permanent, reckons Mr Park. Youth unemployment is a particular concern: it has continued to grow even as overall employment has begun to recover, reaching 10% in March. ►



Hunting dust the old-fashioned way

To cushion the blow, the government has doled out about 1% of GDP in relief payments to small businesses since September. It has also announced massive investments in digital infrastructure and "green" technologies with the aim of creating more well-paid jobs. But that will take a while. Business-owners say that the payments have barely made a dent in their losses. They want the government to compensate them for lost earnings and to expand low-interest loans to tide them over the remainder of the pandemic. Meanwhile, South Korea continues to record hundreds of cases of covid-19 every day. The roll-out of vaccinations is progressing sluggishly, and restrictions on socialising and dining out remain in place. It will be a while before the usual bustle returns to the streets around Ewha. ■

Australia and covid-19

Isolation nation

SYDNEY

Clamping down fiercely on travel is proving politically popular

IT TOOK TWO cases of covid-19 to plunge Perth, the capital of Western Australia, into lockdown on April 24th. The state government announced a three-day "circuit-breaker" just as locals were gearing up for a long weekend. "We can't take any chances," declared the premier, Mark McGowan.

Australian states keep ordering snap lockdowns because they are nervous about more contagious strains of covid-19. Some of the world's strictest border controls have generally held the virus at bay. Most foreigners are barred from entering the country, and returning citizens must quarantine for two weeks in guarded hotels. When a case of the virus slips through, state premiers throw up defences.

A single infected quarantine guard closed Perth for five days in February. The state of Victoria, home to 6.7m Australians, went into a short lockdown after a cluster of 13 cases leaked from a hotel in Melbourne. Brisbane, capital of Queensland, has been shut down twice since January. And that is just this year.

The latest breach in Perth started with a man who fell ill after his isolation had ended. He caught the virus in quarantine, from an infected traveller in another room, raising fears about airborne transmission within hotels. State leaders are hollering for an even tougher system. Most quarantine hotels are in big cities, so one idea is to send travellers to better-ventilated sites in quieter spots. Mr McGowan wants the federal government to use air bases or a deten-

tion centre on Christmas Island, an Australian territory in the Indian Ocean. Queensland hopes to build a quarantine facility in the small city of Toowoomba. Victoria envisages a "village-style environment" outside Melbourne.

Another suggestion is to clamp down even harder on travel. Border controls ban residents from leaving as well as outsiders from coming in. Aussies can escape only for a handful of reasons, such as a family funeral. Mr McGowan, however, thinks they are swanning off too easily. "If people want to go overseas to covid-infected countries in the middle of a pandemic, then why should they come home and risk the rest of us?" he asks.

The federal government, for its part, is asking for a sense of proportion. The quarantine hotels are "99.99% effective", says the prime minister, Scott Morrison. Half a million people have passed through them, notes the health minister, Greg Hunt. He calls it "one of, if not the, most successful systems in the world".

But voters back the fiercest isolationists. Mr McGowan declared Western Australia "an island within an island" when the pandemic started, and cut it off from the rest of the continent for most of last year. He is so popular that his opponent conceded a recent state election weeks before the first vote was cast. Annastacia Palaszczuk, a strict guardian of Queensland's borders, won a third term in October.

So when will Australia reopen to the rest of the world? The federal government had planned to vaccinate the adult population of 20m by October, but the roll-out is months behind schedule. Even when everyone is fully jabbed, officials say that travellers may still need some form of quarantine. A poll in February found that 71% of Aussies want to keep the international border closed until the "public health crisis has passed". On that basis, they will be cut off for some time. ■



Too easy

Covid-19 in India

Heartening heroics

DELHI

Volunteers are filling the many gaps in the fight against covid-19

MANY INDIANS are up in arms about the government's handling of their country's all-engulfing second wave of covid-19. Hospitals, testing facilities, even crematoria are overwhelmed. Vaccines are in short supply. The government squandered a lull in infections over the winter, a common criticism runs, and is now flailing in the face of the inevitable resurgence. But while there is no shortage of hapless officials, there is also an impressive supply of ordinary citizens, charities, private companies and even the odd public servant taking their own initiatives to mitigate the crisis.

Devendra, a 38-year-old teacher in the rural state of Jharkhand, became a tabloid hero when, after receiving a distress call from a friend in Delhi, 1,400km away, he scoured his state to find an oxygen cylinder and then drove for 24 hours straight to deliver the life-saving gift. On social-media services such as Twitter and WhatsApp, untold thousands of people respond to even greater numbers of pleas for help to find a hospital bed or oxygen or simply money to pay medical bills. Numerous volunteers have aggregated such requests and offers, allowing browsers to match needs with whatever help is available by subject and location.

Sometimes the efforts are very local. After seeing how hard it was to get his own 80-year-old father admitted to hospital, Vishal Singh, who owns a chain of private schools, set up a free, fully equipped covid-19 care centre for other residents of his own posh gated community. Pascal and Rozy Saldanha, a middle-class couple in Mumbai, sold their jewellery to buy oxygen cylinders to give to needy neighbours. Residents of south Delhi speak of a mystery Food Man who roams the streets, stopping hungry-looking people and feeding them.

Other initiatives are more organised. Khaana Chahiye was formed last year to help migrant workers who were forced to flee Mumbai when a national lockdown cost them their jobs. The group started by setting up soup kitchens on roads, to offer a square meal to those who were so destitute that they were trying to walk to their home villages, hundreds or even thousands of kilometres away. Over the past year it has served some 4.6m meals, thanks to a team of more than 200 volunteers, and expanded to slums in the city.

Older charities have also redirected efforts to the struggle against covid-19. Near- ►

ly every Sikh temple, from smallest to grandest, operates a regular *langar* or soup kitchen. Numerous charities that had been supplying a huge sit-in on the borders of Delhi by farmers, many of them Sikhs, have now refocused on covid-19. One of these, Hemkunt Foundation, now operates a 24-hour drive-in centre outside Delhi that provides free oxygen to those in desperate need.

Indian tycoons have also stepped into the act. Azim Premji, a tech mogul and India's biggest philanthropist, gave an estimated \$1bn to charity last year, either di-

rectly or through his companies, \$150m of it for covid research and relief. Other entrepreneurs raised some \$10m almost overnight for Mission Oxygen, which aims to buy as many oxygen concentrators as possible abroad and ship them to Indian hospitals. Within a single week the group was able to import the first machines, and has placed orders for 1,300 more.

There have been moments of heartening bureaucratic efficiency, too. Whereas in Delhi desperate patients have been forced to wander from hospital to over-spilling hospital to plead for admission,

authorities in Mumbai run an efficient, centralised triage system to allocate beds to patients. In Nandurbar, a tribal district of northern Maharashtra, one of India's hardest-hit states, the top local bureaucrat took note of what was happening elsewhere in the world, and poured all his meagre resources into preparing for a second wave. His team focused particularly on fitting local hospitals with small plants to supply their own oxygen, as well as on training medical staff. Had such efforts been replicated across India, they would have saved tens of thousands of lives. ■

Banyan A real tree-for-all

There is a ray of hope for South-East Asia's beleaguered tropical forests

NO ECOSYSTEM is more important in mitigating the effects of climate change than tropical rainforest. And South-East Asia is home to the world's third-biggest patch of it, behind the Amazon and Congo basins.

Even though humans release carbon from these forests through logging, clear-felling for agriculture and other disruptions, some are so vast and fecund that the growth of the plants within them absorbs even more from the atmosphere. The Congo basin, for instance, locks up 600m tonnes of carbon a year more than it releases, according to the World Resources Institute (WRI), an international NGO. That is equivalent to about a third of emissions from all American transport. The Amazon, too, remains a net absorber (though four years of massive fires and clearing for cattle have brought it to a tipping-point). In contrast, such is the extent of clearing for plantations in South-East Asia's rainforests, which run from Myanmar to Indonesia, that over the past 20 years they have turned from a growing carbon sink to a significant source of emissions—nearly 500m tonnes a year. Indonesia and Malaysia, home to the biggest expanses of pristine forest, have lost more than a third of it this century. Cambodia, Laos and Myanmar, relative newcomers to deforestation, are making up for lost time.

If that is the sombre backdrop, a couple of pieces of good news help brighten it. First, according to Global Forest Watch, which uses satellite data to track tree cover, loss of virgin forest in Indonesia and Malaysia has slowed for the fourth year in row—a contrast with other parts of the world. For the first time Indonesia is not one of the world's three worst countries in this respect. Following devastating fires in 2015, the In-

donesian government issued a temporary moratorium on new licences for palm-oil plantations and made permanent one on clearing primary forests and peatlands. Though often honoured in the breach, they are clearly having some effect. In 2019 Malaysia imposed a five-year cap on the area under plantations. It also increased penalties for illegal logging.

The second piece of news is an initiative unveiled during President Joe Biden's recent climate summit. It is intended to make forests more valuable standing than cut down. The LEAF Coalition, backed by America, Britain and Norway, along with such corporate giants as Amazon, Airbnb, and Unilever, aims to create an international marketplace in which carbon credits can be sold for deforestation avoided. An initial \$1bn has been pledged to reward countries for protecting forests. South-East Asia could be a big beneficiary: what multinational would pass up the kudos of saving baby orangutans?

Admittedly, curbing deforestation has been a cherished but elusive goal of climate campaigners for ages. A big UN ini-

tiative to that end, called REDD+, was launched a decade ago, with Indonesia notably due for help. It never achieved its potential. Projects for conservation must jump through many hoops before approval. The risk is often that a patch of forest here may be preserved at the expense of another patch there. Projects are hard to monitor. The price set for carbon under the scheme, \$5 a tonne, has been too low to overcome these hurdles.

The new initiative, argues one of its architects, Frances Seymour of WRI, builds on REDD+ while being mindful of its shortfalls. LEAF will at least double the price of carbon, making conservation more attractive. Whereas buyers of carbon credits under REDD+ pocketed profits from a rise in carbon prices, windfalls will now go to the country that sold the credits. Standards of monitoring, says Ms Seymour, are much improved.

Crucially, the scheme will involve bigger units of land than previous efforts, the so-called jurisdictional approach. That reduces the risk of deforestation simply being displaced from a protected patch to an unprotected one. Besides, says Gita Syahrani, of LTKL, which assists district-level leaders in Indonesia keen to protect forests, it allows for best practice to be shared and for local leaders to understand the political advantage that conservation and the money that backs it can confer.

LEAF comes at a time when big firms have grown more serious about escaping association with deforestation, and when international will is building to cut emissions. Sceptics are right to point out that unscrupulous loggers and plantation owners still have plenty of scope to game the system. But it is possible to think that the prognosis for South-East Asia's forests is no longer quite so grim.





Demography

Is China's population shrinking?

BEIJING

Leaks from the census say yes. Official media give mixed messages

THE COMMUNIST PARTY has long known that, partly as the result of its brutal birth-control policies, China's population would soon peak and start to shrink. It has been startled, however, by how rapidly that moment has drawn near. Now, it looks as if it might have arrived.

In November the country completed its ten-yearly census, and said it would announce the results in early April. As May arrives with no announcement, leaks suggest that the results have not been published because they are so shocking, and the party is in a flap about how to break the news. The *Financial Times* reported on April 27th that the census will show that the population has fallen below 1.4bn, still higher than the 1.34bn in the 2010 census, but lower than it was a year before.

Leaks are sometimes wrong, or reflect early estimates which are revised upwards. *Global Times*, a party newspaper, denied the report in the *Financial Times*, saying census results are "extremely unlikely" to

indicate shrinkage starting last year. Oddly, it said a result showing a lower population in 2020 than in 2019 is likely to be "a statistical error". The paper also acknowledged that a decline is likely to occur by next year. On April 29th, in a one-line statement, the National Bureau of Statistics said the population continued to grow in 2020. Either way, China's demography is raising difficult questions for the party.

In 2015 the government relaxed the one-child policy, allowing most people to have a second child. The birth rate briefly rose, but soon fell again. In 2019 the number of new sprogs was the lowest since 1961, when a Mao-made famine killed millions and

the population was half its present size.

A trickle of recent provincial data on birth numbers points in the same direction. Local figures on new birth registrations (separate from the census) offer a preview of what the census figures will probably show. For the first three quarters of 2020 the south-western city of Guiyang reported a 32% fall in births compared with the previous year. In the eastern city of Weifang births were down by 26% in the first half of the year. Hefty declines were reported elsewhere, unrelated to the coronavirus pandemic.

There are also indications that China's total fertility rate (the number of children a woman is expected to have in her lifetime) has dropped faster and further than previously thought. Chinese planners have assumed a rate of 1.8, but some Chinese scholars (and the World Bank) say it is between 1.6 and 1.7. A working paper released in March by China's central bank suggests the rate is no more than 1.5.

Such numbers make grim reading for the party. China's working-age population, defined as those between 15 and 59 years old, has been falling since 2011. Meanwhile the share of people aged over 60 has risen from 10.4% in 2000 to 17.9% in 2018. The latest guess is that by 2050 one-third of Chinese will be in their 60s or older. Supporting them will put a huge burden on the young, unless the oldies can be persuaded ➤

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to work longer. In a report published in 2019 the Chinese Academy of Social Sciences warned that China's main pension fund could run out of money by 2035.

A second demographic worry is the continued imbalance between men and women. Since the 1980s birth restrictions, combined with a preference for boys and easy access to prenatal scans, led to the widespread abortion of girls. In 2019 there were 30m more Chinese men than women and the disparity in the number of marriageable age will only grow. The government worries that young men who cannot find a mate may become a source of unrest.

Low birth rates will put more pressure on the party to abandon all its coercive birth-control policies. Fines still apply for having more than two babies, though enforcement varies. Lately the loudest calls for this have come from officials in the three provinces that comprise China's north-eastern rustbelt. Birth rates in Heilongjiang, Jilin and Liaoning are only about half the national average.

In February China's National Health Commission said those three provinces could start allowing people to decide for themselves how many children to have. That is a right people in other countries take for granted. But it is unlikely to boost the region's overall birth rate, or its flagging economy. A sociologist notes that local youngsters are fleeing to parts of China with better weather and more jobs.

"Most people want no baby or at most one baby, so even if you remove all the limits right now, it won't have much effect," says Zhang Xiaocheng of Duke Kunshan University. Chinese have grown accustomed to the idea of a small family. High costs for housing, health and education further discourage fecundity.

Child-rearing out of wedlock is both socially unacceptable and officially discouraged, even as young Chinese are delaying getting married or shunning it entirely. Last year the number of nuptials fell by 12% to a little over 8m, the lowest since 2003 and well down on the peak of 13.5m in 2013.

Neck and neck



In 2005 almost half of those who got hitched did so between the age of 20 and 24; in 2019 only about one-fifth did so.

Officials are keen on policies such as cash payments to encourage parents to have a second child. But evidence from the 50 countries trying to boost birth rates suggests that this is hard. Providing cheap child care is perhaps the most effective policy. But that is much more costly and complex to deliver than handouts.

James Liang, an economist at Peking University, believes that China's distorted demographics will limit the size of its market and talent pool and thus hinder its rise. China will never accept significant numbers of immigrants, he says, so America will have a big advantage. In the next ten or 20 years, China will continue to do well, but then America "will retake leadership and China will never catch up".

The falling birth rate will bring forward another battle. A new five-year plan includes vague proposals to increase China's retirement ages, which in cities is currently 60 for men and 55 or 50 for women, well below the rich-country average of 64. That will be deeply unpopular. And lengthening working lives also risks driving fertility down further, because many families rely on grandparents for child care. There are no easy ways out. ■



several presidents on China. He and many others see a desire for a new cold war in Washington. President Joe Biden's officials, like President Donald Trump's, talk of "strategic competition" with China, rather than co-operation.

Both parties on Capitol Hill strike a similar tone. A bill called the Strategic Competition Act passed the Senate Foreign Relations Committee on April 21st, promising to "counter the malign influence of the Chinese Communist Party globally". Analysts at think-tanks and in the media have written stratagems for containment and elegies for engagement.

Expertise about China is not necessary. Within government, analysts who once focused on war zones have pivoted to China. Those who preach moderation towards the Chinese government risk being tarred by the most strident hawks as apologists, their motives called into question. Esteemed China specialists who were previously called on by the White House for advice have fallen out of favour.

China's own actions have prompted the pushback. In the past decade the Communist Party has intensified repression at home, ramped up military activity in its near seas and, with its newfound economic heft, pursued an increasingly aggressive foreign policy. Meanwhile Xi Jinping, China's president, warned that China was engaged in an ideological struggle with the West, and that he would not tolerate dissent or unrest. His removal of term limits on his rule, the crushing of civil liberties in Hong Kong and the mass internment of Uyghurs in Xinjiang shocked many previously dovish analysts into hawkishness.

Former proponents of engagement are often now the loudest cheerleaders for the change in tone. "It was an illusion that China would change if we just sent more ballet troupes, more foundations, more academic exchanges, more journalists, more ►

Analysing China

Doves become hawks

NEW YORK

A big shift among China-watchers

WHEN RICHARD NIXON made his historic visit to Beijing in February 1972, he reassured Mao Zedong that neither of their countries had plans for global hegemony, meaning that they could work together and "find common ground, despite our differences".

Nixon's trip marked a shift not just in America's relations with China but also in the centre of gravity for analysis of the country in America. China-watchers moved towards a more doveish presumption that China did not pose a threat and a hope that engagement would mean it gradually becoming more like America. Nearly half a century on, the balance has shifted once again, towards a hawkish posture that, as in the cold war, stresses ideological competition. The relationship is as confrontational now as at any point in the 50 years since Nixon went to China.

"It doesn't take any bravery to be a China hawk today. It takes bravery to not be one," says a former official who advised

▶ trade," says Orville Schell of the Asia Society. "The message, and this is what the academic community is starting to understand, is that Leninism, if you have had many decades of it, is deep."

Under Mr Trump, America's national-security policy became focused on challenging China, by improving deterrence, especially in the South China Sea and the Taiwan Strait; by trying to stop Huawei, a Chinese telecoms giant, from building 5G networks around the world; and by rooting out Communist Party influence and espionage in America, subjecting an unknown number of academics and researchers with China links to scrutiny from the FBI.

Mr Trump appeared personally inclined to court Mr Xi and overlook or even applaud his repressive impulses. Yet the Trump administration was the first in the world to impose sanctions on Chinese officials and companies for their complicity in human-rights abuses in Xinjiang (the Biden administration would later co-ordinate further sanctions with its allies).

Dozens of American dissenters, including some prominent China scholars, pushed back in 2019 in an article in the *Washington Post* entitled "China is not an enemy". They argued that America was exaggerating the threat from China as an "existential" one, and that its confrontational policy would weaken the hands of moderates within the Chinese government. On both counts their arguments were dismissed by critics as a rehash of engagement-era tropes, in particular the notion that there exists a meaningful pro-reform faction within Mr Xi's Communist Party. The conversation about China in Washington remained unchanged.

In the summer of 2020 four Trump officials gave a series of speeches describing the Communist Party as a threat to freedom and democracy globally. And in January the Trump administration became the first government to declare that the atrocities committed against Uyghurs in Xinjiang constituted genocide, a view the Biden administration has repeated but other countries have generally not. Mr Biden has adopted the Trump hard line, with less fire-breathing rhetoric, about the contest between authoritarianism and democracy.

Public sentiment against China runs high, too, in America and among its democratic allies. Being tough on China will continue to be popular. What worries the moderates, and even some of the hawks, is how China will respond if it decides the Biden administration is, like the Trump administration appeared to be, locked in an adversarial struggle. The strategic rationale of Nixon's opening to China was that they had an adversary in common, the Soviet Union. Now America and China are left only with each other. ■

The movie business

Dissing Oscar

HONG KONG

Chloé Zhao discovers that trolls are shaping policy

WHEN CHLOÉ ZHAO WON Best Director for her film "Nomadland" at the Golden Globes in February, film buffs in China, the land of her birth, were ecstatic. State media proclaimed she was the pride of China. "Congratulations," gushed Zhang Ziyi, star of "Crouching Tiger, Hidden Dragon", on social media. "Look forward to the Oscars." Two months on, however, as Ms Zhao became the first woman of colour to win an Oscar for Best Director, and "Nomadland" scooped Best Picture, her name was nowhere to be seen.

What happened? The answer is a form of nationalist backlash that is increasingly common. Soon after Ms Zhao won the Golden Globe, internet-users dug up comments she had made in 2013, saying China is "a place where there are lies everywhere". Censors pounced, removing any mention of her from the Chinese internet.

Nationalist trolls have long been intolerant of speech they deem critical of China. The government is now endorsing these attacks, perhaps for fear of looking weak if it doesn't. It has intervened to cancel the distribution of "Nomadland" in China.

Ms Zhao is not the first to be dealt with in this way. In June last year Hao Haidong, a Chinese footballer who is the country's top scorer and now lives abroad, said that the Communist Party's rule "has caused horrific atrocities against humanity". Chinese websites swiftly deleted his name.

In 2020 Fang Fang, a writer who kept a

diary throughout Wuhan's lockdown, was read by tens of millions across the country. But once it was announced that an American publisher was translating her diary into English, she was labelled unpatriotic and faced an online onslaught. Her writing has been shunned by Chinese publishers and media outlets. "This is the trolls winning," says Michael Berry, who translated Ms Fang's work. "These attacks can escalate to the point they result in actual political decisions."

China also has a broader agenda: to promote homegrown movies and weaken American cultural dominance. The era of seeking validation from Hollywood may be over, says Ying Zhu of the City University of New York. And an increasingly rocky relationship with America is causing the Communist Party to be less obsessed with international awards. Nine out of China's ten top-grossing films this year were Chinese. The Oscars, argued a recent newspaper editorial, are "still dictated by Western tastes and standards". China, it said, should have its own awards ceremony.

That may already be under way. Since 2019, China has banned all mainland filmmakers from attending the Golden Horse Awards in Taiwan, formerly the leading Chinese-language festival, after one award winner called for Taiwanese independence. It even scheduled its own version, the Golden Rooster awards, on the same night, forcing film-makers to choose.

The party's treatment of Ms Zhao is a missed opportunity for the country to promote its soft power. As the relationship between America and China has worsened, bicultural, bilingual artists such as Ms Zhao could be providing an important bridge. In her acceptance speech, she spoke warmly about memorising Chinese poetry with her father as a child, and she switched into Mandarin to quote a famous line from classical Chinese.

But the authorities have a long history of censoring Chinese artists, including "Fifth Generation" film-makers, such as Zhang Yimou and Chen Kaige. Mr Zhang's latest film, "One Second", was withdrawn at the last minute from the Berlin Film Festival in 2019 for "technical reasons".

In the end, as with all good movies, there may be room for redemption. After the Oscars, *Global Times*, a nationalistic newspaper, published an English-language commentary praising Ms Zhao for her warmth towards her Chinese roots and saying she could have a "mediating role".

Ms Zhao's next film as director is "The Eternals", a superhero movie from the Marvel franchise. Its producers will be hoping the film also does well in China, now the biggest market in the world. The fact that Ms Zhao is Chinese may have been part of her attraction to them. She is now looking more like a liability. ■



Chloé Zhao, on the road



Diplomacy disrupted

The Zoom where it happens

Even more than most people, diplomats have had to adjust the way they work during the pandemic. And as in other areas, this is accelerating change

WHILE ASSORTED G20 "Sherpas", officials who do the donkey work on summits, gathered in Dhahran in Saudi Arabia in March last year, lockdowns were starting and international travel was stopping. A scramble to get home began. But within weeks, after some teething troubles with videoconference technology, the Sherpas were conducting talks over Zoom and Webex, and their bosses were holding a leaders' summit by video. Diplomacy had gone virtual.

"For a long time we've been talking about the advent of digital diplomacy," says Jonathan Black, Britain's sherpa. "It has really now arrived." Over the past year diplomats have all but abandoned big multilateral meetings in the flesh. The United Nations General Assembly (UNGA), which normally clogs up New York for two weeks in September as thousands of delegates jet into the city, became a more modest affair with leaders joining via screens.

In the parts of the world that have secured vaccines "in-person" diplomacy is slowly restarting. When Dominic Raab, Britain's foreign secretary, hosts fellow G7

foreign ministers for "covid-secure" talks in London on May 3rd-5th, it will be the first time the group has met in the same room since they did so in Saint-Malo in France in April 2019. Current plans envisage that the full G7 summit in Cornwall in June, and a NATO one in Brussels immediately afterwards, will be in-person too.

In the meantime, a great experiment in virtual diplomacy has been under way. In February, for example, Joe Biden held his first summit meeting as president, with Justin Trudeau of Canada, by videoconference. Without leaving the White House, he has since joined a virtual meeting of fellow G7 leaders hosted in London in February—cyber-hopping across to Germany on the same day to speak at the Munich Security Conference—as well as the inaugural summit of the "Quad" (America, Australia, India and Japan) in March. In April he brought together 40 world leaders on screen for a climate summit. Diplomats everywhere, accustomed to ceaseless flying around the world, have spared the national coffers and done their bit to save the planet by cutting out travel.

"Diplomacy has not stopped; it's accelerated in some respects," says Nicholas Burns, a former ambassador, now at Harvard University. Communiqués have been agreed upon, resolutions passed, relationships nurtured. In some respects diplomats have probably never been busier.

Hurdles have had to be overcome. At the UN, Russia has refused to accept anything other than physical presence for the Security Council, depriving virtual meetings of formal status. That has slowed things down. Since the seats in the council are not sufficiently socially distanced, a system had to be worked out for voting by emailed letters. With receptions and other forms of entertainment ruled out, diplomats have had to adapt. Instead of the usual dinner to mark their stint as president of the Security Council in February, for example, the British distributed picnic baskets to other missions—placing an unusual amount of diplomatic weight on Branston pickle and Fortnum & Mason tea.

The main workarounds, however, have involved not tea but technology. Zoom, Microsoft Teams and other platforms have both enabled diplomacy to continue and opened new possibilities for efficiency and reach. "We're a lot better off now because of covid, in terms of diplomacy and mediation, because we've been forced to think more carefully about how to do our job," says Martin Griffiths, the UN's special envoy for Yemen. "It's a huge seismic change to the way we do business."

It is not the first time that technology ►►

has transformed the world of diplomats. Ambassadors used to be "the equivalent of ship captains", says Charles Freeman, a former American ambassador, now at the Watson Institute for International and Public Affairs at Brown University. "They were far away and not subject to control." At the Congress of Vienna in 1814-15, the British foreign secretary, Lord Castlereagh, enjoyed great autonomy, since letters to London might take four to six weeks to arrive. "I did not wait for instructions at Vienna," he later told Parliament. "I took upon myself the responsibility of acting."

The telegraph changed all that. News and instructions travelled instantly, to generals in battle and diplomats in embassies. Envoys bemoaned their loss of autonomy (one British diplomat lamented the "telegraphic demoralisation of those who formerly had to act for themselves"). Diplomatic power became more centralised.

The pace could still be leisurely. Winston Churchill fished with Franklin Roosevelt and painted with Dwight Eisenhower. Leaders invested time "tending the diplomatic garden", as George Shultz, America's secretary of state under Ronald Reagan, put it. In his final year in office, in 1988, Shultz undertook an eight-country, three-week tour of Asia, "unthinkably long by today's standards", recalls Mr Burns, who accompanied him.

Cables and wireless

Since then, air travel and the demands of the news cycle back home have led to shorter summits and a general acceleration of diplomacy. Email and social media have further speeded things up, often bypassing careful drafting and clearance procedures developed to avoid mistakes. Under the presidency of Donald Trump, an impulsive tweet could short-circuit the best-laid diplomatic plans. Modern diplomats have had to adjust to "the annihilation of distance and the compression of time", as Mr Freeman puts it.

Now covid-19 has shaken things up still more. For one thing, it has played havoc with foreign services' plans and personnel. At the top, foreign trips have been scaled right back (see chart). Down the ranks, many diplomats have been withdrawn from their posts because of health precautions, or find themselves on extended tours without their families. The pandemic itself has also become a core element in diplomacy, whether as part of soft-power manoeuvring between America, China and Russia, or among allies in tensions stoked by vaccine nationalism. But its longer-term impact will probably be on how diplomacy is conducted, changing practices in three important ways.

First, in the often staid world of diplomats, it has accelerated the adoption of technological tools. Videoconferencing



and other means of direct communication, especially via WhatsApp and (for greater security) Signal, have been used more widely. Foreign services' investment in secure video technology is expected to grow.

Martin Waehlisch, who leads an "innovation cell" at the UN in New York, says the pandemic has boosted adoption of virtual-reality (vr) technology to give decision-makers in New York a sense of what it is like to be on the ground in conflict zones. He sees this as "the future of briefings", replacing the traditional reports in "Times New Roman, single-space, black-and-white block text". "Iraq 360", a vr experience to help mobilise donors, showed the possibilities in 2019. Now the restrictions on travel have led to an investment in other immersive storytelling projects as an extra format for briefing the Security Council. Such projects are under way for Yemen, Sudan and Colombia. Mr Waehlisch hopes this will become standard practice.

The second change is improved productivity, thanks to videoconferencing. Interacting with people around the world has become a lot simpler. "I've been able to reach out to more people because I'm not

constantly in an airport or on the road," says Rosemary DiCarlo, the UN's undersecretary-general for political affairs. Thanks to Zoom and other platforms, it has become possible for diplomats and political leaders to show up for speeches and meetings that they would almost certainly not have attended had their physical presence been required.

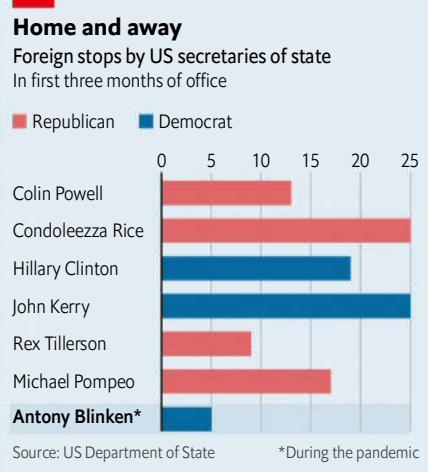
For example, 12 foreign ministers and a prime minister might not have flown to New York in February to discuss global vaccine access, but they did all take part in a virtual Security Council meeting on the subject. Scott Morrison, Australia's prime minister, would hardly have travelled from Canberra to the Rocky Mountains just to address the Aspen Security Forum, as he did last August. It takes months of planning to assemble all the people necessary for a G20 or ASEAN gathering, but you can bring presidents and prime ministers together on a video screen with relative ease. For peace talks, too, virtual platforms make it possible to bring in people who probably wouldn't find the time to get on a plane and spend several days cloistered in Stockholm or Geneva.

Virtual meetings also cut out a lot of the formalities and pomposity of traditional diplomacy. They are "a great leveller", says a diplomat from a UN Security Council member: "They're in their bedroom and you're in your bedroom." In the bigger gatherings, officials feel less need to be loquacious than when they have the floor after travelling for a day to deliver a message. As a result, they can sometimes achieve much the same outcome, insiders say, only faster.

Blessed are the peacemakers

The third change may be the most important: the pandemic has accelerated experiments in ways to include a wider range of voices in peace efforts. For some time "inclusivity" has been a buzzword in the world of conflict resolution. Diplomats know that peace processes are often perceived as being imposed from above, or from outside, and that any such deals may not enjoy widespread support. A number of private-diplomacy outfits, such as the Centre for Humanitarian Dialogue (hd), based in Geneva, have worked to facilitate the involvement of grassroots representatives, including women and young people. But the logistics can be hard. Getting a handful of women from a conflict zone to Switzerland for a few days of discussion is a challenge at the best of times. During a pandemic it can be an impossibility.

So mediators turned to technology—and found relatively quick and easy ways to bring in people who are not normally consulted on a political or peace process. Diplomats are now excited about the potential. "This should become a standard





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EVENTS

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Restoring global trade after covid-19

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part of how we operate," says Ms DiCarlo. Her innovation cell in New York repurposed a commercial tool normally used for market research to develop the ability to conduct what it calls "large-scale synchronous dialogues". These digital focus groups feel like a texting chat, but have the scale of an opinion poll.

The first experiment was in Yemen. A regular poll with 20-30 questions in that country would cost €250,000 (\$300,000) and take a month to get the answers, according to Mr Waehlisch of the innovation cell; the digital dialogue cost only a modest consultancy fee for the question design, and produced results instantly. "It's quite extraordinary for the UN to be in the forefront of this stuff," says Mr Griffiths, the envoy for Yemen. "It's terrific, it's 21st-century diplomacy, because of course it gets away from men in rooms."

The absence of alternatives

Libya shows the impact this can have. Last year the pandemic pushed negotiations between the country's rival forces onto video platforms—Zoom for the political dialogue, Teams for the military track. In the summer, with the help of HD's mediators, a physical meeting in Montreux led to a road map for reconciliation, the Libyan Political Dialogue Forum (LPDF). Stephanie Williams, at the time the UN's acting special representative for Libya, realised she needed to expand the numbers in the dialogue for it to be more representative.

In September she started doing big Zoom sessions with mayors, women's groups and youth activists; representatives of each group reported back to the LPDF, giving their suggestions. In all, Ms Williams says, some 200 women took part, as well as 100-150 young people and the majority of Libya's 130 municipalities. And then, between November and January, she held five digital dialogues, averaging over 1,000 people for each one, typing back and forth in Arabic. "It really took off with the Libyans," says Ms Williams. "And it turned out to be a great tool."

The dialogues included spot polls, which confirmed a lot of what she knew Libyans wanted from the political process, "but we were also able to use it to push the political class, to say, hey, it's not just the UN mission that's saying what Libyans want." In particular the dialogues were useful in pressing the need for unified institutions before elections, which are planned for December. In giving Libyans a voice, the UN's diplomats reckon, the Zoom calls and dialogues not only boosted confidence in the peace process but improved the prospects for it lasting. An opinion poll (of the traditional sort) in February by Diwan Research found that 71% of Libyans were satisfied with the LPDF process to select a new government, and 68%

deemed the process fair and transparent.

Sooner or later these tools would have been put to use in diplomacy. But the constraints of covid-19 had the effect of hastening their adoption, in Libya saving valuable time. "I don't think that we would have considered things like the digital dialogues had it not been for the pandemic," Ms Williams says.

Even enthusiasts for the new possibilities of digital diplomacy, however, are keenly aware of its limits. Building a rapport is harder on Zoom than in person. Samantha Power, when appointed by Barack Obama to be America's ambassador at the UN, went to the trouble of paying a visit to each of her 192 fellow mission heads (with the sole exception of North Korea's), an investment in relationships that could no doubt be done far more easily today by Zoom, but with much less impact.

Part of what is missing are the signals you can pick up about an interlocutor in a physical meeting: the visible reaction. "When you ask a tough question, do they blanch or do they back up, do they lean into it?" says Mr Burns of Harvard. "You're not going to get that on Zoom."

And the really hard part of a negotiation is best done in person. If things aren't going well, a chat at the bar, or a stroll in the grounds, may help create a breakthrough. The plus side of virtual meetings, the efficiency gains, are also their minus side: you lose the time spent on the margins, the space for informal conversation that helps to establish trust. Difficult messages, often the stuff of diplomacy, can be delivered with more nuance, and less lasting damage to a relationship, face to face than when struggling with a poor connection. At a distance, diplomats say, it is easier to camp on a red line than when you are in the same room. Confidentiality is another concern: "The most delicate issues aren't amenable to virtual," says Mr Griffiths.

For all these reasons the toughest agree-

ments—such as Britain's Brexit deal with the EU—and the hardest conversations will still have to be worked out in person. It is one thing for the White House to convene world leaders to make worthy on-screen statements about tackling climate change, as happened on Earth Day in April. It is another to cajole and corral countries into a difficult agreement, as happened in the negotiating rooms at COP21, the Paris climate summit in 2015. Hence the hope that COP26 in Glasgow later this year can be held in person too.

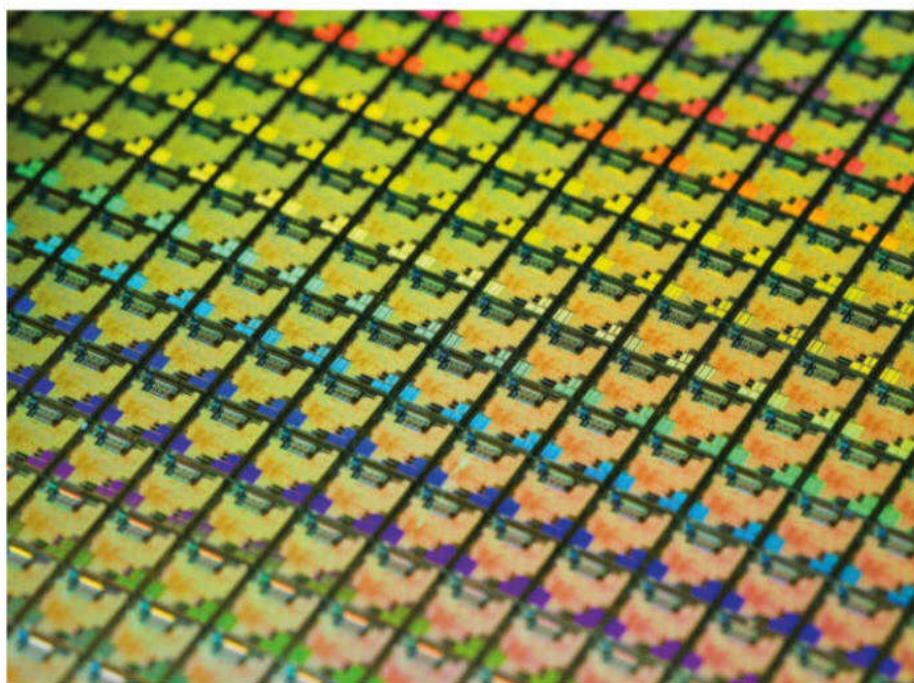
So physical summits will not end. Neither is the role of the resident ambassador under serious threat, despite the ease of direct digital communication between governments. Diplomats insist there is still no substitute for that man or woman sitting in the foreign capital, soaking up the culture, the politics, the media, the arguments, and being the acknowledged interpreter of that culture back home.

Diplomatic immunity

But any complacency about a simple reversion to pre-pandemic habits of diplomacy would be misplaced, just as it was after previous disruptions such as the telegraph and the jet plane. The big diplomatic jamborees of the past, such as UNGA, may never return in quite the same way. Digital tools, from virtual meetings to inclusive focus groups, have proved their worth. The diplomatic handbook is ready for a rewrite.

Covid-19 has hastened the arrival of hybrid diplomacy, a blend of the physical and digital. Quite what the ideal mix turns out to be has yet to be worked out, but it is something international negotiators and foreign services are starting to think through. In America Mr Biden and his secretary of state, Antony Blinken, want to reinvest in a State Department that had been badly neglected. The money and training should go on preparing for tomorrow's diplomacy, not yesterday's. ■





Taiwan Semiconductor Manufacturing Company

Living on the edge

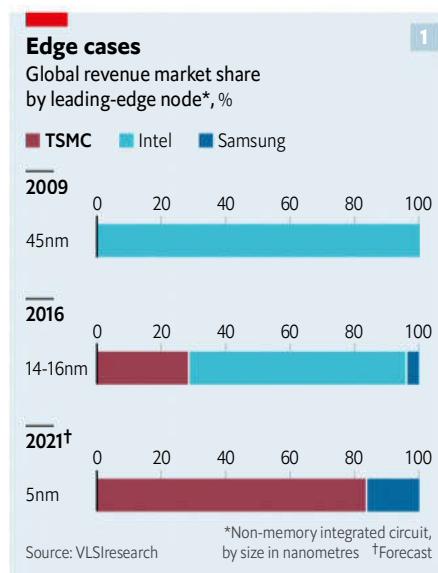
The world's biggest chipmaker is learning how to thrive amid the Sino-American tech war: make yourself indispensable

CHIPMAKERS' CRAFT can seem magical. They use light to stamp complex patterns on a dinner-plate-sized disc of crystal silicon, forming arrays of electric circuits. Once cut out of the disc, each array is called a chip. The chip's job is to shuttle electrons in a mathematical shimmer prescribed by computer code. They do the maths which runs the digital world, from Twitter and TikTok to electronics in tanks. Without them, whole industries cannot function properly, as carmakers forced to pause production because of microprocessor shortages are discovering.

The most important firm in this critical business is Taiwan Semiconductor Manufacturing Company (TSMC). It controls 84% of the market for chips with the smallest, most efficient circuits on which the products and services of the world's biggest technology brands, from Apple in America to Alibaba in China, rely. As demand for the most sophisticated chips surges thanks to the expansion of fast communication networks and cloud computing, TSMC is pouring vast additional sums of money into expanding its dominance of the cutting edge.

This has proved to be a successful business model. Last year TSMC made an operating profit of \$20bn on revenues of \$48bn. It is, in the words of Dan Hutcheson

of VLSIresearch, a firm of analysts, "the Hope Diamond of the semiconductor industry"—and, with a resplendent market capitalisation of \$560bn, the world's 11th-most-valuable company. It is also an astute geopolitical actor, navigating the rising Sino-American tensions, including over the fate of its home country, which China claims as part of its territory and to which



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America offers military support. In 2020, 62% of TSMC's revenue came from customers with headquarters in North America and 17% from those domiciled in China. It has managed the geopolitical divide by making itself indispensable to the technological ambitions of both superpowers.

TSMC was founded in 1987, and for the first quarter-century it made mostly unremarkable microprocessors. That began to change in 2012, with its first contract to make powerful chips for the iPhone. Apple wanted TSMC to push its manufacturing technology as far and as fast as it could, to gain an edge over rival gadget-makers. The notoriously secretive American firm liked the way Morris Chang, TSMC's founder, made trade-secret protection one of his priorities; guests to TSMC premises would have their laptops' USB ports sealed even if they only visited a conference room.

Two years later the Taiwanese firm's chips were powering the iPhone 6, the best-selling smartphone of all time. Revenue from the 220m units sold kick-started TSMC's ascent. Some of Apple's competitors also used TSMC as a supplier, and wanted the same thing. All paid handsomely for the chipmaker's efforts.

This windfall set TSMC steaming ahead. It overtook Intel, the American giant which once enjoyed a monopoly on the leading edge, then left it in the dust (see chart i). Its remaining rival in top-flight chips, Samsung of South Korea, is barely able to keep up. Such is TSMC's manufacturing prowess that Peter Hanbury of Bain, a consultancy, reckons it has given Moore's Law, the industry's prediction-cum-benchmark of doubling processing power every two years or so, at least another 8-10 years of life. ➤

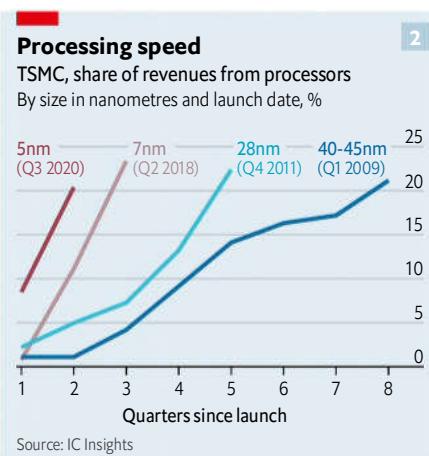
Its lead over rivals is growing. It is pouring cash into cutting-edge chip factories (known as fabs) at an unprecedented rate. In January it said it would raise its capital expenditure to \$25bn–28bn in 2021, up from \$17bn in 2020. In April TSMC raised the figure again, to \$30bn; 80% will go on advanced technologies. It plans to spend \$100bn over the next three years.

It has also stopped cutting prices—which in chipmaking, where processing power has only got cheaper, is tantamount to raising them. Its chief executive, C.C. Wei, has said it will skip a planned price cut in December 2021 and keep things that way for a year. IC Insights, a research firm, calculates that TSMC can charge between twice and three times as much per silicon wafer made using its most advanced processes, compared with what the next-most-advanced technology will fetch.

This creates a positive feedback loop. Developing the latest technology before anyone else allows TSMC to charge higher prices and earn more profit, which is ploughed back into the next generation of technology—and so on. The cycle is spinning ever faster. Four technological generations ago it took TSMC two years for those cutting-edge chips to make up 20% of revenues; the latest generation needed just six months to reach the same level (see chart 2). Operating income, which grew at an average rate of 8% year in the decade to 2012, has since risen by 15% on average. Combined with revenues that chip-designers make from semiconductors ultimately forged by TSMC, the company and its customers account for 39% of the global market for microprocessors, according to VLSI-research, up from 9% in 2000 and a third more than once-dominant Intel.

This is an enviable position to be in. But it is not an unassailable one. The experience of Intel, which has fallen behind in the last two generations of chips because of technological missteps, shows that even the most masterful manufacturers can trip up. Chipmaking is also notoriously cyclical. Booms lead to overcapacity, and to busts. Demand may slacken as the rich world emerges from the pandemic, when purchases of gadgets that made it possible to work and relax at home were brought forward. That would hit TSMC's bottom line and strain its balance-sheet. The company has \$13bn of net cash, a modest rainy-day fund for a big tech firm. To help finance its most advanced fabs, it has issued \$6.5bn-worth of bonds in the past six months.

The most serious danger to TSMC comes from the Sino-American ructions. The company's position at the cutting edge offers a buffer against geopolitical turmoil. Chip-industry insiders say that the Taiwanese government encourages all its chipmakers, including TSMC, to keep their cutting-edge production on the island as a



form of protection against foreign meddling. Taiwanese contract manufacturers account for two-thirds of global chip sales.

Reflecting this, 97% of TSMC's \$57bn-worth of long-term assets reside in Taiwan (see chart 3). That includes every one of its most advanced fabs. Some 90% of its 56,800 staff, of whom half have doctorates or masters degrees, are based in Taiwan.

The firm has made soothing noises to America and China, offering to invest more in production lines based in both countries. But it is hard not to see this as diplomatic theatre. Its Chinese factory in Nanjing, opened in 2018, produces chips that are two or three generations behind the cutting edge. By the time its first American fab, designed to be more advanced than the one in Nanjing, is up and running in 2024, TSMC will be churning out even fancier circuits at home. By our estimates, based on disclosed investment plans, the net value of TSMC's fabs and associated equipment will roughly double by 2025, but 86% will still be in Taiwan.

In the past three years the American government has begun to disrupt the delicate balance. It has tightened export controls that prohibit any foreign company from using American tools to make chips for Huawei, a Chinese technology giant. That applies to TSMC, which in 2019 sold

more chips to Huawei than to any other customer bar Apple. Most of these were destined for smartphones, and other Chinese handset-makers such as Oppo happily snapped up what Huawei (which on April 28th reported its second year-on-year decline in quarterly revenues in a row) could not.

Further American attempts to prevent TSMC from doing business with China could invite meddling by the regime in Beijing, which refuses to rule out taking back Taiwan by force (see Briefing). President Joe Biden's administration has also announced a \$50bn government plan to revive chipmaking at home: it is doubtful whether subsidies will restore Intel's supremacy, but the initiative could involve putting more pressure on TSMC to put cutting-edge production in America, a strategic trap the firm has been keen to resist.

The rival powers have so far refrained from interfering with TSMC directly, perhaps concluding that this is the most reliable way of achieving their technological objectives. If the chipmaker's importance keeps growing, one of them may decide that it is too valuable to be left alone. ■

Digital advertising

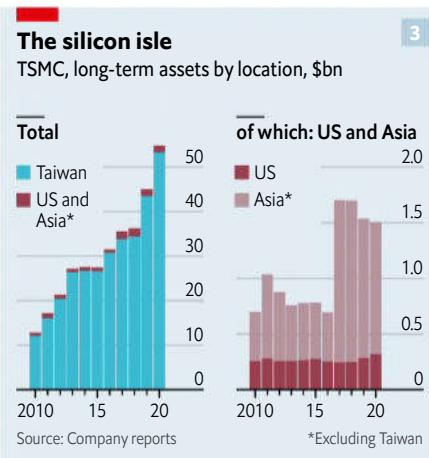
Flying blind

Apple's privacy rules force marketers to find new ways to target ads

ONLINE SHOPPERS often feel they are being watched. Put an item in your basket but fail to buy it, and it may follow you plaintively around the internet for days. Announce your engagement on social media and you will be hit with adverts for the honeymoon. As you turn 40, expect the attention of elasticated-trouser merchants.

On April 26th Apple, which supplies one-fifth of the world's smartphones and around half of America's, introduced a software update that will end much of this snooping. Its latest mobile operating system forces apps to ask users if they want to be tracked. Many will decline. It is the latest privacy move forcing marketers to rethink how they target online ads.

By micro-profiling audiences and monitoring their behaviour, digital-ad platforms claim to solve advertisers' age-old quandary of not knowing which half of their budget is being wasted. In the past decade digital ads have gone from less than 20% of the global ad market to more than 60%, according to GroupM, the world's largest media buyer. Even last year, amid the pandemic, the business grew by 9%. As lockdowns ease it is going gangbusters. On ►



► April 27th Alphabet, Google's parent company and the world's biggest digital-ad platform, reported first-quarter advertising revenues up by 34%, year on year. The next day Facebook, the second-largest, said its own ad sales had grown by 46%.

Stronger privacy protections may make their ads less effective. In 2018 the EU imposed its General Data Protection Regulation (GDPR) and America's most-populous state introduced the California Consumer Privacy Act. Both made it harder to harvest users' data. Since 2020 Apple's Safari web browser has blocked the "cookies" that advertisers use to see what people get up to online. Google has similar plans for its more popular Chrome browser.

Apple's latest change makes explicit an option that was previously hidden deep in its phones' settings. Users can forbid apps to access their "identifier for advertisers" (IDFA) code, which singles out their device, and from tracking their activity across other firms' apps and websites. It amounts to a "seismic shift" in in-app advertising, says Jon Mew, head of the Internet Advertising Bureau, an industry body.

The platforms best-placed to survive the shake-out are those with lots of consumer data of their own. Google's \$147bn ad business gets most of the information it needs from the terms users type into its search bar. Amazon, whose digital-ad business is the third-largest and growing fast, has the advantage of being able to track what people buy after seeing ads on its site—a "closed loop", as marketers call it. Apple knows where iPhone-users go, what time they wake up and much besides. It has a small but growing ad business, selling prominence in its app store, for instance.

For Facebook, which knows more about its users' interests than about their shopping needs, Apple's changes are more worrying. In August it warned they might reduce revenues at its Audience Network, through which it sells ads to other apps, by as much as 50%. But the Audience Network represents less than a tenth of its business. Thanks to its intimate knowledge of users, it will still be better at targeting than almost anyone else. "In a world with a lot less data, who has relatively more?" asks Brian Wieser of GroupM. The effect of GDPR was, if anything, to increase Facebook's and Google's market shares, he adds.

To improve its tracking of purchases, Facebook is moving to create a closed loop of its own. Last year it introduced Facebook Shops on its flagship social network and Instagram Shops and its sister photo-sharing app. Mark Zuckerberg, Facebook's boss, speculated in March that "we may even be in a stronger position if Apple's changes encourage more businesses to conduct more commerce on our platforms, by making it harder for them to use their data...outside of our platforms".

Not every ad platform will be able to adapt as easily. Smaller publishers with fewer data and resources will suffer, believes Nicole Perrin of eMarketer, a research firm. Publishers that rely on third-party cookies will be hit hardest. The day Apple launched its new policy, a group of German publishing companies lodged a legal complaint with Germany's antitrust authorities. Small platforms may also find it harder to persuade phone users to trust them with their data. AppsFlyer, an ad-tech company, found that iPhone users agreed to tracking from shopping and finance apps more than 40% of the time, but 12% of the time with casual gaming apps.

The inability to share data is forcing advertisers to come up with new ruses. One is to bypass rules banning data transfers between ad-tech companies by consolidating. In February AppLovin, a mobile-software firm, acquired Adjust, which provides mobile-ad attribution, reportedly for \$1bn. Another is to ask users to "sign in", which lets an app monitor their behaviour with no need for IDFAs. And instead of targeting individuals, marketers can target broader interest groups—coffee lovers,

Daily Mail readers, and so on—much as they did in the pre-internet age. It's "back to the future", says Mr Wieser.

Stripped of accurate ways of measuring their impact, "direct-response ads" that require consumers to take an action (like clicking) lose their appeal. Advertisers will again have to gauge ads' effectiveness by looking for a rise in sales in a region where an ad ran but not elsewhere. Because campaigns that promote general awareness of a brand never benefited as much from tracking, platforms which mostly attract brand advertising will not feel much difference. Snap, whose social network, popular with teenagers, belongs to that group, posted a year-on-year rise in revenues of 66% in the first quarter.

The less advertisers know about their audience, the costlier advertising will become. Facebook has argued this will hurt small businesses. It is probably right, thinks William Merchan of Pathmatics, a data company. Digital ads promise to cut waste in media buys, he says. Now that advertisers are again in the dark about which half of their budget is wasted, they are "going to have to just spend more". ■

The steel industry in India

White hot

The covid-ravaged economy's surprising bright spot

STEELMAKERS HAVE for decades embodied India's failed plans for prosperity. Post-independence socialism produced many mills but little steel. A partial privatisation in the 1990s created capacity, but also large firms fed by feckless state-backed lending. Many were subsequently exposed as bankrupt. Even well-run private producers stumbled, as Tata Steel did with its

disastrous acquisition in 2007 of Corus, a troubled European rival. Demand subsequently declined at home and aggressive Chinese rivals expanded abroad.

Then came covid-19. In March 2020 India imposed the strictest lockdown of any large economy. For an industry reliant on mills not designed to sit idle, and on the physical shipment of bulky slabs and coils, this spelled disaster. JSW, a rare success, filled its blast furnaces with coking coal to preserve heat, but not with ore; 14,000 workers completing an expansion of its mill in Maharashtra state dispersed to their villages. "There was no market," recalls Sajjan Jindal, JSW's chairman.

The market has since come back with a vengeance. In the past year steel prices have nearly doubled in India, doubled in Europe and China, and more than trebled in America. Surveys by Edelweiss, a Mumbai-based broker, show them heading up. Even Tata's European business is now profitable. With efficient plants running at near-full capacity, the share prices of big Indian steelmakers have outperformed those of rivals elsewhere (see chart).

To understand how they pulled it off, ►





On a roll, despite everything

▶ look at jsw. Despite the uncertainty of the early pandemic, Mr Jindal took a gamble and immediately began planning for a re-opening: "I was eager to restart, so we did." The firm lengthened shifts to reduce the flow of people in and out, and transformed schools and clinics it runs into dormitories and covid-19 treatment centres. The firm tapped out its credit lines, increasing debt from \$6bn to \$7bn. But after a three-week lull, jsw was up and running again.

Its Indian rivals followed a similar script. Those in Japan, South Korea and Russia were slower to get back in business. Tight supply propped up prices, even as pockets of high demand persisted in places spared the worst of covid-19, such as China, Vietnam and parts of Africa. By July domestic demand in India had begun to recover, as good harvests prompted farmers to buy new tractors. Construction, which uses steel and heavy machinery made from it, took off after the first viral wave subsided. Enough of jsw's workers returned to complete the expansion in Maharashtra.

Things may be about to get harder. Foreign competitors are back in operation. India is in the throes of a new, deadlier wave of covid-19 that may prompt another nationwide lockdown. In the long term, many countries are getting more serious about climate change, threatening tariffs on carbon-intensive goods such as steel.

Yet prices of both steel and Indian steelmakers' shares remain stubbornly high. China seems keen to close its most environmentally toxic plants, which could crimp Chinese production. Jefferies, an investment bank, expects China to import more steel than it exports in 2022—some of it doubtless from India. America's government, and others, are planning big infrastructure splurges. With tensions between China and the West mounting, the world's industrial giants may seek alternative suppliers in friendlier places. For those Indian steelmakers that withstand covid-19's resurgence, the future has not looked this bright for years. ■

Commercial property

Safe as warehouses

Developers struggle to meet demand for storage space

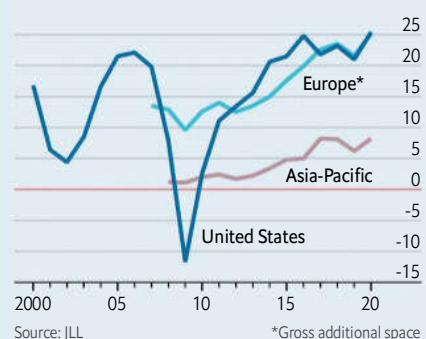
WANDER THROUGH central and east London, and you find traces of the East India Company. In its 274-year history, the rapacious colonial-era trader tore down poor houses, replacing them with sprawling depots to store tea, silk, spices and other exotic wares. Today those same sites are occupied by offices, restaurants and flats. Soon, they could once again be stacked with merchandise. A large plot near the historic East India Docks, which once processed goods from India and China, is being converted to a mix of flats and warehouse space dubbed Orchard Wharf.

The pandemic e-commerce boom has fuelled demand for warehouses. In 2020 firms in Europe leased 16% more new logistics space than the year before, according to JLL, a property consultancy. In America and Asia the rise was 21% and 32%, respectively (see chart). Some firms, like supermarkets or medical-supplies makers, needed more storage to meet offline demand. But one in four new leases signed last year in Western countries was linked to online shopping, reckons JLL, up from 12% in 2019. In China it was one in three.

CBRE, a real-estate firm, estimates that a 5% increase in retailers' inventories in America requires up to 46m square metres of additional warehouse space—enough to cover roughly three-quarters of Manhattan. And those inventories are growing fast as retailers go digital. Online retail typically needs three times as much space as the physical sort, because internet shoppers expect a wider variety of goods. Vacancy rates have therefore plummeted, from 10%

Seeking fulfilment

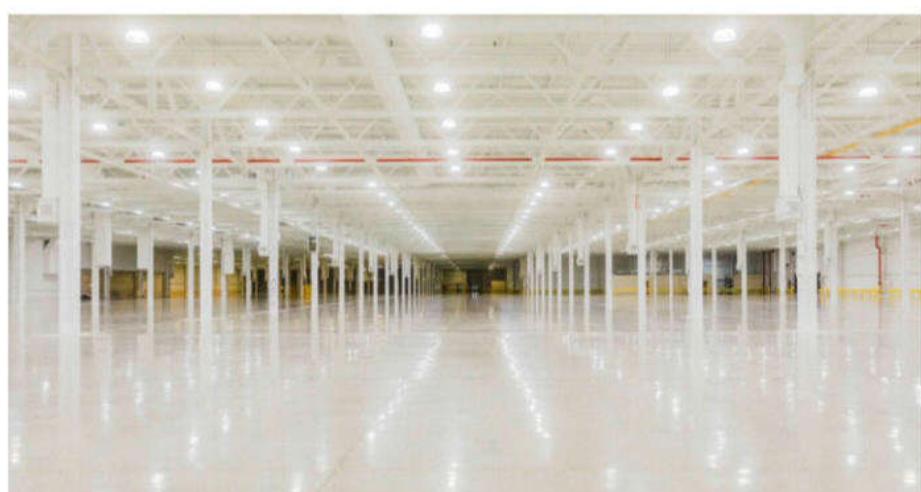
Logistics property, net additional space leased
Square metres, m



across America and Europe a decade ago to just 5% now. In some places, like Toronto and Tokyo, they are below 2%.

The value of existing assets is ballooning as a result. The gross assets of Prologis, a leading warehouse developer, are worth \$10bn more than six months ago. This in turn is luring more investment. JLL calculates that purchases of logistics assets went from a tenth of global property investments in 2015 to a fifth last year. In 2020 Amazon increased square footage across its fulfilment and logistics network by an unprecedented 50%.

This building frenzy is now starting to run up against obstacles. The first is scarcity of space, especially in densely populated cities. Half of San Francisco's industrial land was converted to residential and office space between 1990 and 2008. Between 2006 and 2015 London lost 11% of its industrial land. The problem has grown so acute in parts of Germany that delivery lorries operate from sites across the border in Poland and France. High costs, restrictive zoning rules and current tenants make it difficult to convert existing properties, such as struggling shopping malls, into distribution centres. Prologis forecasts that retail conversions will make up just ►►



White space

► 0.75% of the overall logistics stock over the next decade.

Public hostility to new sites is also growing. Large warehouses are noisy and operate around the clock. Suburban homeowners across America and Europe worry about pollution from lorries. Even where developers pledge thousands of jobs, politicians grumble that these will be low-skilled, or soon replaced by robots. Five Conservative MPs have called on Britain's government, run by their own party, to stop a huge warehouse from being built in south-east England.

Warehouse owners are getting more creative. SEGRO, a big British one, is redeveloping unused space beneath a Parisian railway station. Amazon is flipping former golf courses in America into distribution centres. The online giant is also converting an empty car park in central London into a delivery hub. Hybrid developments like Orchard Wharf are proliferating.

Less creatively, developers are raising rents. Prologis expects them to go up by 6% globally this year. That may dismay e-merchants. Not investors, though: the share prices of Prologis and SEGRO have nearly doubled since the start of 2019. ■

Wood products

Forest bump

OSLO

Ever more money grows on trees

IN THE BUCOLIC low-rise surroundings of Norway's biggest lake, Mjostarnet stands out. At 85 metres tall, this building of flats, offices and a hotel, completed in 2019, is Norway's third-tallest. It is the highest in the world built of wood. Similar structures have sprung up in other countries. So, in many more places, have wooden additions to existing buildings, which weigh around a fifth of what an equivalent steel-and-concrete one would, and therefore risk less damage to the building below.

Mjostarnet stands as a proud example of wood's comeback after a century of steel, concrete and plastic. Global exports of forest products, including sawn wood, pulp and paper, grew by 68% between 2000 and 2019, to \$244bn. Demand is reaching redwood-like heights, fertilised by a pandemic DIY boom. Having ranged between \$200 and \$400 for much of the past decade, the price of 1,000 square feet of one-inch-thick timber has exceeded \$1,400—and hoisted the share prices of wood producers up with it. The stockmarket value of many big ones such as Weyerhaeuser has roughly doubled in the past year; the



Trees for the wood

American giant is now worth \$30bn.

Mark Wilde of the Bank of Montreal expects more saw mills to come online in response. They will be different to those of the past, for the industry is also undergoing root-and-branch changes.

The first is the collapse in demand for commercial printing over the past 15-20 years. This has led to consolidation in paper production. Many paper mills have been converted to manufacture packaging, preferred by consumers who worry about plastic's environmental impact. Some big European wood firms, such as Metsa of Finland, have abandoned print paper (it still makes cardboard and tissues). After shutting two mills this year, Stora Enso, which is also Finnish, will derive 10% of revenue from print paper, down from 70% a decade ago. The rest will come mainly from pulp, packaging and fibre products.

The second, related change is technology-enabled diversification. Most mills already manufacture wood products on top of selling lumber. In modern ones, saws slice three-quarters of a tree into planks, and chop the rest into chips that can be turned into wood-based composites. Because the forest business reflects the decades-long sylvan lifecycle, this 40-year-old "chip-n-saw" technique is only now enjoying widespread adoption. It works best on trees with a diameter of 25cm, compared with 40cm for traditional bandsaws, and so lets forest owners sell or, if they are vertically integrated with mills, use their trees 20-30 years earlier than in the past.

Greater harvesting efficiency is now combining with newer techniques to expand the range of wood products. Metsa is turning waste lignin, a natural polymer which gives trees their rigidity, into textiles for clothing and furnishings. UPM, another Finnish company, has worked out how to turn "black liquor", a gloop left over from paper manufacturing, into biofuels and other chemicals. It will open a refinery

in Germany—the first of its kind anywhere—next year. It is already making wound dressings and a cell-culture medium from wood nanofibres to rival agar jelly. There is talk of climbing higher up the value chain to planning and design. All this will prove a handy scaffold when lumber prices come back down to earth. ■

Labour relations in Germany

The king of Wolfsburg

BERLIN

The nemesis of Volkswagen's boss abdicates

"THE MOST powerful man at Volkswagen," Ferdinand Dudenhöffer of the Centre for Automotive Research, an influential think-tank, was not referring to Herbert Diess, the German company's boss. Rather, he reserved that title for Bernd Osterloh. In his 16 years as head of the carmaking group's works council, which represents workers, Mr Osterloh organised his own roadshows and travelled with his own entourage (including a translator). His press team was bigger than Mr Diess's. Some investors mistook him for the giant firm's chief executive and wondered why he did not speak any English.

Then, on April 23rd, Mr Osterloh announced he was resigning. He was widely expected to stay until the next works-council election in March 2022—and then for another three-year term. Instead, on May 1st he will take over as personnel chief at Traton, a lorry-maker that is part of Volkswagen. Daniela Cavallo, his 46-year-old deputy, will assume his old post.

Works councils play a big role in all German companies with more than 2,000 employees. Workers can nominate half the

Bartleby When the boss is behind you

The costs of office-less executives outweigh the benefits

IT IS a tradition of corporate architecture. A company's top executives get offices on the top floor, often dubbed the c-suite after the "chiefs" who occupy it. The CEO resides in the "corner office", with the biggest windows and best views. Junior staff suffer a few moments of trepidation when summoned upstairs.

Some heterodox bosses shun this tradition. Reed Hastings of Netflix has no office, corner or otherwise, and huddles at random desks, for example. Now more staid firms are following suit. Executives in the London offices of HSBC, a banking giant, will no longer be based on the 42nd floor of the group's Canary Wharf tower. Instead the floor will be converted into meeting rooms. Senior executives will "hot-desk" with everyone else.

A plausible argument for such a shift can be made. Staff morale would suffer if the rank-and-file are crammed in open-plan offices while the executives cling to cushy digs with panoramic vistas. When the top brass sit alongside their teams, they will be more in touch with how projects are going, and how staff are feeling. In theory, if the executives are visible, employees are more likely to approach them with problems.

But lingering bosses may equally hurt morale. One of the joys of office life is the freedom to enjoy a bit of banter with colleagues. This may include the odd crack about the management. In the presence of their boss staff will be constrained in what they talk about and the tone of their comments. They may feel the need to sound serious at all times, lest the quality of their commitment to their work come into doubt—after all, the manager may be right behind them.

You also have to wonder whether executives will really spend every morning searching for a place to sit. Some hot

desks will be a lot hotter than others. Once the chief financial officer has picked a desk on day one, deferential underlings will steer clear of that particular spot on subsequent days. In contrast, anyone who works closely with a particular executive will be tempted to pick a desk close by. The risk is of a "beach towels on sunbeds" syndrome where employees compete to get the desks nearest to (or farthest from) particular managers.

Of course, the executive may be absent from the open floor for extended periods. Any meeting that involves confidential information, such as a future business plan or a career review, will have to be held in private. So the meeting rooms that HSBC is creating on the executive floor may end up being block-booked by the managers for much of the day.

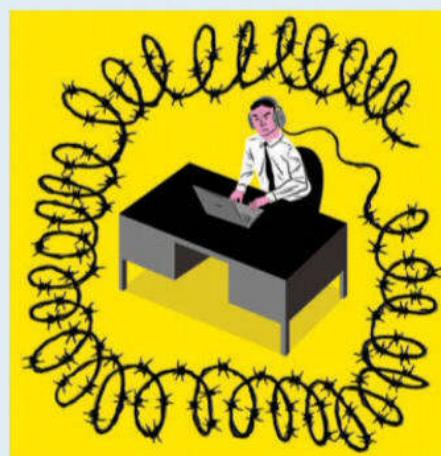
Even so, the lingering boss presents other problems. Anyone who has worked in an open-plan office will acknowledge that the babble of others talking can make it hard to concentrate at times. Managers may find themselves constantly being approached by team members with ques-

tions or problems for them to solve. Many people resort to headphones to shut out the background noise (and to signal their unavailability). But if managers do that, they run the risk of seeming shut off from their colleagues.

Studies of open-plan offices have shown that they do not create the hoped-for collaborative effects. One study found that at firms that switched to open-plan design face-to-face interactions fell by 70%. Like an animal caught on open ground without cover, many people do not like being constantly observed. In the absence of a physical barrier, they create a "fourth wall", indicating their desire for solitude by facial expressions or curt replies to questions.

Where people do need to communicate, it is usually with members of their own team. So using a hot-desking system to mix up different teams, in the hope of creating collaboration, is unlikely to work either. People will avoid contact with their immediate neighbours and will message their other team members electronically.

In practice, the main benefit for companies of adopting an open-plan design is to save money by cramming more employees in the same space. This explains the willingness of some companies to allow working from home. Recently, HSBC revealed that more than 1,200 staff, mainly in call centres, would be doing so permanently. Indeed, the HSBC executive-office shift is part of a plan that aims to save 40% of head-office costs. As Noel Quinn, the bank's chief executive, told the *Financial Times*, the executive offices were empty half the time because the managers were travelling. As reporters are often told, the best way to understand what is really going on is to "follow the money".



► members of the supervisory board, which oversees the management board under the country's two-tier structure. At Volkswagen they wield even more influence thanks to the 20% voting share that Lower Saxony, home to its headquarters in Wolfsburg, has in the group. To protect investment and jobs in the Land, it backed Mr Osterloh and the board's other nine labour representatives. They in turn listened to IG Metall, the metal-workers' union to which nearly all Volkswagen workers belong.

The main reason for Mr Osterloh's sudden exit was a rare boardroom defeat. He

had tried to topple Mr Diess, who wants to push Volkswagen into the electric age. That means retraining many of its 665,000 workers or getting them to retire—anathema to the works council if it results in job cuts. In December the supervisory board gave the CEO its full backing. A move to a cushy job with a reported annual salary of €2m (\$2.4m) could be seen as a face-saving way for Mr Osterloh to lick his wounds.

Testy corporate governance has made Volkswagen's flagship vw brand the world's least-competitive big one, thinks Arndt Ellinghorst of Bernstein, a broker.

The group derives 60% of net profit from two premium marques, Audi and Porsche. vw and the other nine mostly mass-market brands make little money outside China, which accounts for another 20% of profits (excluding Audi and Porsche). To change this Mr Diess must get along with Ms Cavallo. A trained economist, she is calmer than her irascible mentor, who started on the shop floor 44 years ago. She may be less averse to the sale of peripheral brands such as Ducati, a motorcycle-maker, which Mr Osterloh blocked. Convincing her to accept deeper changes will be tougher. ■

Schumpeter | The magical realism of Tesla

And the blunt reality of geopolitics



YOU HAVE to hand it to the “technoking”. For all his impish self-aggrandisement, mockery of deadlines, baiting of regulators and soon-to-be sideline as a “Saturday Night Live” comedy host, Elon Musk is deadly serious about technology. So serious, in fact, that as he was discussing the nitty-gritty of neural networks on an earnings call on April 26th, Tesla’s boss did not miss a beat when what sounded like his infant son let out a wail in the background. The electric-car maker’s record net profit of \$438m in the first quarter, the seventh straight in the black, came as an afterthought.

Such is the allure of Tesla’s whirring money machine that many now give the benefit of the doubt to Mr Musk’s more eccentric claims. His latest involves artificial intelligence (AI). In the future Tesla will be remembered not just as an electric-vehicle (EV) and renewable-energy pioneer, he says, but also as an AI and robotics company. He bases this on a belief that it is close to cracking the challenge of self-driving cars using just eight cameras, machine learning and a computerised brain in the car that reacts with superhuman speed. He calls full self-driving “one of the hardest technical problems...that’s maybe ever existed”.

Amid the techno-optimism, though, Tesla also faces the dreary reality of everyday life. Though it expects to deliver about 50% more vehicles this year than in 2020, or around 750,000, like other carmakers it is struggling with a shortage of computer chips. The fiery crash of a Model S in Texas, killing two, has raised concerns about its self-driving technology (reports that its Autopilot function was involved are “completely false”, Mr Musk said). A pandemic-related shortage of engineers hit its output in China, source of much of its recent growth. And the Chinese authorities, which used to shower love on the American firm, are showing signs of Tesla fatigue. Mr Musk may one day find the boundaries of his kingdom constrained not by physics but by geopolitics.

He is no longer alone in talking in grandiose terms about Tesla. These days sober sorts vie to justify the firm’s valuation of \$700bn or so, which puts all other carmakers in the shade. When describing its potential, Jed Dorsheimer of Canaccord Genuity, a Canadian asset manager, starts with the invention of the printing press in 15th-century Europe. Adam Jonas of Morgan Stanley, an investment bank, believes Mr Musk’s EVs are in the midst of something

akin to a “Model-T moment”—provided he can, like Henry Ford, crack mass manufacturing to make Teslas more affordable. Both compare Tesla to Apple, the American technology giant, to illustrate how Mr Musk could create a money-spinning ecosystem of gadgets and services that reinforce each other.

For Tesla bulls, the maker of EVs indeed has more in common with that of iPhones than it does with established car firms. Its boosters get excited about Silicon Valley-like innovation, not car sales. On Wall Street the value ascribed to Tesla’s relatively low-margin EV business is being eclipsed by the promise of more nebulous but potentially more lucrative ones, mostly involving software: the sort of connected services, such as maps, entertainment, ride-sharing, semi-autonomous driving and over-the-air upgrades that make Teslas a geek’s dream. Few assume, as Mr Musk does, that fully autonomous “robotaxis” are imminent. But some, such as Mr Jonas, think Tesla ride-sharing fleets, probably with someone at the wheel, will soon be rolling through city streets.

The magical realism may go beyond that. Besides AI and software, Mr Musk is also doubling down on Tesla’s original plan to build, alongside an affordable car, a zero-emission energy business. He has said his intention is to produce three terawatt-hours of battery capacity within a decade, more than 12 times as much as the goal of Volkswagen, its nearest EV competitor. Besides bringing the cost of cars down to \$25,000 each, the batteries will also go towards Tesla’s home-energy-storage business. That would create what he calls a “giant distributed utility” that can cope with increased electricity demand as more people use EVs, as well as provide grid stability at times of bad weather. Mr Dorsheimer, who is particularly bullish on Tesla’s solar and storage business, thinks its energy brand could become “Apple-esque”.

Thinking different

Apple, worth more than three times as much as Tesla, is a flattering firm to be compared to. It is also the prime example of how deftly an American company can handle the ebb and flow of superpower rivalry. Yet when it comes to geopolitics, Tesla may be at a disadvantage. It is just as global as Apple: last year it made half its sales outside America; 21% came from China. But the \$2trn global car market is more than four times the size of the one for mobile phones. With many more firms involved, cars are more politically sensitive than smartphones. Initially countries like China and Germany threw down the welcome mat for Tesla’s gigafactories, partly to goad local firms into producing better EVs. Now that this is happening, the pressure to keep Tesla down is increasing.

If Mr Musk is right that self-driving is the future of getting around, concerns about data-gathering and national security are bound to rise. China has already hinted it is sensitive to them. This year the government restricted the use of Tesla vehicles by military personnel and employees of some state-owned firms because of data-security concerns. Mr Jonas, for one, thinks Tesla’s position in China will be “substantially diluted” during the coming decade, as the car market morphs into a transportation utility run and regulated by the state in concert with local champions.

Cyber-paranoia may, of course, make it as hard to sell a Chinese car in America as an American car in China. And compared with the “insanely hard” problems Tesla is trying to crack, even superpower politics must seem like a minor irritation. But although Mr Musk can claim to rule over the realm of physics, politicians, bureaucrats and spooks run much of the real world. That is a source of power that even the technoking cannot disrupt. ■



The economic recovery

Money, machines and mayhem

A post-pandemic boom is beginning in the rich world. History suggests that things are about to get interesting

THE CHOLERA pandemic of the early 1830s hit France hard. It wiped out nearly 3% of Parisians in a month, and hospitals were overwhelmed by patients whose ailments doctors could not explain. The end of the plague prompted an economic revival, with France following Britain into an industrial revolution. But as anyone who has read "Les Misérables" knows, the pandemic also contributed to another sort of revolution. The city's poor, hit hardest by the disease, fulminated against the rich, who had fled to their country homes to avoid contagion. France saw political instability for years afterwards.

Today, even as covid-19 rages across poorer countries, the rich world is on the verge of a post-pandemic boom. Governments are lifting stay-at-home orders as vaccinations reduce hospitalisations and deaths from the virus. Many forecasters reckon that America's economy will grow by more than 6% this year, at least four percentage points faster than its pre-pandemic trend. Other countries are also in for unusually fast growth (see chart 1). The Economist's analysis of GDP data for the G7

economies going back to 1820 suggests that such a synchronised acceleration relative to trend is rare. It has not happened since the post-war boom of the 1950s.

The situation is so unfamiliar that economists are turning to history for a sense of what to expect. The record suggests that, after periods of massive non-financial disruption such as wars and pandemics, GDP does bounce back. It offers three further lessons. First, while people are keen to go out and spend, uncertainty lingers. Second, crises encourage people and businesses to try new ways of doing things, upending the structure of the economy. Third, as "Les Misérables" shows, political upheaval often follows, with unpredictable economic consequences.

Take consumer spending first. Evidence from earlier pandemics suggests that during the acute phase people behave as they have during the past year of covid-19, accumulating savings as spending opportunities vanish. In the first half of the 1870s, during an outbreak of smallpox, Britain's household-saving rate doubled. Japan's saving rate more than doubled dur-

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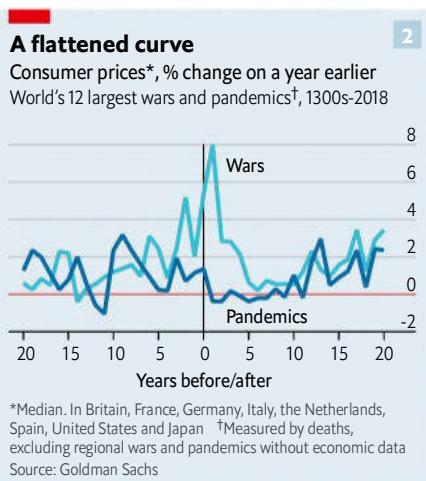
ing the first world war. In 1919-20, as the Spanish flu raged, Americans stashed away more cash than in any subsequent year until the second world war. When that war hit, savings rose again, with households accumulating additional balances in 1941-45 worth some 40% of GDP.

History also offers a guide to what people do once life gets back to normal. Spending rises, prompting employment to recover, but there is not much evidence of excess. The notion that people celebrated the end of the Black Death by "wild fornication" and "hysterical gaiety", as some historians suppose, is (probably) apocryphal. The 1920s were far from roaring, at least at first. On New Year's Eve 1920, after the threat of Spanish flu had decisively passed, "Broadway and Times Square looked more ►►

Step on it

GDP, % increase on a year earlier





like the old days", according to one study, but America nonetheless felt like "a sick and tired nation". A recent paper by Goldman Sachs, a bank, estimates that in 1946-49 American consumers spent only about 20% of their excess savings. That extra spending certainly aided the post-war boom, though the government's monthly "business situation" reports in the late 1940s were nonetheless filled with worry of an impending slowdown (and indeed the economy went into recession in 1948-49). Beer consumption actually fell. Consumers' caution may be one reason why there is little evidence of pandemic-induced surges in inflation (see chart 2).

The second big lesson from post-pandemic booms relates to the "supply side" of the economy—how and where goods and services are produced. Though, in aggregate, people appear to be less keen on frugality following a pandemic, some may be more willing to try new ways of making money. Historians believe the Black Death made Europeans more adventurous. Piling on to a ship and setting sail for new lands seemed less risky when so many people were dying at home. "Apollo's Arrow", a recent book by Nicholas Christakis of Yale University, shows that the Spanish flu pandemic gave way to "increased expressions of risk-taking". Indeed a study for America's National Bureau of Economic Research, published in 1948, found that the number of startups boomed from 1919. Today new business formation is once again surging across the rich world, as entrepreneurs seek to fill gaps in the market.

Other economists have drawn a link between pandemics and another change to the supply side of the economy: the use of labour-saving technology. Bosses may want to limit the spread of disease, and robots do not fall ill. A paper by researchers at the IMF looks at a number of recent outbreaks of diseases, including Ebola and SARS, and finds that "pandemic events accelerate robot adoption, especially when the health impact is severe and is associat-

ed with a significant economic downturn." The 1920s were also an era of rapid automation in America, especially in telephone operation, one of the most common jobs for young American women in the early 1900s. Others have drawn a link between the Black Death and Johannes Gutenberg's printing press. There is as yet little hard evidence of a surge in automation because of covid-19, though anecdotes abound.

Whether automation deprives people of jobs, however, is another matter. Some research suggests that workers in fact do better in the aftermath of pandemics. A paper published last year by the Federal Reserve Bank of San Francisco finds that real wages tend to rise. In some cases this is through a macabre mechanism: the disease culls workers, leaving survivors in a stronger bargaining position.

In other cases, however, rising wages are the product of political changes—the third big lesson of historical booms. When people have suffered in large numbers, attitudes may shift towards workers. That seems to be happening this time: policy-

makers across the world are less interested in reducing public debt or warding off inflation than they are in getting unemployment down. A new paper from three academics at the London School of Economics also finds that covid-19 has made people across Europe more averse to inequality.

Such pressures have, in some instances, exploded into political disorder. Pandemics expose and accentuate pre-existing inequalities, leading those on the wrong side of the bargain to look for redress. Ebola, in 2013-16, increased civil violence in West Africa by 40%, according to one study. Recent research from the IMF considers the effect of five pandemics, including Ebola, SARS and Zika, in 133 countries since 2001. It finds that they led to a significant increase in social unrest. "It is reasonable to expect that, as the pandemic fades, unrest may re-emerge in locations where it previously existed," researchers write in another IMF paper. Social unrest seems to peak two years after the pandemic ends. Enjoy the coming boom while it lasts. Before long, there may be a twist in the tale. ■

Taxing capital

Benchmarking Biden

Will Joe Biden's proposed taxes on capital make America an outlier?

IF PRESIDENT JOE BIDEN succeeds in raising America's top rate of federal capital-gains and dividend tax to 39.6%, as he pledged to Congress on April 28th, it would be twice the average top rate in Europe. But it would apply only to the highest-earning 0.3% of taxpayers: those earning more than \$1m. The fact that countries cast their nets differently makes comparing taxes on capital, which include levies on companies and property as well as on capital

gains and dividends, tricky. The OECD, a club of mostly rich countries, does not publicly track members' capital-gains-tax rates because exemptions and carve-outs make them so hard to compare.

Fortunately comparing how much money countries raise is easier. America's total taxes on capital brought in revenues worth about 5% of GDP in 2018, according to analysis by Spencer Bastani of the Institute for Evaluation of Labour Market and ►

A bevy of levies

Selected countries, 2018

Total tax revenues, % of GDP



Capital-tax revenues, % of GDP



► Education Policy and Daniel Waldenstrom of the Research Institute of Industrial Economics, two Swedish think-tanks. That compares with an average of 5.8% for a panel of 16 OECD countries. What is distinctive about America is its mix of capital taxes. Its corporate tax raises relatively meagre revenues (see chart on previous page), whereas property-tax revenues are unusually high. Overall, America collects less tax than most rich countries, so as a share of total revenues, capital taxes are a hefty 20%, fifth among the 16 countries in the researchers' sample.

By how much would Mr Biden's plans change this picture? Working out the answer is just as tricky as conducting cross-country comparisons. The headline proposals are straightforward. Corporate taxes would rise from 21% to 28%. And the rate on capital gains and dividends would nearly double from 20% for top earners (who own a disproportionate share of wealth). But assessing how saving and investment respond to capital taxes is one of the most hotly debated topics in economics.

Investors can choose when to sell assets, and therefore when to pay capital-

gains tax. American budget wonks usually calculate a revenue-maximising rate of capital-gains tax of about 28%. But that is under existing rules, which in effect waive the tax on estates when heirs inherit them. Mr Biden wants to close that loophole, so postponing capital gains indefinitely might no longer be so attractive, drawing more of them into the tax net. Taking this change into account, the Penn-Wharton budget model finds that Mr Biden's capital-gains proposal would raise \$113bn over ten years. That is still relatively modest compared with the \$1trn that Mr Biden's pro-

Buttonwood Up to speed

Why private-credit markets are due a growth spurt

THESE ARE many ways to tell the story of the turnaround in America's capital markets since last spring. The focus has been on public markets, notably the wondrous surge in share prices. Yet the change in fortunes of private equity (PE) is perhaps more remarkable. A year ago Blackstone, a PE giant, reported a first-quarter loss of more than \$1bn. A reckoning seemed overdue. Widespread defaults on overborrowed PE-owned businesses were expected. A year on, Blackstone has reported record profits of \$1.75bn. So much for comeuppance.

Its rude health owes a lot to the speed, as much as the extent, of recovery in asset prices. Buyout shops barely had time to mark down their portfolio companies in line with a falling stockmarket before share prices suddenly recovered. Dealmaking has picked up to a frantic pace. Competition from corporate buyers means that buyout firms must move quickly. Where they have an edge is in raising debt. In fact the premium on speed in PE is why you should expect to see a sharp pickup in a related corner of capital markets—private credit.

Private credit mainly serves mid-sized companies that are acquiring something or undergoing change of some kind—buying out a family member's stake; refinancing their bank debts; and so on. More often than not, this change will be carried out under the auspices of a PE sponsor and require a lot of borrowing. Banks used to finance this sort of thing, but not anymore. To access the public markets, a company must meet the demands of regulators. It must be biggish and profitable, with a history of pristine financial statements. A lot of companies do not tick the boxes.

Private credit has elements of both bank and capital-market finance. It is

like a bank loan in that it is tailored to the borrower and does not usually change hands in markets. It is like a publicly traded bond in that the end-investors are pension and insurance funds looking for regular fixed income. The border between private and public credit is blurry. The defining factor is how widely a loan is distributed. The highest-profile part of private credit is the market for leveraged loans, which are fixed-income instruments sold to syndicates of investors. The more widely a loan is distributed the more liquid it is. A broadly syndicated loan might be sold to 100 or more lenders. By contrast, the number of parties to a truly private deal is often in the single digits.

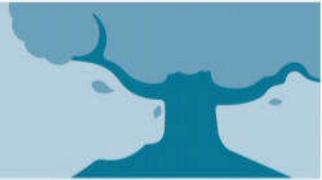
The bigger PE firms have private-credit arms. The set of skills required is similar, says Mike Arougheti of Ares, a private-asset manager. Both types of investor need to make sound judgments about the growth of cashflows, and the hazards around it, for companies that are not widely researched. There are obvious synergies. Say a PE firm has carried out due diligence on a buyout target only to

lose out to a bid from a rival. Having done the homework, the losing firm might call up the winner and offer to buy the debt.

This nexus with PE is one reason to expect a spurt in private credit. For PE sponsors, the attraction of private credit is speed. There are no lengthy discussions with regulators, rating agencies or underwriting banks. And speed matters more than ever. Buyout funds have \$1trn or more of "dry powder", capital that has been raised but not yet deployed. "Equity markets have rallied, so corporate buyers are competitive," say Mark Attanasio and Jean-Marc Chapus of Crescent Capital, a private-credit firm. The upshot is that every potential target has many bidders.

The other reason to expect growth in private credit is its appeal to investors. Yields are higher than on widely traded corporate bonds. Moreover, the interest charged on private loans is usually tied to short-term interest rates. That protects investors from sudden changes in Federal Reserve policy, which fixed-rate corporate bonds are vulnerable to. Private-credit specialists typically demand greater control over the terms of lending. That way they can mitigate the risks of a borrower getting into trouble. They are also better placed to recover more of their money in the event of a default. In a lightly syndicated deal, there are fewer people to indulge in wasteful squabbling over the remains.

Everything is happening more quickly in capital markets. Even though private markets do not trade minute-by-minute, there is little time to lose. It seems only yesterday that regulators were fretting publicly about the unchecked growth of opaque private-credit markets. Things then went quiet. But the noise levels may go up again soon.



posed increase to the corporate tax is expected to bring in. The combined revenues would come to about 0.4% of projected GDP over the decade, which would still leave America in the middle of the OECD pack for overall capital taxes.

Might the scorekeepers be underestimating the revenues from changing capital-gains taxes? That is what a recent paper by Natasha Sarin of the University of Pennsylvania, Larry Summers of Harvard University, Owen Zidar of Princeton University and Eric Zwick of the University of Chicago argues, for a variety of technical reasons. Earlier work by Mr Zidar and Ole Agersnap, also of Princeton, finds a rate of 38-47% could maximise revenue. Still, the uncertainty around these analyses is high—the second paper relies on an extrapolation from state-level taxes. And in any case the revenue-maximising rate is not necessarily the same as the most desirable rate for society, notes James Poterba of the Massachusetts Institute of Technology.

Economic policy should consider both the revenue raised and the downsides of the tax—and Congress will no doubt soon be debating just that. ■

India's economy

Lights, power, inaction

How to track the economic impact of India's second covid-19 wave

RIVERS CHANGE course, forests catch flame, glaciers melt: Raj Bhagat Palani-chamy of the World Resources Institute India, a research centre, has tracked all of these injuries to India's landscape through satellite images. In the past year, he has been trying to map a different kind of harm, identifying infection hotspots, pinpointing hospital beds and cross-checking official fatality numbers by examining infrared images of the fires at crematoria.

The murderous toll of India's second wave of covid-19 infections is impossible to miss but hard to measure. The same is true of its toll on the economy. GDP data for April to June will not be released until the end of August. Figures for industrial production in April will not appear until mid-June and will anyway miss the service sector, which is likely to be hardest hit. India's government publishes a "periodic" survey of the labour force. But Himalayan glaciers could shrink in the time it takes for it to ap-

pear. Hence the keen interest in less conventional indicators of economic activity, such as electricity consumption, mobile-phone data and views from space.

Just as satellite images can see the increased intensity of India's pyres during the day, they can capture the reduced luminosity of its cities at night. In March last year, when Narendra Modi, India's prime minister, introduced a strict nationwide lockdown, India's night-time lights darkened by 5.6% compared with a year earlier, according to Robert Beyer, Sebastian Franco-Bedoya and Virgilio Galdo of the World Bank. By May 2020, India was 10% dimmer. The country as a whole has brightened since. But 31 of Maharashtra's 36 districts (including Mumbai) and all but a handful of those in Madhya Pradesh and Uttar Pradesh shone even less brightly in March 2021 than a year earlier.

Mr Beyer and his colleagues have also taken advantage of India's daily statistics on electricity consumption, which they have "scraped" from the website of the grid operator. During April 2020, consumption fell by almost 27% below the amount that past patterns would predict, given the temperature and the underlying upward trend in India's power usage. Consumption finally surpassed its expected level in March 2021. That recovery, however, has retreated in recent weeks (see chart).

The economy's prospects for the rest of the year depend on how the pandemic evolves and the government responds. Mr Modi has left it up to the states to decide how and when to reimpose restrictions on gathering. The country therefore faces a patchwork of impediments to moving and mingling. One way to measure their stringency is to tally up the different types of restrictions, such as school closures or event cancellations. Another is to use smartphone data tracking the drop in users' mobility. Goldman Sachs, a bank, has combined both approaches into a single lockdown index. It gave India a score of 87 out of 100 at the worst point last year, far more severe than the peaks recorded in America

(57) or even Britain (74). By comparison, the latest restrictions warranted a score of only 47 on April 23rd.

Analysts at Goldman reckon lockdowns today disrupt the economy less than did similar lockdowns a year ago, as businesses and consumers have adapted. If India's restrictions remain only around their current level for the three months from April to June, economic activity will be 2.9% smaller than it was in the previous three months, they predict. If the pandemic then relents, GDP could still be much bigger this year than it was last. But that says as much about the awfulness of 2020 as it does about the prospects for the rest of 2021. ■

Labour shortages in America

Help wanted

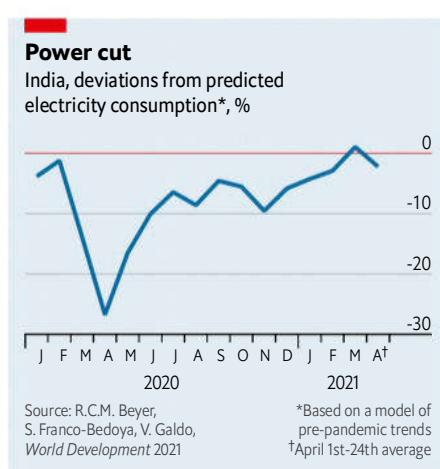
Why workers are hard to find, even though unemployment is high

THE PANDEMIC has led to all sorts of weird economic outcomes. The latest oddity is the growing chorus of complaints in America about a shortage of labour, even though 8m fewer people are in work today than before covid-19 struck. In early April Bloomberg reported that Delta Air Lines had cancelled 100 flights for lack of staff. People are so hard to find that one café in Florida has turned to robots to greet customers and deliver food. A branch of McDonald's is paying potential burger-flippers \$50 just to turn up for a job interview.

The data back up the anecdotes. Total vacancies are running at their highest level for at least two decades (see chart on next page), indicating that firms have plenty of unfilled positions. Furthermore, job openings are leading to fewer hires than you would expect based on the historical relationship between the two. And even accounting for changes in the composition of the workforce, wage growth, at about 3%, has been surprisingly robust, suggesting that firms are offering bigger pay packets to tempt workers. If they persist job shortages could eventually fuel inflation, threatening the economic recovery.

There are three potential explanations for the puzzling shortages: over-generous benefits; fearful workers; and a reallocation of labour between industries. Start with America's huge fiscal handouts. The latest stimulus cheques, posted in the spring, were for up to \$1,400 per person. Seemingly every American knows of a neighbour's cousin's boyfriend who received a "stimmy" cheque, then quit his job in order to sit on the sofa. A federal supplement to unemployment insurance (ui), ►►

Correction In our piece on Amundi last week ("Alpha plus") we wrote that the European asset manager's net income was €962bn in 2020. It was in fact €962m. Sorry.





▶ currently \$300 a week, ensures that four in ten unemployed people earn more from benefits than they did in their previous job. Economic research has long concluded that more generous benefits blunt incentives to look for work.

Yet this relationship appears to have weakened during the pandemic. The fact that increases in UI payments have been time-limited may make workers reluctant to turn down a job with longer-lasting rewards. In the early part of the pandemic the UI supplement was even more generous, at \$600, but its expiry in the summer had “little effect on overall employment”, according to a paper published in February by Arindrajit Dube of the University of Massachusetts-Amherst. Likewise, in the areas where the current \$300 is a relatively larger boost to income, employment growth has not weakened since January, when that uplift was introduced.

This suggests that the second factor, fear, may be important in explaining America’s shortage of staff. Nearly 4m people are not looking for work “because of the coronavirus pandemic”, according to official data. And consider which industries are experiencing the most acute worker shortages. Jobs in health care, recreation and hospitality report the highest level of job openings, relative to employment. Many of these involve plenty of person-to-person contact, making their workers especially vulnerable to infection (a study from California earlier this year found that cooks were most at risk from dying of covid-19). By contrast, in industries where maintaining social distancing or being outside is often easier, labour shortages are less of an issue. The number of job openings per employee in the construction industry is lower today than it was before the pandemic.

The final reason for worker shortages relates to the extraordinary reallocation of resources under way in the economy. The headline growth in vacancies represents the rise in opportunities in some industries—say, clerks in DIY stores—as others

The Turkish lira Money for nothing

ISTANBUL
Counting the costs of the currency's failed defence

PREDAWN POLICE operations in Turkey are nothing new, but some still raise eyebrows. Under the cover of darkness on April 13th, police officers across the country took down giant banners hanging from offices of Turkey’s main opposition party, the Republican People’s Party (CHP). “Where is the \$128bn?” the offending signs read.

The \$128bn is the amount of foreign-currency reserves bankers and analysts reckon has been squandered by Turkey’s central bank in its attempt to prop up the lira over the past couple of years. (Comprehensive official figures are not published.) The government, headed by Recep Tayyip Erdogan, has little to show for the policy, thought to be spearheaded by Mr Erdogan’s son-in-law, a former finance minister. Since the start of 2019, when the interventions began, the lira has lost over 35% against the dollar, the result of inflation, low real interest rates and a string of political crises.

Prosecutors ordered the banners be taken down, claiming they insulted the president, a crime punishable by up to four years in prison. One official said they violated covid-19 restrictions. But all this only heightened the controversy. “Where is the \$128bn?” lit up social media. On April 21st Mr Erdogan conceded that the central bank had used its reserves to defend the lira, that it might do so again if needed and that the amount spent, including some other items, was in fact \$165bn. Markets shuddered.

The money has not vanished. To relieve the pressure on the currency, the central bank exchanged some of its dollars for lira through state banks. But this incurred staggering costs. Given the lira’s depreciation over time, the trades have generated losses of about 250bn lira (\$30bn), equivalent to 4% of GDP, calculates Kerim Rota, a former banker and member of a new opposition party. That raises several questions, he says: “why

did they start such a silly process, why wasn’t it transparent, and who ordered the banks to sell foreign currency and at what rates?” The government has not provided compelling answers.

With its reserves eroded, the central bank might not be able to defend the lira for much longer. And the currency is under pressure again. After a strong start to the year, the lira resumed its descent after Mr Erdogan sacked the former central-bank governor, a respected policy hawk, and replaced him with Sahap Kavcioglu, a critic of high interest rates.

The former governor reportedly got under Mr Erdogan’s skin after ordering an internal probe into the central bank’s dollar sales. His successor has defended the policy, saying it prevented further lira depreciation. Mr Kavcioglu was already expected to slash rates in the second half of the year. Mr Erdogan may lean on him to do so even earlier to offset the damage to the economy from the pandemic. After a record spike in cases, the government announced a three-week lockdown starting on April 29th.

The lira’s decline has eaten away at Turks’ purchasing power, forcing many to turn to the greenback. (Turkish residents keep more of their savings in dollars than in lira.) But the lack of confidence in the management of the country’s finances has had other effects, including a boom in cryptocurrency trading. Between the start of February and March 24th trading volumes in Turkey reached 218bn lira, up by 3,000% on the same period last year, according to Reuters. Holders have suffered a double shock. The first came when the central bank banned the use of cryptocurrencies as payment. The second was the collapse of two Turkish crypto-exchanges in a single week. One of their founders is thought to have fled to Albania with \$2bn in investors’ assets. They too will be asking where their money has gone.

decline, reflecting changing consumer demands. Analysis by *The Economist* of over 400 local areas also finds a wide variation in job churn across geographies: the gap between jobs growth in the most buoyant areas and that in struggling ones is twice as wide as it was before the pandemic. Workers may take time to catch up with this creative destruction. A former bartender looking for work in downtown Manhattan, for instance, may not quickly spot and secure

a position as a delivery driver in farther-out Westchester.

As vaccinations continue to reduce hospitalisations and deaths from covid-19, and limit the spread of the disease, Americans’ fears about taking high-contact jobs should fade too. But if shortages are to dissipate fully, and the threat of inflation is to be contained, some of the unemployed will also have to take up work in sectors and areas that are new to them. ■

Free exchange | Building a boom

What an infrastructure bonanza could mean for America's economy



JOE BIDEN's plan to lavish spending on infrastructure is a crucial part of his bid for a transformative presidency. Much of the first tranche of around \$2.7trn, now entering the meatgrinder of congressional politics, will be spent on greening the American economy and tackling inequalities. About a quarter will be directed towards overhauling transport, water and other basic infrastructure—a vast sum, by recent standards. Bridges to nowhere and white elephants are not the stuff of which proud legacies are made, and history's view of the bill will depend on its specifics, which are still to be determined. Yet economic research suggests that, in the right circumstances, basic infrastructure spending has significant, positive effects in the long run.

A clear understanding of infrastructure's contribution to growth has been a long time coming. In 1944 Leland Jenks, an economic historian, extolled America's railways as a transformative force, noting that "the conviction that the railroad would run anywhere at a profit put fresh spurs to American ingenuity and opened closed paddocks of potential enterprise." Yet Robert Fogel, a Nobel-prizewinning economist, argued in 1964 that the "social savings" generated by railways—the contribution to economic growth relative to alternatives, like canals—was in fact rather modest: worth perhaps at most 3% of annual output in 1890.

Economists' attempts to grapple with the effects of infrastructure spending intensified around 1990. David Aschauer, then of the Federal Reserve Bank of Chicago, argued that the size of the public capital stock contributed substantially to productivity and that the end of America's post-war infrastructure-spending spree was an important cause of the slowdown in productivity growth in the 1970s. Assessing this claim was not easy. Untangling causation presented problems, for instance: does infrastructure investment cause fast growth, do fast-growing economies demand lots of investment, or are both things caused by some other factor?

Subsequent research suggested that infrastructure spending does indeed lift growth in output and productivity. John Fernald of the Federal Reserve Bank of San Francisco tackled the causation issue by studying whether new spending on roads subsequently raised productivity in industries that use roads intensively, relative to others that do not. His analysis determined that post-war

road-building was both a good investment and a boon to growth; it contributed about one percentage point more to productivity growth across the economy before 1973 than it did thereafter. More recent work by Valerie Ramey of the University of California, San Diego, arrives at a similar conclusion. She estimates that a 1% increase in the stock of public capital is associated with a rise in output of 0.33%: a figure slightly below but very close to past estimates, including Aschauer's.

What impact then would an infrastructure bonanza have, if it makes it through Congress? As both Mr Fernald and Ms Ramey note, the value of new investment depends upon the state of the infrastructure already in place. The second high-speed transport link between two cities is unlikely to have the same positive economic impact as the first. How much America stands to benefit from new spending will depend in part on its needs.

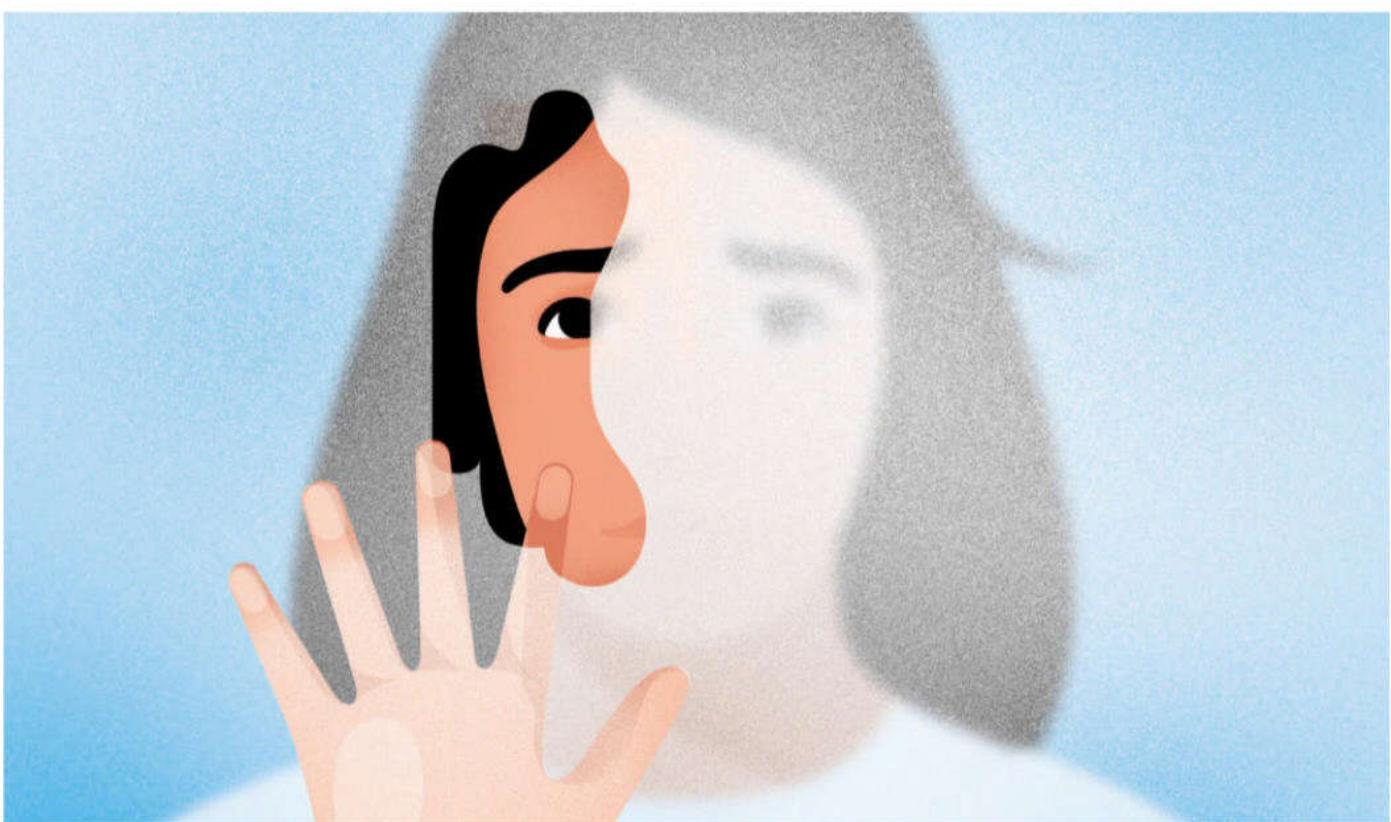
A burst of investment does seem overdue. While spending on most sorts of infrastructure, adjusted for inflation, has continued to climb in recent decades, net investment—taking account of depreciation of an ageing capital stock—has not. Growth in the real net stock of transport capital per person, which rose above 2% in the 1960s, subsequently dropped below 1%; in the aftermath of the financial crisis it sank to nearly zero. Spending on most other sorts of infrastructure has followed similar trends (with the exception of digital capital). Mr Biden's proposal also allocates large sums to measures intended to reduce and protect against climate change, like electric-vehicle infrastructure and retrofitting homes and buildings, which could raise output in the future by reducing the economic cost of climate change.

Money alone will not solve all problems, though: infrastructure spending does not, for instance, reduce congestion. Studies consistently show that new transport capacity does not reduce gridlock over the long run, because free-flowing traffic attracts new users until roads and railways fill up once more. Breaking up jams, economists reckon, requires charging users for access to transport capacity, through tolls or other fees. Such a policy could both raise money and improve the efficiency with which transport is used, but it has proved politically difficult to implement.

Roadway Joe

Yet new transport investments could subtly reshape America's economic geography. Past spending has had profound effects on the location of activity. America's interstate highways drove the country's socially transformative suburbanisation, for example. Work by Nathaniel Baum-Snow of the University of Toronto concludes that but for the construction of the interstate highway system, the populations of American cities would have grown by 8% between 1950 and 1990; instead they shrank by 17%. A reassessment of Fogel's estimates of the impact of railways by Richard Hornbeck of the University of Chicago and Martin Rotemberg of New York University, which considers their wider impact on the economy, suggests that without the railways America's GDP in 1890 would have been around a quarter smaller. The massive shift in population they brought about altered not only the American economy but the very idea of what America was and could be.

A new era of large-scale infrastructure investment would necessarily be less revolutionary than the railways and roads of the past. Yet it might nonetheless prove surprisingly transformative in its direct economic impact, its knock-on effects on private industry—and in the psychological spur it provides to a country that could do with a bit of reinvigoration and renewal. ■



Post-covid syndrome

The sting in the tail

Researchers are closing in on long covid. The results are alarming

IN THE 1890s one of the biggest pandemics in history, known at the time as "Russian flu", swept the world. It left 1m people dead. Russian flu is now thought to have been misnamed. It was probably not influenza, but rather a coronavirus ancestral to one that now just causes symptoms described by sufferers as "a cold". When it was new, however, few people had immunity to it, so it was often lethal. And not only that. For, as the pandemic receded, it left in its wake a wave of nervous disorders. A similar wave followed the next big pandemic, the "Spanish" flu of 1918 (which, though nothing much to do with Spain, really was influenza). One common symptom was lethargy so bad that in Tanganyika (modern-day Tanzania) it helped cause a famine because so many people were too debilitated to pick the harvest.

Something similar is happening now, with the covid-19 pandemic. A wave of what has become known as "long covid" is emerging in countries where acute cases have been falling. Formally, the condition is called "post-covid syndrome" (PCS). But

even the official definition of its symptoms is fluid, because knowledge of its details is still evolving. Britain's National Institute for Health and Care Excellence, for example, defines PCS as "signs and symptoms that develop during or after an infection consistent with covid-19, continue for more than 12 weeks and are not explained by an alternative diagnosis". It does not, though, specify a list of such symptoms.

There are, indeed, many of them. A survey of almost 3,800 people around the world reported 205. A sufferer typically has several at a time, with the most debilitating usually being one of three: severe breathlessness, fatigue or "brain fog".

Britain's Office for National Statistics (ONS) estimates that 14% of people who have tested positive for covid-19 have symptoms which subsequently linger for more than three months (see chart 1 on next page). In more than 90% of those cases the original symptoms were not severe enough to warrant admission to hospital. According to the ONS, in the four weeks from February 6th nearly half a million

people in Britain reported they had had long covid for more than six months—and this will not include any of those infected towards the end of 2020 in the country's second wave.

At the time when the ONS collected those data, at least 1.1% of Britain's population, including 1.5% of working-age adults, reported symptoms dragging on for three months or longer. Multiply that by the hundreds of millions around the world who have been infected at some point by SARS-CoV-2, the virus that causes covid-19, and a public-health catastrophe may be in the making. In the short term, it was only right that effort focused on dealing with the acute disease. Today covid-19's chronic after-effects also need to be considered.

It ain't over 'til it's over

Not all of the suffering badged as long covid is actually caused by SARS-CoV-2. Even before the virus came along lots of young and healthy people would develop similarly debilitating symptoms for medically unexplained reasons. The classic example of such a mystery illness is chronic-fatigue syndrome (CFS), which often seems to follow a viral or bacterial infection. Chronic migraines and other symptoms often seen in long covid would, in normal years, also strike lots of people out of the blue. The data do, nevertheless, suggest that the effects of long covid are swamping this symptomatic background. Researchers in Britain compared the persistence of a dozen typi-

cal long-covid symptoms in nearly 22,000 people who had tested positive for SARS-CoV-2 with the rates of these symptoms in a similar group with no record or likelihood of having been infected. In both, many people got better as time passed (see chart 2). But after 12 weeks the rate of symptoms in the covid-19 group was eight times higher than in the uninfected group.

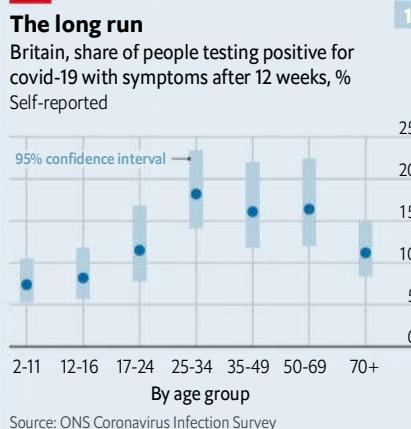
Who should be diagnosed with PCS is still being worked out. Many of those with long-covid symptoms have tested positive neither for SARS-CoV-2 nor for antibodies against it—perhaps because tests were not available when they were ill or those tests were not sensitive enough to pick up the relevant antibodies before they disappeared (a problem with several of the first generation of antibody tests). Studies comparing symptomatic individuals with and without a positive viral or antibody test generally find the same patterns of symptoms in both. Yet many doctors are brushing off individuals with no laboratory proof of past infection.

Those showing up at long-covid clinics in America and Europe are predominantly middle-aged and mostly women. Ethnic minorities are under-represented, even though they have higher acute infection rates. Many doctors suspect this is because white people in these parts of the world are often in a better position than others to seek care, and are more demanding about doing so. Some see parallels with CFS, known sceptically in the past as “yuppie flu” because of the demographic profile of those who spoke out about it.

A study by King's College London found the median age of those with self-reported long covid to be 45, echoing the message of the clinic-attendance data. But the ONS found, contrary to what those data seem to suggest, that women were only slightly more likely than men to develop the condition—though it is unclear whether the types of symptoms experienced by women may be more debilitating.

Broadly speaking, there are three types of long-covid patients, says Avindra Nath of America's National Institutes of Health. The first are characterised by “exercise intolerance”, meaning they feel out of breath and exhausted from even small tasks involving physical activity. The second are characterised by cognitive complaints in the form of brain fog and memory problems. The third are characterised by problems with the autonomic nervous system, a set of nerves that control things like heartbeat, breathing and digestion. Patients in this group suffer from symptoms such as heart palpitations and dizziness.

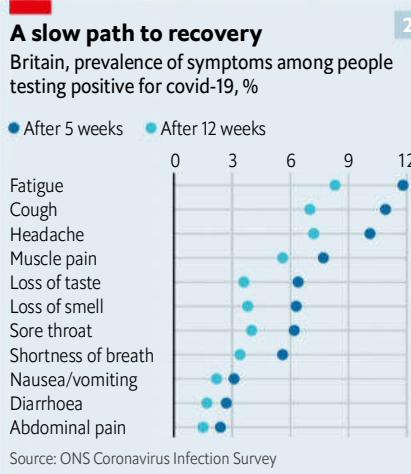
Impairments of the autonomic nervous system are known as dysautonomia, an umbrella term for a variety of syndromes. Igor Koralnik of Northwestern Memorial Hospital, in Chicago, who has been treat-



ing long-covid patients with neurological symptoms, says there has been a marked increase in dysautonomia since the pandemic began. David Putrino, director of rehabilitation innovation at Mount Sinai Hospital, in New York, says that roughly 80% of people who show up at his long-covid clinic have symptoms that are “dysautonomia-like”, regardless of the underlying cause. “And by far these symptoms are the most debilitating, so if we rehabilitate them we can often make the biggest impact in people's lives.”

Based on these patterns of symptoms, and various laboratory tests of long-covid patients, doctors are focusing on three possible biological explanations. One is that long covid is a persistent viral infection. A second is that it is an autoimmune disorder. The third is that it is a consequence of tissue damage caused by inflammation during the initial, acute infection.

According to the first of these hypotheses, some patients never clear the virus completely. They are not infectious, says Dr Nath, so it could be that they harbour some altered form of the pathogen which is not replicating and is thus undetectable by the standard test for SARS-CoV-2, but is nevertheless making some viral product that their bodies are trying to fight off. This



sort of thing is known to occur with other viruses, including measles, dengue and Ebola. RNA viruses, of which SARS-CoV-2 is an example, are particularly prone to this phenomenon, says Dr Nath.

Proof of this hypothesis is lacking, but there are pertinent clues. Researchers are looking for SARS-CoV-2 or its products in all sorts of fluids and tissues from people with prior infection. There is already evidence that the virus can persist in the body, though the data are predominantly from those who did not develop long covid. A study published recently in *Nature* showed that some people had traces of SARS-CoV-2 proteins in their intestines four months after they had recovered from acute covid-19. Viral products from SARS-CoV-2 have also been found in people's urine several months after their recovery. Dr Putrino says viral material has been detected in stool samples from some patients in his long-covid clinic, but not all.

The second hypothesised mechanism for long covid, that it is an autoimmune disease, holds that the virus, though gone, has caused something to go awry with the immune system—which now attacks some of the body's own tissues. A growing body of evidence backs this idea, too.

Bad reactions

The immune system is a complex machine, with many cellular and molecular components, any of which might break and cause symptoms. Some of those suffering from long covid have badly behaving macrophages, the cells responsible for detecting and engulfing harmful invaders. Others exhibit abnormal activation of their B-cells—white blood cells which churn out custom-made antibodies to gum up specific pathogens. In these cases, their B-cells seem to make an unusual quantity and variety of “auto-antibodies”, which attack the body's own cells instead of invaders. Others still have low levels of interferons, a group of molecules involved in fighting off viral infections. And some have problems with their T-cells, which are parts of the immune system that have the jobs of destroying infected cells and alerting B-cells to the presence of pathogens, so that appropriate antibodies can be made.

Several studies have found reduced T-cell counts in people who have had acute covid-19, and also that their surviving T-cells are “exhausted”—meaning they mount only a weak response to infections. Laboratory studies by Dr Koralnik's team have found that long-covid patients with brain fog have different T-cell responses from those of people who were once infected but are now asymptomatic.

All of this suggests that some individuals cannot fight the virus off completely, or that parts of their immune systems act in ways that may be detrimental to their

bodies. Some doctors think people who are already vulnerable to developing an autoimmune condition are pushed further in that direction by the stress which covid-19 puts on their bodies. Such disorders are typically diagnosed in middle age, which is consistent with the age-peak found by King's College, and are more common in women—as is, albeit to a lesser extent, long covid.

The third hypothesis about the cause of long covid, inflammation, holds that the fight put up by the body against the acute illness causes irreparable collateral damage. This often happens during a viral infection, but it could be particularly likely with covid-19. Out-of-control inflammation, caused by cytokines (molecules that drum up inflammation) is a hallmark of the illness.

One guess is that the inflammation which happens when people are ill somehow damages parts of their autonomic nervous systems. Another suggestion, made by Dr Koralnik, is that in some patients SARS-CoV-2 may damage the cells that line blood vessels, either by infecting them directly or via inflammation. This would change the way blood flows to the brain, and may thus explain the brain fog.

Whys and wheresores

Studies intended to investigate each of these possibilities are under way. But the three theories are not mutually exclusive. Indeed, most researchers agree that long covid is probably a term which embraces several conditions with different causes.

Determining these will help both with the development of treatments and with their prescription. If persistent viral infection turns out to be a cause, the search will be on for suitable antiviral drugs. Treatment would consist either of a defined course of medication that clears the virus completely (as is now possible for hepatitis C, for example) or of drugs that people take routinely to keep the virus at bay, the approach taken with HIV/AIDS.

Treatments for immune disorders already exist, and some may work for long



covid. "As soon as we define the immune abnormality in these patients, then it will become very clear how to treat them," says Dr Nath. "It is quite possible that we may need multiple treatments for different types of immune response—and we should be able to figure that out as well."

Some of those with long covid have felt dramatically better after a covid-19 vaccination. But the relief tends to be temporary. Doctors have seen this before. People with CFS, for example, sometimes feel temporarily better after a flu shot or other vaccination. Nobody knows why. One possibility is that the revved-up immune system alleviates their symptoms for a time. A placebo effect may also be involved. Akiko Iwasaki, an immunologist at Yale University, has proposed clinical trials of covid-19 vaccines for long covid. She argues that seeing which work, even if only for a short time, may unmask the specific immune abnormality involved—and show what sorts of drugs could work as well.

At the moment, the only treatment is rehabilitation. To design protocols for long covid, Dr Putrino's team have been working with experts on disorders with similar symptoms, including dysautonomia, CFS and Lyme disease. "We've tried to be extremely symptom-centric," he says. "We try to dig through a person's life and understand what is causing the biggest triggers [of symptoms] that interfere most with their daily life."

He describes some typical examples. Many patients come in having lost a lot of weight because if they have a full meal "their symptoms just wash over them and that's it for the day." That is common in dysautonomia, whereby stretching of the stomach causes an autonomic-nervous-system reaction. These patients are advised by nutritionists on how to eat smaller, nutritious meals and to find out what foods are easiest on them. Some patients experience a drop in blood pressure when

they move about, and feel dizzy—another hallmark of dysautonomia. Simply wearing compressive stockings to prevent blood pooling in their legs can help these people a lot. So can avoiding going outdoors in hot and humid weather. Those with extreme fatigue are taught how to watch for "energy windows", in which to do the most important tasks of the day.

Dr Putrino's team have identified another common problem. They tested 25 of their long-covid patients and found that all had carbon-dioxide levels which were too low. This may sound surprising, given that CO₂ is a waste product derived from respiration, and is harmful if present in too high a concentration. But it also helps regulate acidity, and incorrect acidity can disrupt all sorts of metabolic processes. Low CO₂ levels are also often seen in dysautonomia and CFS. The solution is breathing exercises to help with CO₂ retention. (Elsewhere, opera singers are teaching long-covid patients helpful breathing techniques.)

At Dr Koralnik's neurology clinic, the approach is similar. Long-covid patients are first assessed to see whether their specific problem is memory, attention, fluency in word finding, "or whatever they may have that could be different than someone else who also has brain fog". Cognitive rehabilitation is then tailored to their needs.

It is painstaking work. After an average of 150 days of rehab, which includes two half-hour sessions each week with a therapist, plus remote follow-up, Dr Putrino's patients report a 30-40% improvement in fatigue levels. Such improvement was not seen in comparable patients who were not undergoing rehab, so his team are confident that the effect is real. But out of about 100 patients whose outcomes are being monitored for research purposes, only three say they have recovered fully.

This means that even with appropriate health care, many of those who have long covid will continue to struggle in their daily lives. A survey in Britain, albeit of a self-selected group of people who responded, found that the illness affected the ability to work of 80% of those suffering from it, and about 40% said it affected their ability to care for others (see chart 3).

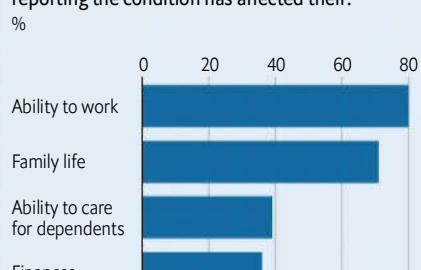
All this suggests that, even when the pandemic of acute covid-19 has been dealt with, a big problem will remain. Post-viral syndromes on this scale affect not only those who are experiencing them directly. They also have serious consequences for everyone else. ■



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Post-viral load

Britain, share of people with long covid reporting the condition has affected their:



Source: National Institute for Health Research



Fiction and politics in Turkey

Orhan Pamuk's plagues

ISTANBUL

A Nobel-prizewinning author reflects on his country's past and present blights

ORHAN PAMUK has had two pandemics to worry about. One confined him and millions of other Turks to their homes for long stretches of the past year. The other struck over a century ago, germinated in his mind for years, and eventually spread through the pages of his new novel, "Nights of Plague".

Mr Pamuk, Turkey's most celebrated author, says he began writing the book five years ago. (At his home in Istanbul, he sits a good 20 feet from your correspondent; he turns 70 next year and takes social distancing seriously.) He set the novel on a fictional Ottoman island in the Aegean in the early 1900s, amid an outbreak of bubonic plague. Just as he began to wrap it up, covid-19 hit Turkey. Reality intruded on fiction. "Suddenly my private world was gone; everyone was using my words," he says. "Everyone was talking about quarantine, like they were researching this book."

The resulting writer's block lasted two weeks. Then the disease raging around him, plus anxieties about his own health, made the author reimagine the pestilence

his characters had to endure. He rewrote swathes of the book. (Given the magnetic view from his desk, of the ferries and container ships criss-crossing the Bosphorus and the rolling Istanbul skyline beyond, it is a wonder that he manages to get any work done at all.)

"Nights of Plague" has just been published in Turkish and comes out in English next year. Mr Pamuk is intent on discussing it—but cannot help talking about the state of Turkey. A chat between two Turks about music or literature no longer seems possible without politics elbowing in; the stench of repression is everywhere. His next appointment, says Mr Pamuk, is with Murat Sabuncu, a journalist who recently spent over a year in prison on bogus terror and coup charges. Days earlier, one of Mr Sabuncu's guests on an opposition television channel stumbled into the studio with his fingers broken. A critic of the government, he had just been attacked by nationalist thugs. "They put everyone in jail, but this is not enough, so they beat [people] up," says Mr Pamuk, shaken.

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In 2005, a year before he was awarded the Nobel prize for literature, Mr Pamuk had his own brush with prison when prosecutors charged him with "insulting Turkishness". His offence was to have spoken a few words to a Swiss newspaper about the slaughter and forced deportation of over a million Armenians by Ottoman forces during the first world war (see Europe). He faced up to three years behind bars, but the charges were eventually dropped. Even now he periodically receives death threats because of those and later remarks. He still has a police bodyguard.

The rest is silence

"I was always in trouble because of my interviews, not because of my novels," he says. With his latest book, that might change. Already he has had to deny a popular columnist's claim that he has mocked Kemal Ataturk, the founder of modern Turkey, in the person of a character. He may face more heckling for his treatment of Abdulhamid II, a sultan who sought to prevent the Ottoman Empire's collapse by mixing autocracy with pan-Islamism.

Modern Turkish Islamists—including the president, Recep Tayyip Erdogan—have reinvented Abdulhamid as a hero of the late Ottoman era. A period drama about the sultan's final years in power, aired on state tv, goes further, depicting him as an archetype for Mr Erdogan and a victim of European and Zionist intrigues. Words spoken by Mr Erdogan one week regularly ►►

▶ come out of Abdulhamid's mouth in the next week's episode. His portrayal in "Nights of Plague" is less charitable. "Abdulhamid closed parliament, did not care about free speech, and made Ottoman Istanbul a police state," says Mr Pamuk.

He is a famously meticulous writer, recalling the Ottoman miniaturists in one of his earlier books, "My Name is Red", a murder mystery set in 16th-century Istanbul. Though such forensic attention to detail can lead to impenetrable prose, for the most part Mr Pamuk's shimmers. He pores over old maps, photos and manuscripts, drawing sketches and painting watercolours of his characters. After writing "The Museum of Innocence", a novel about a lovesick hoarder, he assembled the everyday objects described in the book and enshrined them in a small, remarkable museum. For "Nights of Plague" he devoured all the pandemic literature he could find. He studied cholera's progress from China and India to Ottoman lands, aboard steamships packed with Muslim pilgrims heading to Mecca and Medina, and the resistance to quarantine measures across the empire.

But it took the mounting toll of today's pandemic—the way heads turned when someone coughed or sneezed on the metro or at a nearby table—for him to realise that something was missing. He sensed that omission again when Istanbul, a city of 15m people, sank into morbid silence during its lockdowns, and when he prowled its empty streets at night with his bodyguard and his camera, flanked by stray cats and dogs. "I had imagined my world, but the one thing I couldn't imagine", he says, "was fear. My characters in the book were more fearless before the coronavirus."

Mr Pamuk likes to joke that he used to have three bodyguards and now has only one, which means that Turkey must be improving. A more plausible reason is that he is no longer at the centre of the country's political storms. That, he says, is because the centre has vanished.

Liberals in Turkey have generally been a lonely, endangered species. But a decade or two ago they could at least hope to be heard. Now they have been muzzled. In 2017 Mr Pamuk gave a long interview to what was once Turkey's newspaper of record, in which he said he opposed constitutional changes that granted Mr Erdogan sweeping new powers. Fearing the government's wrath, the paper killed the story. Mr Pamuk has since stopped speaking to the big Turkish news outlets. They have stopped asking him.

Now, he says, there is no room for truly free speech. "A unique thing that I haven't seen in this country before is these silences when the name of our president comes up," he observes. "Before, you could say something nasty in a taxi or a supermarket. Now it's silence." ■

Women of the resistance

Righteous furies

The Light of Days. By Judy Batalion. William Morrow; 576 pages; \$28.99. Virago; £20

THE GREAT chronicler of the Warsaw ghetto, Emanuel Ringelblum, wrote of the female Jewish couriers who travelled across Nazi-occupied Poland: "Without a murmur, without a second's hesitation, they accept and carry out the most dangerous missions...The story of the Jewish woman will be a glorious page in the history of Jewry during the present war."

Except it was not. Many such tales were recounted in "Freuen in di Ghettos" ("Women in the Ghettos"), an obscure Yiddish book published in New York in 1946, then largely forgotten. That is, until 2007, when Judy Batalion, a Jewish Canadian, found a copy in the British Library. Here was page after page of jaw-dropping courage—of "ghetto girls" who smuggled weapons, flirted with Nazis then killed them, blew up trains, sabotaged Vilnius's electricity supply, rescued children and dug escape tunnels. She speaks for many when she writes: "Despite years of Jewish education, I'd never read accounts like these...I had no idea how many Jewish women were involved in the resistance effort."

In "The Light of Days" Ms Batalion, herself the granddaughter of Polish Holocaust survivors, fills the gap. Built on years of further research, her powerful study is an important addition to the Holocaust canon—and to the understanding of the response of eastern Europe's Jewish communities to the Nazi extermination.

There were armed resistance movements in more than 90 ghettos, Ms Batalion says, but she mainly focuses on Warsaw, Vilnius, Bedzin and Krakow. She vividly recounts the formation of the fighting organisations in these cities—and the opposition they often faced from some fellow Jews and the Judenrats, or Jewish Councils. Many Judenrats still believed the best way to save lives was by working with the Nazis to keep order; they deployed Jewish police officers to help in round-ups.

The story is told through the eyes of a group of young women fighters. Renia Kukielka was, typically, "neither an idealist nor a revolutionary but a savvy, middle-class girl who happened to find herself in a sudden and unrelenting nightmare". She and her comrades procured weapons and ammunition, learned how to use them, made Molotov cocktails, faced down the Gestapo with false papers and did not confess under torture. As Chajka Klinger, a resistance leader in Bedzin, recalled: "No revolutionary movement, let alone [one of] the young, had ever faced problems similar to ours—the single, naked fact of annihilation, of death."

Their heroism was astounding. Bela Hazan worked in a Gestapo office under a pseudonym. Frumka Plotnicka, a key resistance organiser (second from right in the picture), fought in the Bedzin ghetto uprising, shooting at the Nazis till her last few moments. She was dragged half-burnt from a bunker and shot.

Pacey as the narrative is (it has been optioned by Steven Spielberg), the large cast and jumps in time and geography demand ►



Half-forgotten heroism

Impressionistic fiction

Home, alone

Whereabouts. By Jhumpa Lahiri. Knopf; 176 pages; \$24. Bloomsbury; £14.99

A WOMAN WALKS alone through an Italian city. She sits in the piazza and basks in the sun. Gradually, the reader comes to know this lonely flâneuse—her troubled past, hidden neuroses and conflicting urges. In “Whereabouts”, Jhumpa Lahiri’s latest book, she and her nameless narrator explore the inevitability of movement and change, uncomfortable truths and unexpected joys.

In Ms Lahiri’s brief chapters—some only a page long, with equally laconic headings such as “In the office”, “On the street” and “In the hotel”—the narrator, a writer and teacher, advances through the seasons, working, eating, swimming, travelling, visiting her mother and people-watching. She craves familiarity but feels compelled to “push past the barrier of my life”. This restlessness leads to a startling perception: “I’m me and also someone else.”

Her contradictions make the character wholly believable. She is moody and compassionate, irritated yet comforted by strangers; she craves solitude but is plagued by it. Ms Lahiri—who won a Pulitzer in 2000 for her first book, “Interpreter of Maladies”—evokes fleeting but resonant encounters with Chekhovian efficiency, making ordinary memories seem profound. Sparse sentences carry a quiet rage. The first mention of the narrator’s father is tersely devastating: “Instead of going to see a play with him, I sat at his wake.” Spring reminds her of “loss, of betrayal, of disappointment”.

Nothing much happens—a flirtation that might become an affair instead fizzles out—but, cumulatively, Ms Lahiri’s vignettes distil the complexities and costs of family. The reader sees how a child can sink into the gulf between parents (in this case, a hectoring mother and disengaged father), and grasps the narrator’s desire, but inability, to turn away from her upbringing: “I think a great deal about my parents, and I ask myself, in this sheltered place, why they’re still nipping at my heels.”



Where the streets have no name

The other key relationship in “Whereabouts” is with the narrator’s home city (unnamed, like her). The emphasis on place and movement reflects the author’s own peripatetic life. Born in London to Bengali parents, she moved to Rhode Island as a young child and later to Rome. She sought out new linguistic territory by writing this book in Italian, then translating it into English herself. Ms Lahiri has taken risks for her craft, and they have paid off, beautifully.

killers. A journalist with the American army warned Fruma and Motke Berger, part of the Bielski group made famous in the film “Defiance”, not to talk, because “people would think they were liars, or insane”. Kukiela made a new life in Israel; Klinger committed suicide there in 1958.

“They were not human, perhaps devils or goddesses,” wrote Stroop. “Calm. As nimble as circus performers. They often fired simultaneously with pistols in both hands. Fierce in combat, right to the end.” Some died in battle, others in Gestapo prisons or death camps. Their stories, half-buried for so long, are superbly told in this gripping, haunting book. ■

close attention. More of the Nazi perspective on the fighters would have made a useful counterpoint. To them, the Jews were passive *untermenschen*, yet here they were, a legion of furies, gunning them down, hurling grenades and home-made bombs. Jürgen Stroop, the ss commander in charge of liquidating the Warsaw ghetto, wrote a detailed report of the operation (before being executed as a war criminal). Ms Bataillon quotes him only fleetingly.

But she is penetrating on the women’s legacy and post-war lives. The handful who survived were often wracked with guilt. Some “self-silenced”. Jewish women were meant to be warm and loving, not

Interspecies relations

Creature discomforts

How to Love Animals. By Henry Mance. Jonathan Cape; 400 pages; £20. To be published in America by Viking in July; \$27

CAT VIDEOS are the definition of click-bait, dogs are prized for their companionable qualities, and the most popular cartoons feature bears, rabbits, ducks and pigs. But in an age when so many people profess to be animal-lovers, a remarkable number behave in ways that suggest the opposite—eating meat of dubious provenance or fish that suffocated on the decks of trawlers, controlling pets with chastening strictness and gawping at wretchedly constrained elephants in zoos.

As Henry Mance, a British journalist, observes, “animals have worse prospects in the very time that we have supposedly been looking out for them.” His lively first book argues for a profound reassessment of humans’ relationships with other species. It is a polemic framed as a personal quest. He takes a job at a slaughterhouse and graphically reports his efforts to rip the wool off freshly killed sheep. He learns to fish, goes on a fruitless deer hunt and visits a lab where drugs are tested on mice and frogs. He observes at close quarters the effects of both deforestation and re-wilding; he attends a Californian dog-fanciers’ convention where corgis are dressed as sharks while their owners dress as corgis.

Some of Mr Mance’s conclusions are unsurprising. Covid-19 has been a sharp education in the cost of disrupting ecosystems. Animals widely regarded as expendable, such as wolves, turn out to play vital roles in keeping other species in check. Though as a child the author adored zoos, marvelling at the tigers and pandas, he now has misgivings about these “soulless, motionless” places, which strike him as “the conservation equivalent of a police line-up”. He is an advocate of veganism, but worries that it may be a “niche pursuit” and “a sign of society fragmenting, rather than animal interests winning”.

Yet elsewhere the arguments in “How to Love Animals” are arresting. After pondering which sea creatures feel pain, Mr Mance rules that mussels, clams and oysters can be eaten in good conscience. He argues that cows raised for beef have better lives overall than those on dairy farms. It is usual to condemn trophy-hunters who cross continents to shoot lions, but “if anyone wants to stop wasteful killing for pleasure, they should focus on farming.”

► As Mr Mance travels from the fishing ports of northern Spain to a Polish hunting lodge, he encounters plenty of strange ideas. Some activists believe seats in parliament should be reserved for people representing the interests of domesticated animals. Others recommend editing wild species' genes so that they no longer harm other creatures with which they share habitats. There is apparently a case for letting captive elephants communicate with their counterparts in other zoos, through a device nicknamed the "Elephone".

No shortage of evangelists insist that technology will improve the lives of animals. Mr Mance is sceptical, concluding that restraint will achieve more than ingenuity. Even if his best line is borrowed from Martin Luther King—"The arc of the moral universe is long, but it bends toward justice"—he is a skilful writer who never shies away from painful stories, and leavens even the grimmest episodes with humour. He also has a rare ability to couch strenuous ethical arguments in terms that are warmly familiar. ■

its collections as tipples and other offerings. For its part, the Museum of Fine Arts, Houston translated a moody yellow self-portrait by Frantisek Kupka, a Czech artist, into a tropical drink. In the Frick Collection's weekly "Cocktails with a Curator" films, experts at the museum in New York match a liquid concoction to the theme or region of an artwork under discussion.

The art world's food fad began before covid-19. Released last year, for instance, the documentary "Ottolenghi and the Cakes of Versailles" focused on a reinterpretation of 18th-century French cuisine at a pricey banquet at the Metropolitan Museum of Art. But recent online programming makes the art-food mash-up digestible for broader audiences. And the trend is set to outlast the lockdown. At a time when broadening access is an imperative, food can help museums entice first-time visitors and co-operate with new partners. It "can be a really nice entry point for people who are less comfortable with art", says Elee Wood of the Huntington.

Most important, as Ms Gomez-Rejón says, "Cooking itself is an art." Like the visual kind, it illuminates the culture that produced it—an understanding enriched by juxtaposing the two forms of creativity. At their best, both food and painting are transporting experiences, introducing new worlds and possibilities, whether on a wall, a plate or in the imagination.

Take the use of blancmange by Debora Massari, a pastry chef, in the Uffizi's series (pictured). Through a dish that has roots in Arab cuisine, which appeared on the tables of the Medicis, she pays homage to Raphael's marriage portraits of Agnolo and Maddalena Doni. A ring of pastry and blancmange covered in dark chocolate (representing Agnolo) is entwined with a ring of white chocolate and lemon (Maddalena). The recipe draws on art and history to make something deliciously new. ■

The art of food

Making a meal of it

LOS ANGELES

Food has always been a subject of art. Increasingly, the reverse is the case too

"TRA ARTE e cucina"—"Between art and cuisine"—is how the Uffizi Galleries describe their recently launched cooking show, "Uffizi da mangiare" ("Uffizi on a plate"). In the videos, Italian chefs share recipes based on pieces in the collection in Florence, discussing both the artworks and the dishes. Dario Cecchini created *costata alla fiorentina* from a game-filled pantry depicted by Jacopo Chimenti; Marco Stabile turned Giorgio de Chirico's "Still Life with Peppers and Grapes" into a risotto that aims to capture the painting's ingredients and sensations on a plate.

Food has always been a subject of art. But increasingly the roles are being reversed, as paintings are interpreted in edible ways and shared online in new, bite-size formats. As part of their bid to attract digital audiences to replace in-person ones, enterprising museums are melding

the worlds of art and cuisine.

Last year the Los Angeles County Museum of Art began a quarterly series, "Cooking with LACMA", which features chefs, culinary historians and recipes based on works in the museum. In the first video Maite Gomez-Rejón of ArtBites, which aims to combine culinary and art history, made a mezcal margarita that was inspired by the output of Rufino Tamayo, a Mexican artist. An instalment this month will involve a Japanese dish drawn from the work of Nara Yoshitomo, a painter. Vivian Lin of LACMA hopes viewers will be moved to "share recipes and new insights about art with one another".

Cocktails have been an especially popular form of crossover during the pandemic, notes Ms Gomez-Rejón, who collaborated with the Huntington, a museum in California, on a video series reimagining works in



Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units	
	% change on year ago latest quarter*	2021†	% change on year ago latest	2021†	%			% of GDP, 2021†		% of GDP, 2021†		10-yr govt bonds latest,%	change on year ago, bp	per \$ Apr 28th	% change on year ago
United States	-2.4	Q4	4.3	5.5	2.6	Mar	2.1	6.0	Mar	-2.7	-13.5	1.6	101	-	
China	18.3	Q1	2.4	8.5	0.4	Mar	1.6	5.3	Mar‡§	2.6	-4.8	3.0	§§	117	6.48
Japan	-1.4	Q4	11.7	2.7	-0.1	Mar	0.2	2.9	Feb	3.2	-9.0	nil	-8.0	109	-1.8
Britain	-7.3	Q4	5.2	5.1	0.7	Mar	1.5	4.9	Jan††	-4.2	-12.3	0.8	51.0	0.72	11.1
Canada	-3.2	Q4	9.6	4.8	2.2	Mar	2.1	7.5	Mar	-2.0	-9.2	1.5	95.0	1.24	12.9
Euro area	-4.9	Q4	-2.7	4.1	1.3	Mar	1.2	8.3	Feb	3.3	-6.3	-0.2	24.0	0.83	10.8
Austria	-5.7	Q4	-5.6	3.8	2.0	Mar	1.7	5.7	Feb	3.0	-6.1	nil	3.0	0.83	10.8
Belgium	-4.9	Q4	-0.3	3.8	0.9	Mar	1.0	5.7	Feb	nil	-7.0	nil	-4.0	0.83	10.8
France	-4.9	Q4	-5.7	5.3	1.1	Mar	1.1	8.0	Feb	-1.7	-7.2	nil	-4.0	0.83	10.8
Germany	-3.6	Q4	1.4	3.5	1.7	Mar	1.9	4.5	Feb	6.8	-3.6	-0.2	24.0	0.83	10.8
Greece	-5.9	Q4	11.1	2.5	-1.6	Mar	0.1	15.8	Dec	-5.8	-5.7	0.9	-122	0.83	10.8
Italy	-6.6	Q4	-7.5	3.4	0.8	Mar	0.7	10.2	Feb	3.0	-10.5	0.8	-93.0	0.83	10.8
Netherlands	-2.8	Q4	-0.5	3.1	1.9	Mar	1.9	3.5	Mar	9.0	-4.2	-0.3	-3.0	0.83	10.8
Spain	-8.9	Q4	0.1	5.8	1.3	Mar	0.8	16.1	Feb	1.5	-8.7	0.4	-58.0	0.83	10.8
Czech Republic	-4.8	Q4	2.5	3.8	2.3	Mar	2.2	3.3	Feb‡	1.7	-5.5	1.8	47.0	21.4	17.0
Denmark	-1.4	Q4	2.7	3.0	1.0	Mar	0.7	4.6	Feb	7.4	-1.3	nil	25.0	6.15	11.9
Norway	-0.6	Q4	2.6	2.6	3.1	Mar	1.6	5.0	Nov‡‡	2.4	-1.7	1.4	65.0	8.23	26.4
Poland	-2.7	Q4	-2.0	4.0	3.2	Mar	2.4	6.4	Mar§	2.1	-4.9	1.6	15.0	3.79	10.8
Russia	-1.8	Q4	na	2.7	5.8	Mar	4.6	5.4	Mar§	4.0	-1.7	7.2	105	74.8	-0.6
Sweden	-2.1	Q4	-1.0	2.4	1.7	Mar	1.4	10.0	Mar§	4.0	-2.3	0.4	45.0	8.37	18.2
Switzerland	-1.6	Q4	1.3	2.6	-0.2	Mar	0.3	3.3	Mar	7.0	-2.3	-0.2	22.0	0.91	7.7
Turkey	5.9	Q4	na	3.9	16.2	Mar	11.9	14.1	Feb§	-2.3	-3.1	17.8	639	8.23	-14.9
Australia	-1.1	Q4	13.1	3.1	1.1	Q1	2.0	5.6	Mar	2.2	-7.6	1.6	70.0	1.29	19.4
Hong Kong	-3.0	Q4	0.7	3.5	0.5	Mar	1.8	6.8	Mar‡‡	3.7	-3.8	1.3	64.0	7.76	-0.1
India	0.4	Q4	42.7	10.4	5.5	Mar	5.2	6.5	Mar	-1.0	-7.0	6.0	-9.0	74.4	2.5
Indonesia	-2.2	Q4	na	3.3	1.4	Mar	2.8	7.1	Q3§	-0.3	-6.4	6.5	-161	14,500	6.5
Malaysia	-3.4	Q4	na	4.4	1.7	Mar	2.4	4.8	Feb§	3.5	-6.0	3.2	28.0	4.10	6.3
Pakistan	0.5	2020**	na	1.7	9.1	Mar	8.8	5.8	2018	-1.9	-6.9	9.8	†††	159	154
Philippines	-8.3	Q4	24.4	6.6	4.5	Mar	4.0	8.7	Q1§	-0.9	-7.4	4.0	55.0	48.5	4.5
Singapore	0.2	Q1	8.3	4.8	1.3	Mar	1.8	2.9	Q1	16.5	-4.1	1.6	62.0	1.33	6.8
South Korea	1.7	Q1	6.6	3.2	1.5	Mar	1.5	4.3	Mar§	4.3	-4.7	2.1	52.0	1,113	10.1
Taiwan	5.1	Q4	5.8	4.5	1.3	Mar	1.6	3.7	Mar	15.1	-0.5	0.4	-8.0	27.9	7.4
Thailand	-4.2	Q4	5.4	3.3	-0.1	Mar	0.8	1.5	Dec§	4.0	-6.0	1.7	61.0	31.4	3.4
Argentina	-4.3	Q4	19.4	6.2	42.6	Mar‡	41.9	11.0	Q4§	2.1	-6.0	na	na	93.4	-28.7
Brazil	-1.1	Q4	13.3	3.2	6.1	Mar	6.7	14.2	Jan§‡‡	0.5	-7.9	9.1	99.0	5.41	3.3
Chile	nil	Q4	30.1	6.0	2.9	Mar	3.5	10.3	Feb§‡‡	-0.2	-6.9	3.8	112	702	21.4
Colombia	-3.5	Q4	26.5	4.8	1.5	Mar	2.6	15.9	Feb§	-3.3	-8.9	6.4	-48.0	3,707	9.4
Mexico	-4.3	Q4	13.7	5.1	4.7	Mar	3.8	4.4	Mar§	2.4	-2.8	6.6	-29.0	20.0	22.5
Peru	-1.7	Q4	37.9	8.0	2.6	Mar	3.2	13.9	Mar§	-0.7	-7.3	5.6	151	3.82	-11.5
Egypt	2.0	Q4	na	2.9	4.4	Mar	6.2	7.2	Q4§	-3.1	-8.1	na	na	15.7	0.5
Israel	-1.5	Q4	6.5	4.0	0.2	Mar	1.3	5.4	Mar	3.4	-8.8	1.1	30.0	3.25	7.7
Saudi Arabia	-4.1	2020	na	2.9	5.0	Mar	2.4	7.4	Q4	2.8	-3.2	na	na	3.75	0.3
South Africa	-4.1	Q4	6.2	2.0	3.2	Mar	3.7	32.5	Q4§	-1.6	-9.2	9.2	-156	14.3	30.7

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. ‡Not seasonally adjusted. §New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index	% change on:			index	% change on:		
		Apr 28th	one week	Dec 31st 2020		Apr 28th	one week	Dec 31st 2020
United States S&P 500	4,183.2	0.2	11.4		Pakistan KSE	45,059.1	-0.5	3.0
United States NAScomp	14,051.0	0.7	9.0		Singapore STI	3,219.6	2.0	13.2
China Shanghai Comp	3,457.1	-0.5	-0.5		South Korea KOSPI	3,181.5	0.3	10.7
China Shenzhen Comp	2,300.9	1.0	-1.2		Taiwan TWI	17,567.5	2.1	19.2
Japan Nikkei 225	29,054.0	1.9	5.9		Thailand SET	1,576.8	-0.2	8.8
Japan Topix	1,909.1	1.1	5.8		Argentina MERV	50,043.8	5.1	-2.3
Britain FTSE 100	6,963.7	1.0	7.8		Brazil BVSP	121,052.5	0.8	1.7
Canada S&P TSX	19,357.0	1.1	11.0		Mexico IPC	48,487.9	-0.8	10.0
Euro area EURO STOXX 50	4,015.0	1.0	13.0		Egypt EGX 30	10,475.3	-1.6	-3.4
France CAC 40	6,307.0	1.6	13.6		Israel TA-125	1,705.4	0.7	8.8
Germany DAX*	15,292.2	0.6	11.5		Saudi Arabia Tadawul	10,531.2	4.3	21.2
Italy FTSE/MIB	24,459.6	1.2	10.0		South Africa JSE AS	67,740.1	0.9	14.0
Netherlands AEX	711.8	0.3	14.0		World, dev'd MSCI	2,951.9	0.6	9.7
Spain IBEX 35	8,799.6	3.3	9.0		Emerging markets MSCI	1,365.0	2.1	5.7
Poland WIG	60,462.4	2.3	6.0					
Russia RTS, \$ terms	1,509.1	3.1	8.8					
Switzerland SMI	11,103.5	-0.9	3.7					
Turkey BIST	1,385.9	4.2	-6.1					
Australia All Ord.	7,320.0	0.8	6.9					
Hong Kong Hang Seng	29,071.3	1.6	6.8					
India BSE	49,733.8	4.3	4.2					
Indonesia IDX	5,974.5	-0.3	-0.1					
Malaysia KLSE	1,608.5	0.7	-1.1					

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

Commodities

The Economist commodity-price index	2015=100	Apr 20th	Apr 27th*	% change on month	% change on year
Dollar Index	All Items	176.7	185.0	14.3	84.4
	Food	131.7	140.0	13.7	55.0
Industrials	All	218.8	227.1	14.7	107.1
	Non-food agriculturals	164.2	174.0	17.2	105.2
	Metals	235.0	242.9	14.1	107.5
Sterling Index	All items	193.4	203.0	12.6	64.8
Euro Index	All items	162.7	169.8	10.9	65.4
Gold	\$ per oz	1,776.0	1,779.8	5.6	4.6
Brent	\$ per barrel	66.7	66.6	3.5	223.8

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICAO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

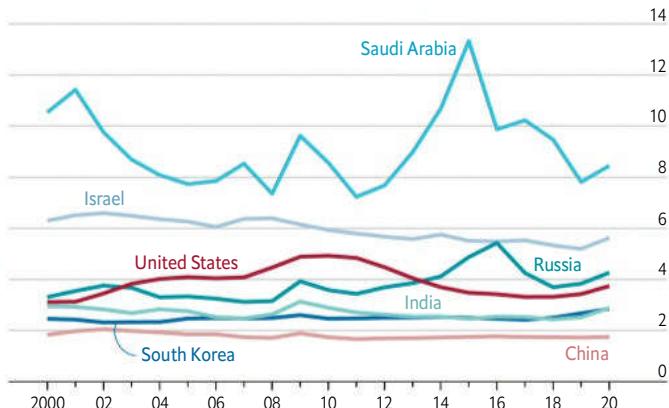
For more countries and additional data, visit Economist.com/indicators

→ Adjusted for local costs, China's current military outlays match America's during the Iraq war

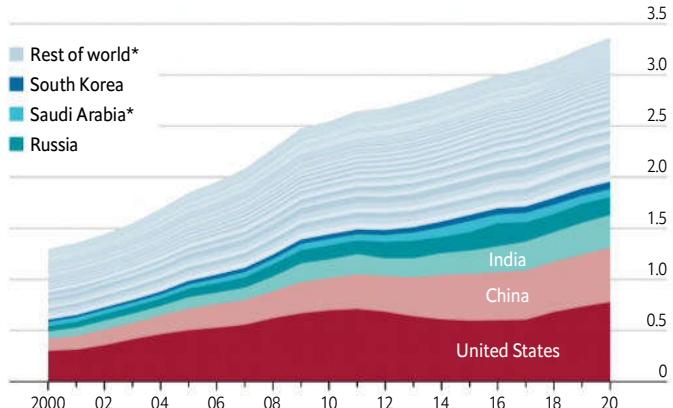
Military spending, \$bn, nominal v adjusted for military purchasing-power parity (PPP)



Military spending, % of GDP



Global military spending, \$trn, adjusted for military PPP



*Estimate based on known military PPP adjustments Sources: IMF; SIPRI; Peter Robertson; The Economist

Buck for the bang

Nominal spending figures understate China's military might

“THAT'S NOT going to happen on my watch,” Joe Biden said last month, regarding China's “goal to become...the most powerful country in the world.” In the martial realm, military-expenditure estimates released this week by the Stockholm International Peace Research Institute (SIPRI) seem to back up his prediction. America spent \$778bn on defence in 2020, 39% of the global total and more than the rest of the top ten countries put together.

However, nominal spending totals may overstate America's advantage. A dollar—or a few hundred billion of them—goes further in some places than in others. Wages in China are relatively low. Army pay there starts at \$10 per month, compared with \$1,733 in America. Construction and maintenance are cheaper as well.

Any fair comparison of military might needs to account for such differences. Just

as *The Economist* calculates currencies' purchasing-power parity (PPP) in terms of Big Macs, Peter Robertson, a professor at the University of Western Australia, has devised a “military PPP”. It adjusts defence budgets based on how they are allocated among wages, operating costs and equipment, and how local prices vary in each of these areas. The greatest differences are in countries that dedicate relatively small shares of their budgets to sophisticated weapons, since spending on missiles and fighter jets generally yields a similar military return on investment everywhere.

The PPP figures make America look far less dominant. At market exchange rates, SIPRI's estimate of China's spending is \$252bn, just one-third of America's; at PPP, it jumps to two-thirds. (The official Chinese figure is just \$184bn in nominal dollars, but is seen as unrealistically low.) Proportionally, the effect is even greater for Russia, whose \$62bn outlay buys \$177bn of military value, and bigger still for India, whose \$318bn-worth of spending is more than four times its \$73bn budget.

Mr Biden's generals might retort that quality is a quantity all of its own. Perhaps American grunts' salaries are 16 times higher than their Chinese counterparts'

because they have superior skills. Similarly, America's bases might be sturdier than Chinese ones, and its best-in-class equipment may not be available elsewhere. And even if China does close the gap on current spending, America's past capital investments still give it an edge: aircraft-carriers can remain in service for 50 years.

Nonetheless, the PPP numbers make clear that China is catching up quickly. So far, this mostly reflects China's faster economic growth. Since 2000 its defence spending has held steady at just under 2% of GDP, roughly half the share in America.

However, China's military ambitions are growing and its alliances are weaker than America's. The United States is preparing to withdraw from Afghanistan. By contrast, China has established control over much of the South China Sea, parts of which are claimed by Vietnam, Indonesia and the Philippines. It has raised tensions with Japan over a disputed group of islands. And it recently fought a border skirmish with India. Most worrying, it is increasing air and naval pressure on Taiwan (see Briefing). If China raises the share of its economy devoted to defence, Mr Biden might have to oversee a new arms race to maintain America's military supremacy. ■



Black snake, sacred water

LaDonna Brave Bull Allard, historian and campaigner for Native-American rights, died on April 10th, aged 64

THE FIRST time they drove up to Whitestone Hill, in south North Dakota, LaDonna Brave Bull Allard had to ask her husband to stop. She could hear grief coming out of the ground, crying and screaming. She had to lay down food and water there, as well as prayer-ties of sweet willow-bark tobacco that could soothe and heal the spirits of the dead.

Whitestone Hill in 1863 had seen a terrible massacre, when hundreds of men, women and children had been herded into a ravine and shot by the United States Army. They had been members of a large camp of tribes, mainly Sioux, who had been meeting to prepare for winter by hunting buffalo and arranging marriages. Among them was her great great grandmother Mary Big Mocassin, then nine years old, who felt the sudden heat of a bullet tear into her hip. She survived, but had shivered in a field for hours crying for her mother. Her voice, too, called from the place.

On the very date of that massacre, September 3rd, but in 2016, LaDonna herself was in a field, frozen and immobile. Again, white men in heavy fighting gear—this time company security guards—were breaking up a camp, one she had made to obstruct the building of the Dakota Access Pipeline beneath the sacred lands of her tribe. Hundreds of protesters were being tear-gassed and pepper-sprayed. Dogs were set on them, and now she was facing one with blood on its dark grey jaws. Yet the only thought in her head was a historian's: how could this be happening again, on the anniversary of so much killing?

It happened because they were living in prophecy, the sort the old women liked to discuss round the kitchen table while she, and the other young, pretended not to hear. One was of Zuzeca Sapa, a black snake that would destroy the world unless her people stood up to defeat it. Back then the snake was taken to be the new Interstate highway, surfaced with black tar. Now it was clearly the pipeline, 1,170 miles long and costing \$3.8bn, intended to carry black

oil from the North Dakota shale-oil fields to Illinois. On the way it threatened 380 archaeological sites; 26 were in the 40-mile stretch round the meeting of the Missouri and Cannonball rivers, where roots had first grown out of her feet.

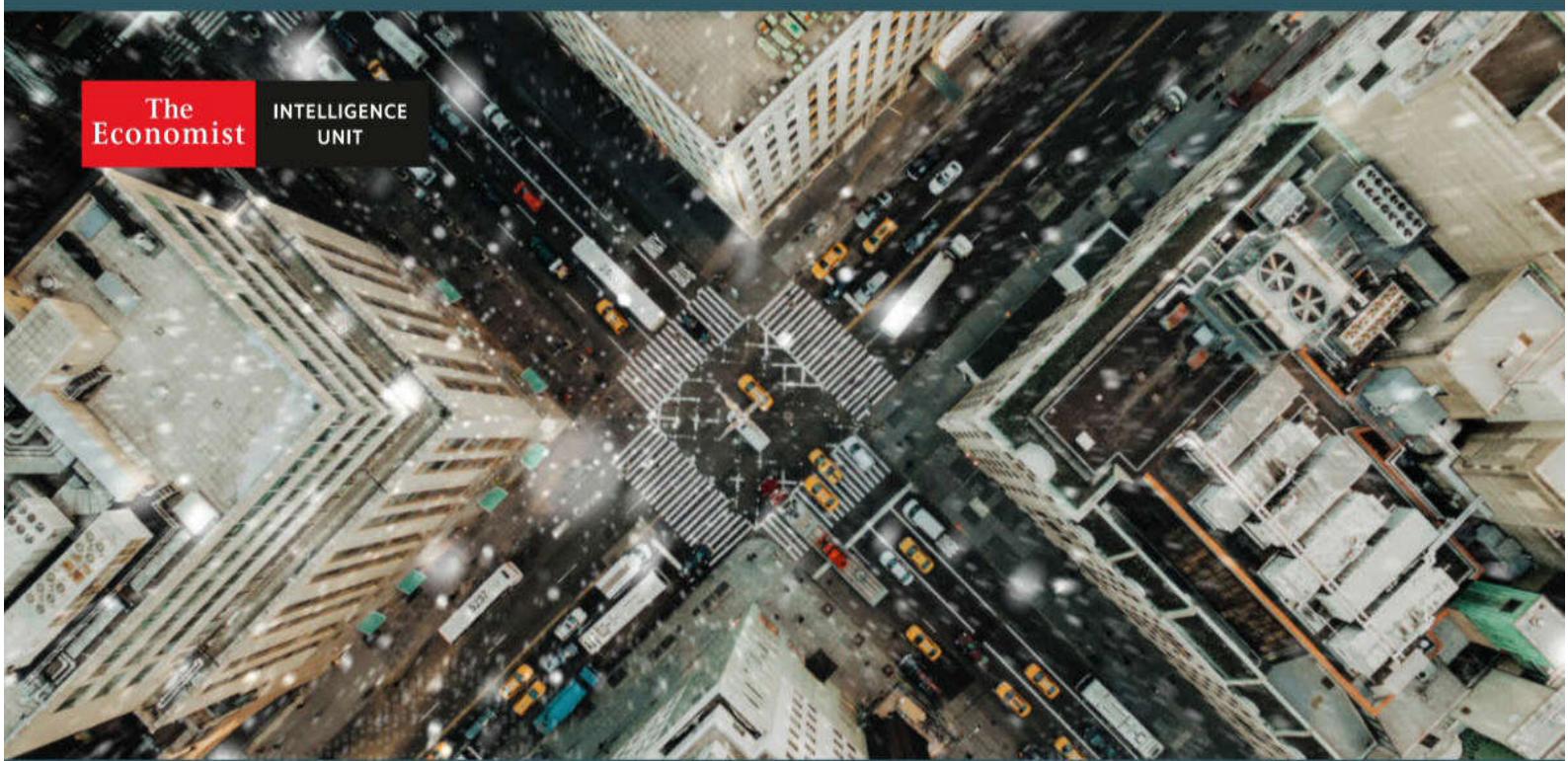
This was her father's land. As a child she had noted every feature which later, as historian of the Standing Rock Sioux, it became her job to catalogue and preserve. The low rolling hills carried the remains of Arikara villages, with effigies arranged in stones and prayers laid for years on the ground. On the peak above her camp her father was buried, along with one of her sons. At the confluence of the rivers was a whirlpool that carved the sand into great spheres strewn along the banks, the sacred stones. Here beside the Cannonball river her grandfather had sun dances with Wise Spirit, her uncle climbed trees for honeycombs and the family hauled up water every day, to drink and live. Soon afterwards that history was part-destroyed by the damming of the Missouri, which left the water unsafe to drink, the whirlpool flat and bleached trees, skeletons of spirits, poking from the water. The pipeline map provided by the company showed nothing there; her people's footprints had been taken out of the earth.

It was up to them to crush the snake. She was no activist: her loves were genealogy and archaeology, pursued through university and now for her tribe. Her way was to invoke the past like a mantra, as she did when she quickly, firmly gave her real identity to any white interviewer: Tamakawastewin, "Her Good Earth Woman", Sissintonwan Dakota from her mother, Oglala Lakota from her father. Yet she also had land, and in April 2016 she set up the Sacred Stone camp at Standing Rock as a spiritual centre of protest. Only a few came at first; locals brought them coffee, firewood and sleeping bags. But a social-media appeal drew hundreds, then thousands, eventually in two camps, in tents and yurts and maple-pole tipis. The seven bands of the Sioux met there for the first time in 140 years. The camps overflowed with horses, dogs, children, singing, story-telling and the smell of frybread. Tribal flags from almost every state lined either side of the route down to the pipeline site, where young men riding bareback would line up to block the road. She spread the word by travelling and speaking; the young spread it on their phones.

In this deliberately leaderless gathering, she kept the focus sacred. The ancestors had put medicine into this ground. Now it had to be applied again, to heal the body of Mother Earth and especially to heal Water, their first medicine. Indigenous spiritual leaders from all over America, as well as beyond it, brought water from their own rivers to fortify the Cannonball against future leaks of oil. The protesters were "water protectors", and their rallying cry was "Mni Wiconi", "Water is Life."

It lasted the best part of a year. At first the Obama administration had allowed the pipeline, then paused it; the Trump administration, citing the national interest, ordered it to resume, but was found in violation of federal law. Violence broke out as the pipeline company (which had not been stopped from operating) continued to dig towards the last remaining stretch, where her heart was. The leaderless movement began to fall apart. Meanwhile the tribal council of the Standing Rock Sioux, as well as the local police, became disenchanted with the camps, their mess, cost and trouble, and joined federal agencies to drive them out. By March 2017 they were cleared, and through the miles of 30-inch light-green pipes the black snake oozed its way.

This looked like defeat, but not entirely. President Biden might yet shut this pipeline down, as he had cancelled Keystone XI; the signs were hopeful. She had plans to build a new camp, fully self-sufficient, in the hills nearby. Echoes of the old camp, too, still sounded. The names "Sacred Stone" and "Standing Rock" were now famous, and fresh prayers had been laid on the ground. In this corner of North Dakota, at least, her people were no longer erased from history. If you walked there, you could hear their resistance rather than their grief. ■



Data Evolution in the Cloud

A data revolution is under way. Almost uniformly, businesses now recognise the potential of data as a competitive differentiator, engine for innovation and generator of business value.

Yet companies still struggle to extract the true value of data. The vast benefits of data-driven insight are broadly understood, but rarely realised in full.

Efficient data analysis provides the fuel to power better, faster decisions. It enables businesses to understand current conditions, respond to change or disruption and predict future customer preferences and demand.

However, both businesses and society at large continue to grapple with the ferocious pace of data creation and evolution.

Companies with rigid legacy systems and outdated operating models risk being left behind in the gathering tide of digital transformation. Data are often trapped in

disparate, unconnected silos across systems and clouds, making effective analysis not only time-consuming but also immensely costly.

So how can data be captured and shared while protecting both privacy and security? How can organisations derive the full value of data while managing the ever-shifting landscape of regulatory compliance? And, above all, how can companies effectively leverage their data to make decisions based more on facts and insight, and less on guesswork and instinct?

To find out, The Economist Intelligence Unit, sponsored by Snowflake, surveyed 914 executives from 8 industries across 13 countries. Our latest report explores the intricacies of data evolution and identifies the challenges to be overcome.

Digital transformation is no longer an option, it is essential—and data holds the key.

Read the full report to learn more at
<https://dataevolution.economist.com/>

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