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Russian assets: freeze or seize?

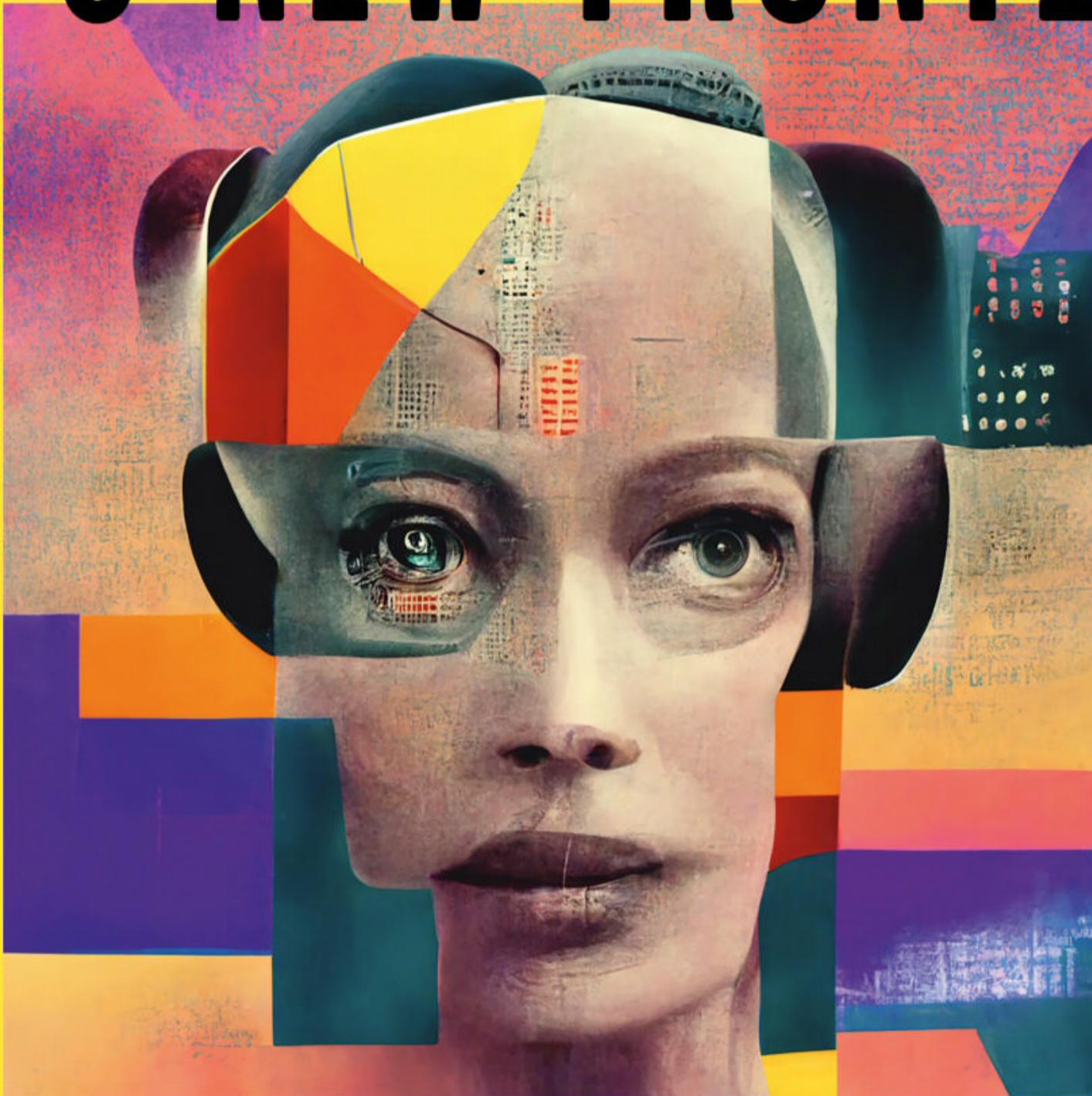
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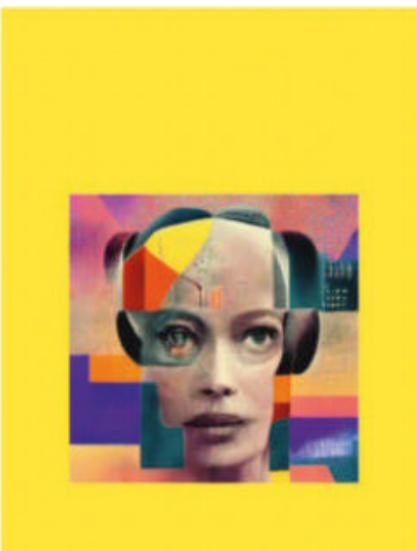
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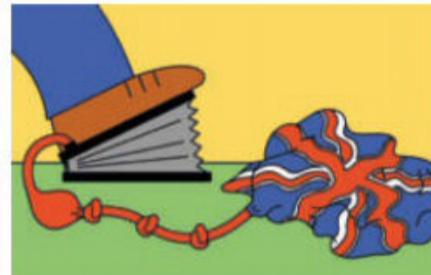


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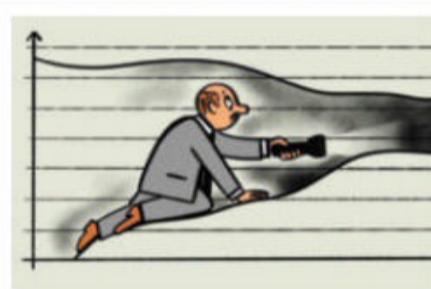
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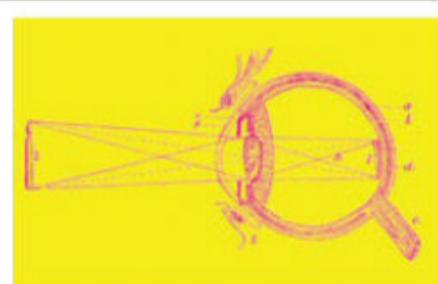
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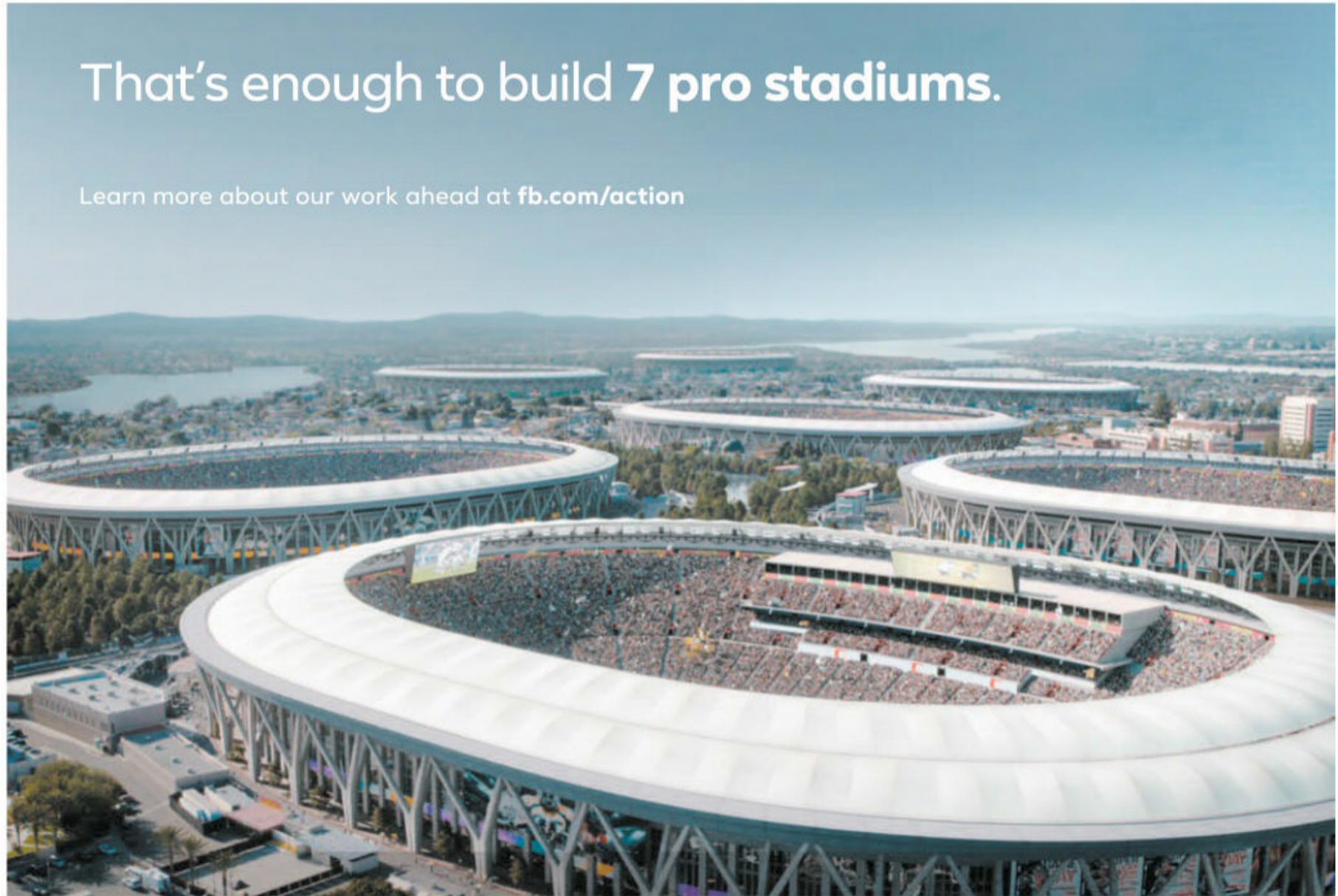


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Battling the fallout from parties held at Downing Street during covid-19 lockdowns, **Boris Johnson**, Britain's prime minister, won a snap no-confidence vote among Conservative MPs. But more than 40% of his own MPs voted against him, severely denting his authority. The party's rules prevent another formal challenge to Mr Johnson's leadership for a year. But Mr Johnson's opponents note that his support was weaker than that accorded Theresa May in a similar vote in 2018, as her premiership floundered. Six months later, she quit.

Sweden's governing Social Democrats won what was in effect a no-confidence vote, but only by securing the co-operation of an independent MP of Kurdish descent by reaffirming their support for a Kurdish group in Syria. That further complicates relations with Turkey, which has said it will block Sweden's and Finland's bids to join NATO owing to their support for Kurdish organisations that Turkey deems terrorists.

Ukrainian troops continued to resist Russia's offensive in Severodonetsk, a besieged city in the east of Ukraine that has become the focus of the Russian invasion. Elsewhere, the pace of fighting has slowed markedly, probably as a result of both widespread casualties and the loss of much military equipment on both sides. Russian missiles hit Kyiv, the capital, for the first time in several weeks.

A Russian strike destroyed Ukraine's second-biggest grain terminal in Mykolaiv. At a meeting of the UN Security

Council the president of the European Council accused Russia of "using food supplies as a stealth missile" by blocking grain exports from Ukraine. The Russian ambassador stormed out of the session. Talks between Russia and Turkey aimed at allowing grain exports to resume from Ukraine's blockaded ports ended without a solution.

Mali's junta, which came to power by staging coups in 2020 and 2021 and had pledged to step down by February this year, said it would delay handing power to a civilian government by another two years. The Economic Community of West African States warned that it would not lift sanctions until the junta agreed to a shorter transition.

Slaughtering the innocents

Gunmen killed at least 50 people when they attacked a Catholic church in Nigeria's south-western Ondo state. The attack was the first of its kind in Ondo. Violence appears to be spreading from the northwest, where thousands have been killed by **jihadists** over the past decade.

Nigeria's ruling All Progressives Congress party picked Bola Tinubu, a former governor of Lagos state, as its presidential candidate for an election next year. The 70-year-old will run against the main opposition candidate, Atiku Abubakar, a 75-year-old former vice-president.

With tensions increasing between the two countries, Felix Tshisekedi, the president of **Congo**, bluntly accused neighbouring **Rwanda** of backing the M23 rebel group, which in recent weeks has attacked villages and army posts in eastern Congo. Rwanda denies involvement.

Two wealthy brothers, Rajesh and Atul Gupta, who have been charged with fraud and money-laundering in **South Africa** in relation to suspected corruption during the presi-

dency of Jacob Zuma, were arrested in Dubai. They are expected to be extradited.

Judges in **Tunisia** went on strike to protest against interference in the judiciary and the sacking of 57 judges by Kais Saied, the president.



A fire and explosion at a container depot in **Bangladesh**, near the port of Chattogram, killed more than 45 people and injured hundreds more. Some 850 tonnes of hydrogen peroxide, a hazardous chemical, had been stored in the open, near other containers.

India's ruling Bharatiya Janata Party rebuked two senior officials who made disparaging remarks about the Prophet Muhammad, amid mounting protests from Muslim countries. Though the BJP often fans anti-Muslim sentiment at home, its sectarian outlook had not previously had much impact on foreign relations.

Australia said a **Chinese fighter jet** cut in front of one its surveillance aircraft in international airspace over the South China Sea. The Chinese plane released "chaff"—small pieces of metal meant to confuse radar—which entered the Australian plane's engine. No one was injured. The allegation came a day after Canada said that its military planes, in the region to enforce UN sanctions against North Korea, had been repeatedly buzzed by Chinese jets. China accused Australia and Canada of provocative behaviour.

Voters in **San Francisco** overwhelmingly decided to remove the local district attorney from office in a recall election.

Chesa Boudin's ultra-progressive positions on law and order were too much even for the famously liberal bastion.

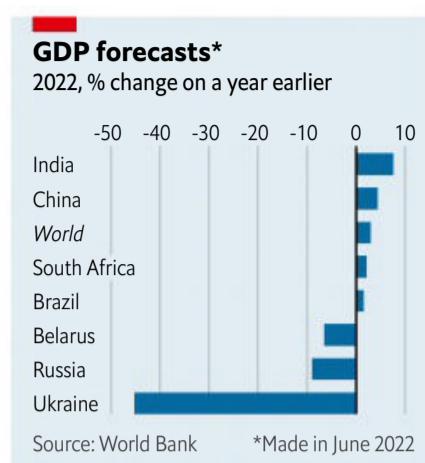
Crime also dominated the primary election for mayor of **Los Angeles**. Rick Caruso, a property developer and former Republican, got the most votes. He has promised to put more police on the streets. Karen Bass, a progressive congresswoman and favourite to win until Mr Caruso's belated entry into the race, came second. They face each other in a run-off in November.

The former leader of the Proud Boys, a far-right group, and four others were charged with seditious conspiracy for trying to prevent Congress from certifying election results by storming the Capitol on **January 6th 2021**. The indictments came three days before congressional hearings into the events of January 6th, due to be broadcast live on prime time television.

The search continued for Dom Phillips, a British journalist, and Bruno Araújo Pereira, an indigenous official, who disappeared in the **Brazilian Amazon**. The area is known for tensions over illegal fishing, mining and hunting. It has been reported that Mr Pereira received death threats the week before the trip. Relatives of the men expressed frustration at the authorities' slow response.

Hugs and misses

The **Summit of the Americas** began in Los Angeles. America announced a series of new policies regarding the region, including an effort to curb migration from Central America. Jair Bolsonaro, Brazil's president, prepared to meet Joe Biden for the first time. But Andrés Manuel López Obrador, Mexico's president, stayed away in protest at the exclusion of Cuba, Nicaragua and Venezuela from the event. Instead he sent his foreign minister, with a "hug" for Mr Biden.



The World Bank slashed its forecast of global **GDP growth** this year, to 2.9%. It warned that the risk of stagflation was considerable and that the world should prepare for "several years of above-average inflation and below-average growth". Real income per person in 2023 is expected to remain below pre-pandemic levels in 40% of developing economies. The OECD also cut its forecast for growth, but played down the risk of stagflation; it expects inflation to start easing later this year.

Appearing before a Senate committee, Janet Yellen acknowledged that America's high level of **inflation** was "unacceptable", and asked Congress to "mitigate" rising household costs through a variety of measures, such as lowering prescription-drug prices. The American treasury secretary earlier denied claims in a new book that she had told Joe Biden to reduce the size of his \$1.9trn stimulus package last year because it would stoke inflation.

Target issued a profit warning because of a build-up in its inventory, which it will clear by heavily discounting prices on a range of goods. Like other retailers, the department-store chain is adapting to a change in consumer spending towards household essentials, such as food and fuel, and away from frivolous products.

In Britain **retail sales** fell at an annual rate of 1.1% in May, the biggest drop since January 2021, when the country was in lockdown. The four-day **Platinum Jubilee** weekend provided a small fillip. Retail footfall

was up by 6.9% versus the average for May. Spending in pubs rose by 74%, year on year.

Currency fluctuations

The **Turkish lira** fell sharply again, after Recep Tayyip Erdogan, Turkey's president, reiterated his pledge to continue cutting interest rates, despite annual inflation running at 73.5%. Mr Erdogan has pressed the nominally independent central bank to reduce rates, which he hopes will boost growth. But the weak lira is pushing up the cost of imports, especially for food and energy. Mr Erdogan has called interest rates "the mother of evils". This week he said only "those living a charmed existence" benefit from them.

Australia's central bank made a more assertive push to tame inflation by raising its main interest rate by half a percentage point, to 0.85%. That follows a smaller increase in May. **India's** central bank also lifted its benchmark rate by half a point, to 4.9%, the biggest rise in over a decade.

Share prices in **Chinese tech companies** continued their winning streak, amid hopes that the government's crackdown on the industry is near-

ing an end. Didi Global's depressed stock surged by as much as 60%, after reports that an almost year-long ban on downloading the ride-hailing giant's app would soon be lifted.

Ant Group, an affiliate of Alibaba and also a target of the Chinese government's ire, this week opened a digital wholesale bank, which it has based in Singapore. ANEXT Bank will provide financial services to small- and medium-sized enterprises.

Howard Schultz said he would step down as chief executive of **Starbucks** early next year. Mr Schultz took up the job on an interim basis in April, his third stint leading the coffee chain. Like Amazon, Starbucks is fighting a grassroots effort to unionise its employees. It has decided to close one of the outlets that recently plumped to join a union, apparently over a faulty grease trap.

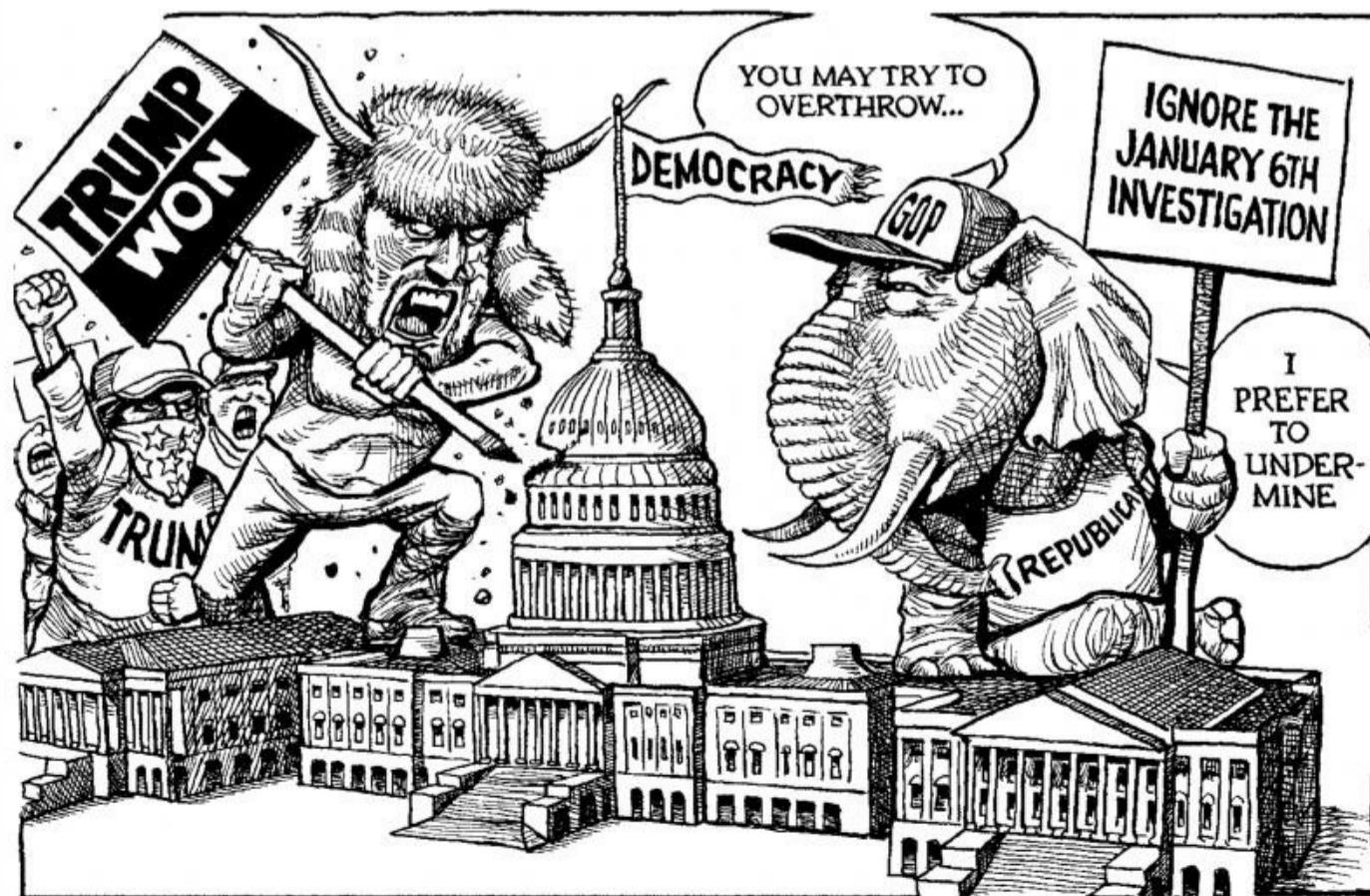
Elon Musk sent a formal complaint to **Twitter** stating that it was in "clear material breach" of their \$44bn buy-out agreement by "actively resisting" his request for the number of fake and spam accounts on the platform. Twitter said that if necessary it would enforce the

transaction, though it has reportedly agreed to give Mr Musk access to data on the swarms of tweets it hosts each day. It is thought Mr Musk is looking for a way out. Since striking the deal Twitter has lost about a fifth of its stock-market value.

Meanwhile, **Tesla's** share price plunged after reports that Mr Musk was thinking of cutting the carmaker's workforce by 10% because he has a "super bad feeling" about the economy. Mr Musk recently told Tesla's staff that they could no longer work remotely and were expected in the office at least 40 hours a week.

Thursday is the new Friday

Tesla employees wanting to spend less time in the office could benefit from the results of the world's biggest experiment of a **four-day week**, which has just started in Britain. The six-month programme involves 70 firms and 3,300 staff, who will receive full pay but work 80% of their time. The experiment is being run by a think-tank and academics to measure whether and how a reduced work week affects productivity, and if people can work "shorter and smarter".





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Artificial intelligence's new frontier

The promise and perils of a breakthrough in machine intelligence

PICTURE A COMPUTER that could finish your sentences, using a better turn of phrase; or use a snatch of melody to compose music that sounds as if you wrote it (though you never would have); or solve a problem by creating hundreds of lines of computer code—leaving you to focus on something even harder. In a sense, that computer is merely the descendant of the power looms and steam engines that hastened the Industrial Revolution. But it also belongs to a new class of machine, because it grasps the symbols in language, music and programming and uses them in ways that seem creative. A bit like a human.

The “foundation models” that can do these things represent a breakthrough in artificial intelligence, or AI (see Briefing). They, too, promise a revolution, but this one will affect the high-status brainwork that the Industrial Revolution never touched. There are no guarantees about what lies ahead—after all, AI has stumbled in the past. But it is time to look at the promise and perils of the next big thing in machine intelligence.

Foundation models are the latest twist on “deep learning” (DL), a technique that rose to prominence ten years ago and now dominates the field of AI. Loosely based on the networked structure of neurons in the human brain, DL systems are “trained” using millions or billions of examples of texts, images or sound clips. In recent years the ballooning cost, in time and money, of training ever-larger DL systems had prompted worries that the technique was reaching its limits. Some fretted about an “AI winter”. But foundation models show that building ever-larger and more complex DL does indeed continue to unlock ever more impressive new capabilities. Nobody knows where the limit lies.

The resulting models are a new form of creative, non-human intelligence. The systems are sophisticated enough both to possess a grasp of language and also to break the rules coherently. A dog cannot laugh at a joke in the *New Yorker*, but an AI can explain why it is funny—a feat that is, frankly, sometimes beyond readers of the *New Yorker*. When we asked one of these models to create a collage using the title of this leader and nothing more, it came up with the cover art for our American and Asian editions, pictured (we tried to distract our anxious human designers with a different cover in our European editions).

Foundation models have some surprising and useful properties. The eeriest of these is their “emergent” behaviour—that is, skills (such as the ability to get a joke or match a situation and a proverb) which arise from the size and depth of the models, rather than being the result of deliberate design. Just as a rapid succession of still photographs gives the sensation of movement, so trillions of binary computational decisions fuse into a simulacrum of fluid human comprehension and creativity that, whatever the philosophers may say, looks a lot like the real thing. Even the creators of these systems are surprised at their power.

This intelligence is broad and adaptable. True, foundation models are capable of behaving like an idiot, but then humans are, too. If you ask one who won the Nobel prize for physics in 1625, it may suggest Galileo, Bacon or Kepler, not understanding

that the first prize was awarded in 1901. However, they are also adaptable in ways that earlier AIs were not, perhaps because at some level there is a similarity between the rules for manipulating symbols in disciplines as different as drawing, creative writing and computer programming. This breadth means that foundation models could be used in lots of applications, from helping find new drugs using predictions about how proteins fold in three dimensions, to selecting interesting charts from datasets and dealing with open-ended questions by trawling huge databases to formulate answers that open up new areas of inquiry.

That is exciting, and promises to bring great benefits, most of which still have to be imagined. But it also stirs up worries. Inevitably, people fear that AIs creative enough to surprise their creators could become malign. In fact, foundation models are light-years from the sentient killer-robots beloved by Hollywood. Terminators tend to be focused, obsessive and blind to the broader consequences of their actions. Foundational AI, by contrast, is fuzzy. Similarly, people are anxious about the prodigious amounts of power training these models consume and the emissions they produce. However, AIs are becoming more efficient, and their insights may well be essential in developing the technology that accelerates a shift to renewable energy.

A more penetrating worry is over who controls foundation models. Training a really large system such as Google’s PaLM costs more than \$10m a go and requires access to huge amounts of data—the more computing power and the more data the better. This raises the spectre of a technology concentrated in the hands of a small number of tech companies or governments.

If so, the training data could further entrench the world’s biases—and in a particularly stifling and unpleasant way. Would you trust a ten-year-old whose entire sense of reality had been formed by surfing the internet? Might Chinese- and American-trained AIs be recruited to an ideological struggle to bend minds? What will happen to cultures that are poorly represented online?

And then there is the question of access. For the moment, the biggest models are restricted, to prevent them from being used for nefarious purposes such as generating fake news stories. OpenAI, a startup, has designed its model, called DALL-E 2, in an attempt to stop it producing violent or pornographic images. Firms are right to fear abuse, but the more powerful these models are, the more limiting access to them creates a new elite. Self-regulation is unlikely to resolve the dilemma.

Bring on the revolution

For years it has been said that AI-powered automation poses a threat to people in repetitive, routine jobs, and that artists, writers and programmers were safer. Foundation models challenge that assumption. But they also show how AI can be used as a software sidekick to enhance productivity. This machine intelligence does not resemble the human kind, but offers something entirely different. Handled well, it is more likely to complement humanity than usurp it. ■



The Capitol-riot hearings

High time for prime time

Why America's probe into the attempted coup last year is needed, before it's too late

THE ESSENCE of what happened on January 6th 2021 is well-known, if still shocking to recall. A mob stormed the Capitol in Washington, DC, in an effort to prevent Congress from certifying Joe Biden's election victory. Four people in the crowd died that day, and five police officers in its aftermath. Members of Congress had to be rushed to a secure location in a basement. Rioters erected a mock gallows and chanted "Hang Mike Pence". And the man who inspired all this was the president himself, who had urged his followers to help overturn his election defeat. As the Republicans' leader in the Senate, Mitch McConnell, told the Senate a few weeks later, Donald Trump was "practically and morally responsible" for these events: "The people who stormed this building believed they were acting on the wishes and instructions of their president."

So what is the point of the public hearings of the House committee probing the insurrection due to start on June 9th (see United States section)? From Thursday's prime-time political theatre to half a dozen sessions that will follow before a final report in September, the coverage will be viewed very differently on either side of a polarised country. Commentators on the right will belittle it all as a witch hunt. And after November's mid-term elections, in which the Republicans look likely to win control of the House, they can be counted on to bury the matter.

Yet that ticking clock gives an urgency to the proceedings, which matter profoundly, for three reasons. One flows from the basic workings of democracy: institutions must do their job. It is the task of Congress to probe how an assault on the Capitol happened and conclude what lessons can be learned. Its nine-member committee—seven Democrats and two principled Republicans, Liz Cheney and Adam Kinzinger—has gone about it in a commendably thorough, bipartisan way, despite much resistance. On June 3rd the Department of Justice charged Peter Navarro, a former economic adviser to Mr Trump, for refusing to

co-operate with the committee (though it strangely decided not to act against Mark Meadows, the White House chief of staff at the time of the riot, despite similar obstructionism).

Second, though the core of the story is known, many vital details are not—especially concerning the extent of the coup's planning and how directly the president was involved. Some revealing details, such as text messages from Mr Trump's family to Mr Meadows urging him to persuade his boss to stop the riot, have dribbled out in the course of the committee's work so far. More can be expected in the public hearings, given that they will draw on information gleaned from more than 1,000 depositions and interviews and over 140,000 documents.

A flow of fresh facts about the depth of plotting would reinforce the third reason why these hearings are important: the threat is not over. True, America's democracy prevailed despite the attack. Members of Congress were eventually able to go back into the chamber and they duly certified the election (albeit that, despite the violence that had occurred that day, 138 Republican House members still voted to reject the results in Pennsylvania). Mr Biden became president.

But even now 60% of Republicans believe Mr Trump's lie that the election was stolen. And the party has decided that the insurrection was not serious enough to break with Mr Trump, leaving him the front-runner for the Republican nomination in 2024. If Republicans select him, Mr McConnell says he will back him.

Astonishing as it may seem, given what is already known about his efforts to thwart the will of the electorate, let alone what may be discovered, Mr Trump could well win back the presidency legitimately. In case he does not, his supporters are striving to put in place officials who may make a future challenge to the voters' verdict succeed. The committee's work, including the public hearings, is a vital part of the eternal vigilance that, more than ever, is needed to defend American democracy. ■



Sanctions and Russia

Seizing the moment

Permanently grabbing Russian assets is a seductive idea. It would also be a mistake

MORE THAN 100 days into the war in Ukraine, the biggest sanctions programme ever imposed on a major economy is still being tightened. America and Europe have frozen Russia's currency reserves held in Western banks. On June 3rd the European Union joined America and Britain in placing a partial embargo on Russia's oil exports, and also cut off Sberbank, its largest lender, from the SWIFT interbank messaging system. A motley crew of oligarchs and their toys have been sanctioned. In Fiji the *Amadea*, a 100-metre superyacht with a helipad and pool, is the subject of Western actions, as are private planes in Dubai and Chelsea football club in England.

Sanctions have caused serious disruption to Russia's economy and if kept in place will impair its performance for years. Even so, their limitations are clear. Owing to high energy prices—Brent crude costs about \$120 a barrel—Vladimir Putin's regime is enjoying bumper revenues. Because only Western countries and a handful of Asian allies are enforcing sanctions, many customers continue to buy Russian oil. As a result, by the end of 2023 its crude production is expected to be only about 20% below its pre-war level. Kremlin-linked tycoons are still free to travel much of the world. Russian missiles continue to slaughter civilians in Ukraine and devastate its economic capacity. ■

The bill for rebuilding Ukraine's smashed cities and repairing its ruined industrial base will be huge: upwards of \$600bn, according to some estimates (see Finance & economics section). That has got many people wondering if the West should shift from merely freezing Russian assets temporarily to confiscating them permanently. They could then be used to pay for the reconstruction that lies ahead.

Russia has about \$300bn of reserves held in the West and up to another \$1trn of mainly private-sector assets held abroad. On May 19th Ursula von der Leyen, the president of the European Commission, said that the EU was looking into asset seizures. The G7 has discussed using them, too.

The idea that the aggressor should pay for the damage it has caused is appealing and popular. But the legal justification, and strategic logic, of sanctions are that they impair a country's capability to pursue a course of action and may change its behaviour, because if that country alters its path the assets will be released. A shift from this approach to a policy of permanent seizure would be a big step that would be justifiable only if two tests are passed. The first is that any new policy is compatible with the rule of law. And the second is that it has a clear strategic pay-off.

Start with the rule of law. In America the president has the authority to freeze a foreign government's assets but not typically to seize them unless America is at war with that country. Ever since Russia invaded Ukraine, President Joe Biden has been at pains to say America is not in open conflict with it. The executive branch can transfer control over certain foreign assets when it stops recognising a country's government, as with some funds

that belong to Venezuela and Afghanistan (see Asia section). However, America says it does not seek regime change in Russia.

Under international law, reparations usually involve the consent of the paying country, typically as part of a peace treaty. Such negotiations are a long way off, and Ukraine must not be forced into them. Seizing assets owned by individuals, however odious they are, before they have been convicted by a court is also dubious. In some countries, such as Germany, doing so may violate the constitution.

What about the West's strategic interests? In the short run, permanent seizure would make no difference to the Kremlin's

ability to fund its deadly war machine, since Mr Putin's regime cannot use the foreign assets that have already been sanctioned and frozen. In the long run, the precedent set by confiscations without a clear legal footing would expose all cross-border assets, including Western ones, to tit-for-tat appropriation by governments. It would also give a further incentive for countries that are not allied with America, or

which have unstable relations with it, to bypass the American-led financial system, which is a bedrock of Western power.

Rather than resorting to asset confiscations, the West must strengthen Ukraine's war effort. That means supplying more heavy weapons and speeding up their deployment and the training of Ukrainian forces to use them (see Europe section). It means maintaining sanctions for as long as Russia wages its war and occupies Ukraine. And it means making clear that even if no peace deal is signed, and no Russian reparations are ever paid, Europe and America will still have to foot a large part of the bill for rebuilding Ukraine's shattered economy. ■



Xenophobia in South Africa

Scapegoating Africans

South Africans should not blame immigrants for their country's failings

IN 1995, A year after becoming South Africa's first black president, Nelson Mandela gave a speech in Alexandra, a township in Johannesburg. "It saddens and angers me to see the rising hatred of foreigners," he said, chastising residents for destroying migrants' homes. "We cannot blame other people for our troubles." Under Mandela, the African National Congress (ANC), many of whose fugitive leaders had been sheltered by other African countries during apartheid, took in Africans fleeing wars in Congo, Somalia and elsewhere. The new government also made it easier for Africans to work and settle in South Africa.

They have not always felt welcome. Xenophobic locals occasionally attacked immigrants in the 1990s in poor urban areas like Alexandra, and there was more widespread violence against foreigners in 2008. In general, however, South African politicians have refrained from inciting such horrors. Unfortunately, that is changing. Today politicians from several parties are vying to see who can blame immigrants most loudly for the country's self-inflicted problems (see Middle East & Africa section). The virulence of their rhetoric varies, but the consequence is the same: life for immigrants has grown nastier and more perilous.

Vigilante groups are growing in strength. They spread wild rumours on social media. They stomp around townships, de-

manding (illegally) to check foreigners' identity documents. Sometimes, they inflict mob justice. Astonishingly, one in eight South Africans say they have taken part in "violent action" against immigrants; almost as many say they would be prepared to do so. Most South Africans think migrants commit more crimes (they don't) and "steal" local jobs (studies suggest that they tend to boost both GDP and employment).

Instead of rebutting these baseless beliefs, political entrepreneurs seek to exploit them. ActionSA, a new right-wing populist party; the Economic Freedom Fighters, a hard-left outfit; and ethnicity-based parties such as the Inkatha Freedom Party and the Patriotic Alliance, all fan fear of foreigners to woo votes away from the ANC, which is expected to lose its majority in the next election in 2024.

Anxious to cling to power, the ruling party has responded by treating foreigners more harshly. The processing of asylum applications has ground to a halt. Some provinces want to restrict foreign ownership of township shops. A new immigration system promises to make it harder for firms to hire non-citizens. And the government says it will no longer renew residence permits used by many Zimbabweans since the ruin of their country in the late 2000s. Before long, they will face a grim choice: live in ►

► the shadows or be deported en masse to a failing state.

It is perhaps not surprising that friction arises between immigrants and poor South Africans. Tensions are common in many countries, especially during hard times. And life in the rainbow nation is certainly hard. The official unemployment rate is 35%. Prices of food and fuel are rising. The politicians in charge of many towns have proved better at looting than supplying public services. Schools have only marginally improved since the end of apartheid—a system that deliberately deprived black people of education. However, the blame for these modern ills lies squarely with the ruling party, not with immigrants.

So instead of scapegoating people who cannot vote, the government should try to govern better: by curbing corruption, improving public services and making South Africa an easier place to do business. More specifically, to restore public confidence in its immigration system it should get a grip on its borders, by fir-

ing the crooked officials who wave people across illicitly. It should make it easier for migrants to plug skills shortages, which aggravate the difficulty South Africa already has keeping the water flowing and the lights on. And rather than barring firms from hiring unskilled migrants it should make it easier to hire anyone—looser labour rules would mostly benefit jobless South Africans. It should also support free and fair elections in Zimbabwe, without which the awful regime there will remain in power and carry on driving its citizens to emigrate.

Many countries in Africa are trying to open their borders. The African Union has proposed that its members follow the European Union and embrace freedom of movement. The 15-country regional bloc in west Africa has gone furthest in making that aim a reality; an east African bloc is growing more liberal, too. South Africa, which aspires to lead the continent, ought to be at the vanguard of such efforts. Instead it is an outlier. ■

Short-sightedness

Protecting the pupils

To fight an epidemic of myopia, schools should send their students outside

FEW THINGS come with no downsides at all. Rich countries have almost completely banished infectious diseases such as tuberculosis, cholera and malaria. Instead, their health ministries spend much of their time worrying about illnesses caused by wealth. Cheap, calorie-dense food has abolished starvation in the rich world, but it also encourages diabetes. Sedentary, white-collar jobs are less arduous (and less lethal) than manual work. They also promote obesity and heart disease.

Even education is not always an unalloyed good. Over the past few decades, East Asia has seen a stunning rise in the rate of short-sightedness. And a growing pile of evidence suggests that the main underlying reason for this is education—specifically, the fact that children spend large parts of the day in comparatively dimly lit classrooms (see Science & technology section).

Before the long economic booms that began in the 1960s, myopia was uncommon in East Asia. These days, among the young, it is almost ubiquitous. In Hong Kong, Singapore and Taipei more than 80% of school-leavers are short-sighted. In Seoul over nine in ten young men are. China, which began its economic rise later, is catching up. Data from as far afield as Guangzhou in the south and Inner Mongolia in the north show myopia rates among young people of about 80%.

If East Asia is the centre of the epidemic, the West is not immune. Good data are harder to come by. But studies suggest rates of between 20% and 40% in Europe, an order of magnitude higher than the natural state of affairs. One study in California found a rate of 59% among 17- to 19-year-olds.

There are, admittedly, worse things to suffer from. But short-sightedness is not always benign. Glasses and contact lenses are an expensive, lifelong hassle. In parts of rural China, where some families cannot afford either, children struggle in the very schools that are causing the problem. And severe myopia predisposes those enduring it to other eye diseases in middle age, some of which can cause untreatable loss of vision. Governments in Asia are increasingly worried about the public-health

implications of entire generations growing up short-sighted. Those in other parts of the world should start worrying, too.

The evidence suggests that regular exposure to bright daylight is vital in properly controlling the growth of children's eyes. Too little light leads to elongated, short-sighted eyes. Researchers think that this explains why rates are so high in Asia, where a strong cultural emphasis on the value of education leads to long school days and, often, private tutoring in the afternoon and evening. That leaves little time for sunshine. Western children, whose parents are increasingly worried by a hyper-competitive jobs market that threatens much less secure employment than they enjoyed, are beginning to go the same way.

Special eyedrops, as well as clever glasses and contact lenses, may be able to slow the progression of myopia once it has started.

But prevention is better than mitigation, and the science suggests a cheap, straightforward measure. A series of encouraging trials, many conducted in Taiwan, show that giving schoolchildren—and especially those in primary education—more time outside can cut the number who go on to develop myopia. An island-wide policy of doing just that seems to have begun reversing the decades-long rise in myopia rates. Similar attempts in Singapore relied on parents, who proved more reluctant to change their behaviour, perhaps worried that other parents might not follow suit, leaving their children at a disadvantage in the classroom.

Governments are well placed to solve such collective-action problems, while reassuring anxious parents that a bit less classroom time is unlikely to be catastrophic. After all, countries such as Finland and Sweden do well in global education rankings with a less intense approach to education. Giving more outdoor time to young children would still leave room for them to cram for exams in their teenage years. And longer breaks in the playground may also make a dent in other rich-world problems such as childhood obesity. Far-sighted governments should send the kids outdoors. ■



Economic growth

Britain's real problem

It's not just Boris Johnson. Economic decline has become a chronic British disease

CONSERVATIVE MPS' half-hearted vote to endorse Boris Johnson as prime minister, on June 6th, betrayed how deeply Britain's ruling party fails to confront hard choices. A defeat for Mr Johnson would have ushered in a new government, with a chance to prove itself before the next election. A resounding victory would have given him a fresh mandate to show that he had put his transgressions behind him. The irresolute blow the rebels inflicted leaves Britain in the hands of a washed-up cabinet mouthing grandiloquent promises it cannot honour.

This newspaper has long argued that Mr Johnson ought to have resigned for lying repeatedly to Parliament about whether he broke his own laws. But hypocrisy and deceit do not begin to capture the wider problem that he and his country face. Britain is stuck in a 15-year rut. It likes to think of itself as a dynamic, free-market place, but its economy lags behind much of the rich world. There is plenty of speechifying about growth, and no shortage of ideas about how to turn the country round. But the mettle and strategic thinking that reform requires are absent—another instance of Tories ducking hard choices.

Britain's stagnation also holds lessons for other slow-growing countries, many of them in Europe. Lower GDP means declining global influence, faltering faith in free markets and less money for public services. A struggle over fixed resources fires the populism that turns politics into an ugly fight about identity. The shortage of funds for investment entrenches tired and inefficient institutions. Worst of all, the lack of growth limits Britons' scope to flourish.

The idea that Britain has a growth problem is not new. But few realise how deep a hole it is in. Whereas average annual GDP growth over the decade preceding the global financial crisis of 2007-09 was 2.7%, the new normal is now closer to just 1.7%.

Plenty of countries suffered from the financial crisis and covid-19. But Britain's problems run deeper. In 2022 GDP per head will be more than 25% lower than America's, measured at purchasing-power parity. Britain has been declining against America and Germany since the mid-2000s. Average wages now lag behind America's by about as much as Poland's do Britain's.

Underlying this is feeble productivity. In the decade to 2007, British productivity growth was second only to America's in the G7. In the decade to 2019, growth in output per hour worked stalled to just 0.7% a year, making Britain the second-slowest in the G7; only Italy was slower. Had Britain's productivity growth rate not fallen after the financial crisis, GDP per person in 2019 would have been £6,700 (\$8,380) higher than it is.

At least in the short run, Brexit has made matters worse. Business investment is lower than when the referendum took place. Since the end of 2020 firms trading with the European Union have faced extra paperwork, customs delays and higher taxes. In the last quarter of 2021 Britain exported 16% less than at the end of 2019. Global goods trade, by contrast, grew by nearly 6%.

The outlook is poor, too. The OECD predicts that next year GDP in Britain will be stagnant. Official forecasts show that real take-home pay will be lower in five years than it is today, eaten away

by higher taxes and consumer-price inflation that, at 9%, is the highest among big rich economies.

Part of the problem is that boosterish politicians talk so much nonsense about growth. The statistics are noisy and complex enough for a clever civil servant to find a number that paints Britain in a favourable light. Don't be fooled. Self-delusion stifles fresh thinking about policy, one reason Britain's economic debates have been tangential to growth, harmful even. For most of the 2010s politicians obsessed about cutting deficits. Budget discipline is important, but hardly a cure for Britain's ills. In a speech this week Mr Johnson was to propose unlocking growth by letting people use housing benefits to buy houses.

"Levelling up", a theme of this government, could in theory focus on raising the productivity of workers and capital in Britain's left-behind regions. In practice, it seems to put redistribution before output. That may be the just thing to do, but it is naive to expect that sending pots of public money to Britain's poorer places will increase the size of the national pie.

When it comes to growth, Britain's politicians will the ends but not the means. They run scared of the homeownership elderly, who turn up to vote and make up a growing share of the electorate. So tax rises are heaped on businesses and workers instead, further harming the economy. The government has likewise watered down its plans for reforming the planning system—because elderly homeowners object.

A change of government may not fix the problem. Parts of Labour grasp the challenge. But the party is fixated on outbidding the Tories over levelling up, and is less likely than the Conservatives to reform public services in a way that will lower costs and taxes.

Britain has been here before. In 1979, in opposition, Margaret Thatcher lamented its declining economic standing. "Travel abroad, and see how much better our neighbours are doing," she urged Tory supporters. Her uncompromising reforms led to nearly three decades in which British living standards closed on those in the rest of the rich world.

The stagnation nation

Over the coming months we will look at growth in Britain and how to fix it. Some solutions are familiar but politically difficult, like solving the housing crisis in south-east England and boosting trade with the EU. Others involve fresh thinking to harness the potential of the country's universities and life-sciences firms, and to expose managers to competition.

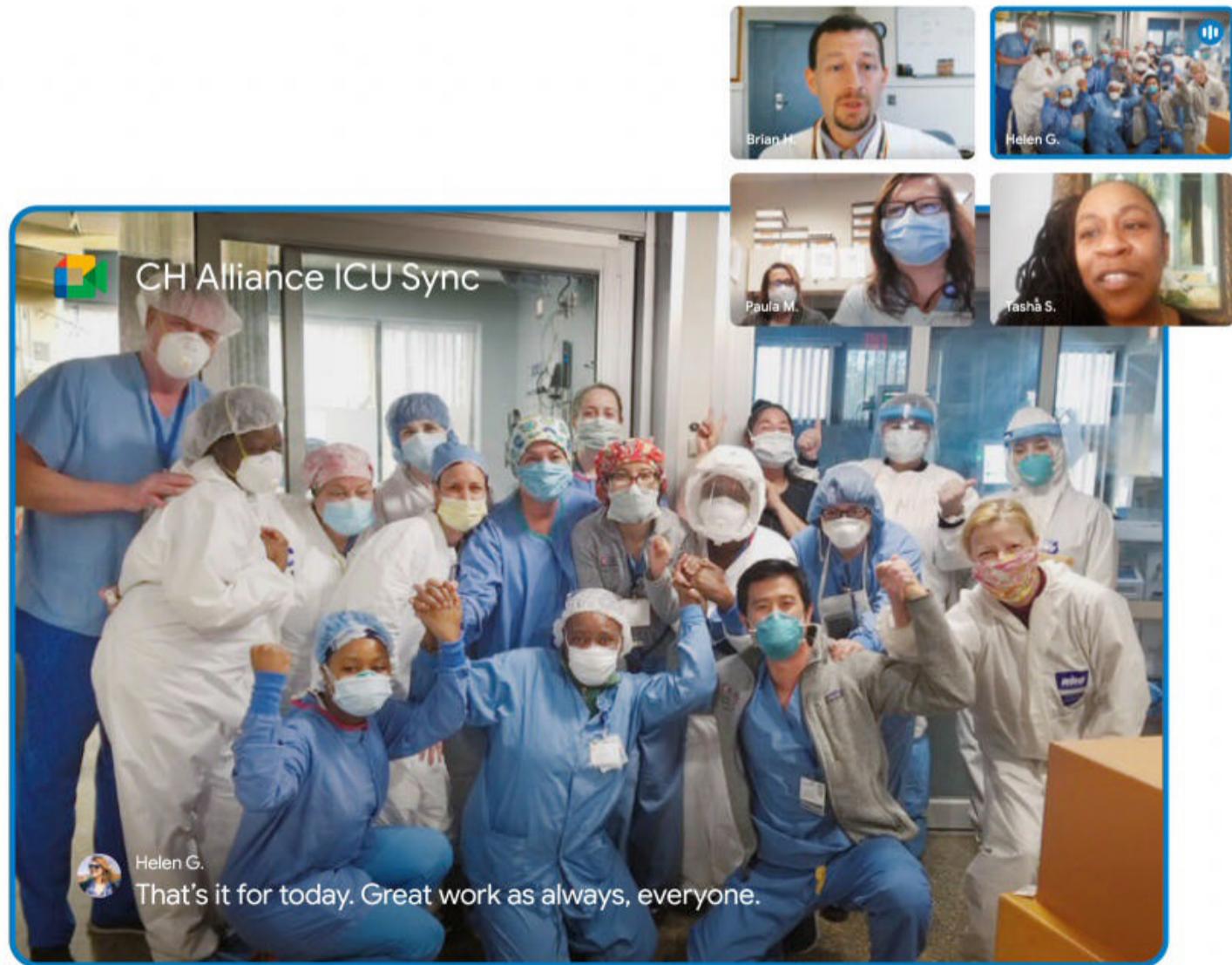
Britain's advantages, from the English language to the common-law system, have not gone away. However, under the dishonest, unserious—and now politically wounded—Mr Johnson, Britain is at threat from rising barriers to trade, an ageing electorate and rigid planning. Britain suffers from complacency, born of centuries as a first-rank economy, and Johnsonian bluster only exacerbates it. If Britain is to avoid a bleak future it must grasp reform. That will require a once-in-a-generation show of political courage, persuasion and policy ingenuity. Just like four decades ago, there is no alternative. ■





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Keep the pressure on Russia

I agree with Andrey Kortunov (By invitation, May 20th) that the war in Ukraine is to an extent a clash of societies and politics, but his article misrepresents the conflict overall. This is not a collision of models. That would depict two competing ideals. Ukraine was never offering an alternative model to Russia, in the way that America offered an alternative to the Soviet Union during the cold war. Rather, the conflict is about Russia subjugating the Ukrainian populace to a warped interpretation of history emanating from the Russian government.

The Russian International Affairs Council is funded by the Russian Ministry of Foreign Affairs. Mr Kortunov, as the RIAC's director-general, has in the past repeated the mantra that Europe's security architecture needs to be changed to accommodate Russia. His article continues that erroneous tradition and calls on Europe to strike a deal with Russia. Why should Europe evolve its security to placate a bully that has always found new excuses to justify its unhappiness?

This war is more about the aggrandisement of Russia and the sense that we should conciliate the Kremlin regardless of its actions; these should not be represented as anything but Russian aggression.

STEPHEN G.F. HALL
Lecturer (assistant professor)
in politics
University of Bath

Unarm the citizen army

After a mass shooting Republicans always argue that a heavily armed citizenry is essential for public safety ("A senseless slaughter", May 28th). When I was deployed to Saigon at the height of the Vietnam war the army prohibited us from routinely carrying firearms in the city. This regulation almost certainly saved lives; off-duty troops had easy access to alcohol, but without weapons they were less likely to cause innocent deaths or to

frequent dangerous areas. Those who parrot the views of the National Rifle Association about arming citizens might give some thought to the experiences of the actual army.

JOHN WILSON
London

As a corrective to the repeated slaughter of innocents, and to the malevolent Republican bluster and impotent Democratic hand-wringing accompanying each new mass murder, we should consider imposing three choices on American gunowners: surrender your guns; play with your weapons under supervision in the National Guard; or be dispatched to Ukraine, where you can serve in a practical way the cause of freedom you so profess to love.

JOSHUA NOSSITER
San Francisco

Greener graphene

Graphene has indeed taken a slow road to find its place in the world ("Pouring graphene's bright future", May 21st). While the 30% increase in strength and other beneficial properties for concrete applications are certainly attracting attention, what has truly excited industry is the direct reduction in carbon-dioxide output during the cement manufacturing process. The biggest offender, but a necessary ingredient, in cement manufacturing, is something called "clinker". It is the binding agent created in the way you outlined by roasting limestone and various compounds at high temperatures to burn off carbon.

Advanced testing by First Graphene in conjunction with some of the world's biggest cement-additive manufacturers shows that replacing the bulk of the clinker with very small amounts of graphene can reduce carbon emissions by up to 20% while, at the very least, maintaining the same performance characteristics as current cement products.

MICHAEL BELL
Chief executive
First Graphene
Henderson, Australia

Remembering Tokyo

Regarding your fine obituary for Saotome Katsumoto (May 21st), the firebombing of Tokyo in March 1945 has become a mere historical footnote. In fact, 70 of Japan's largest cities were virtually destroyed by incendiary bombs in the first half of 1945, before the atomic bombings. Combined with the naval blockade, this practically reduced Japanese civilians to starvation.

Nowhere is this subject more sensitively and devastatingly portrayed than in "Grave of the Fireflies," an anime film written and directed by Takahata Isao in 1988. It follows the path of two orphaned siblings struggling to survive the final grim months of the war. The Tokyo firebombings are graphically but superbly portrayed.

JODY FERGUSON
Austin, Texas

British politics 101

Bagehot's column on the obsession of British politics with America confirmed what I have believed for a long time (May 21st). American job titles and terminology are an unstoppable force. The BBC seems to train its journalists in New York or Chicago. They regularly speak of candidates running rather than standing for office, or of putting their names to a ticket. We hear of stump speeches, no doubt given on whistle-stop tours, although I don't think I've ever known a British politician speak from a train "on the campaign trail".

How long until we have primaries or are asked to vote for a district attorney, town sheriff or judge? When we do, I can only hope that they will have more power than that other American import, our toothless metro mayors.

MIKE PAVASOVIC
Ashton-under-Lyne, Lancashire

Countries other than America do feature in contemporary debate in Britain. The levelling-up discourse often cites German unification, and

demographic discussions quickly invoke Japan. During lockdowns Sweden was watched with fascination. And Australian-style is a fashionable policy prefix. Some diversity does exist, despite the gerrymandered bookshelves.

BABAK MOUSSAVI
London

Bagehot deplored the singular focus of the British political class on America. One week later, the opening line of your article on the turnaround of John Lewis compared the retailer's Christmas adverts to America's Super Bowl commercials ("Retailer therapy", May 28th). The comparison was comically spurious, demonstrating that even where an analogy to America is not available, somehow America must be mentioned.

Perhaps, therefore, the root of Bagehot's complaint is to be found with *Economist*-reading British politicos?

NORMAN HENDERSON
Adjunct professor
University of Regina
Regina, Canada

If you go down to the woods...

I suspect that your leader writer is not an American hiker ("Grisly reality", May 14th). America's bear season runs from whenever they come out of their dens to whenever they return to them. Even in the coldest localities, bears are active for five or six months of the year, not for "two months from September". As for hikers being advised to stay on their trails in bear season, bears like trails too and we are just as likely to encounter them there as when we are bushwhacking.

The good news is that bears do not pursue humans as aggressively as writers pursue arresting opening lines.

ROBERT MCWILLIAMS
New Haven, Connecticut



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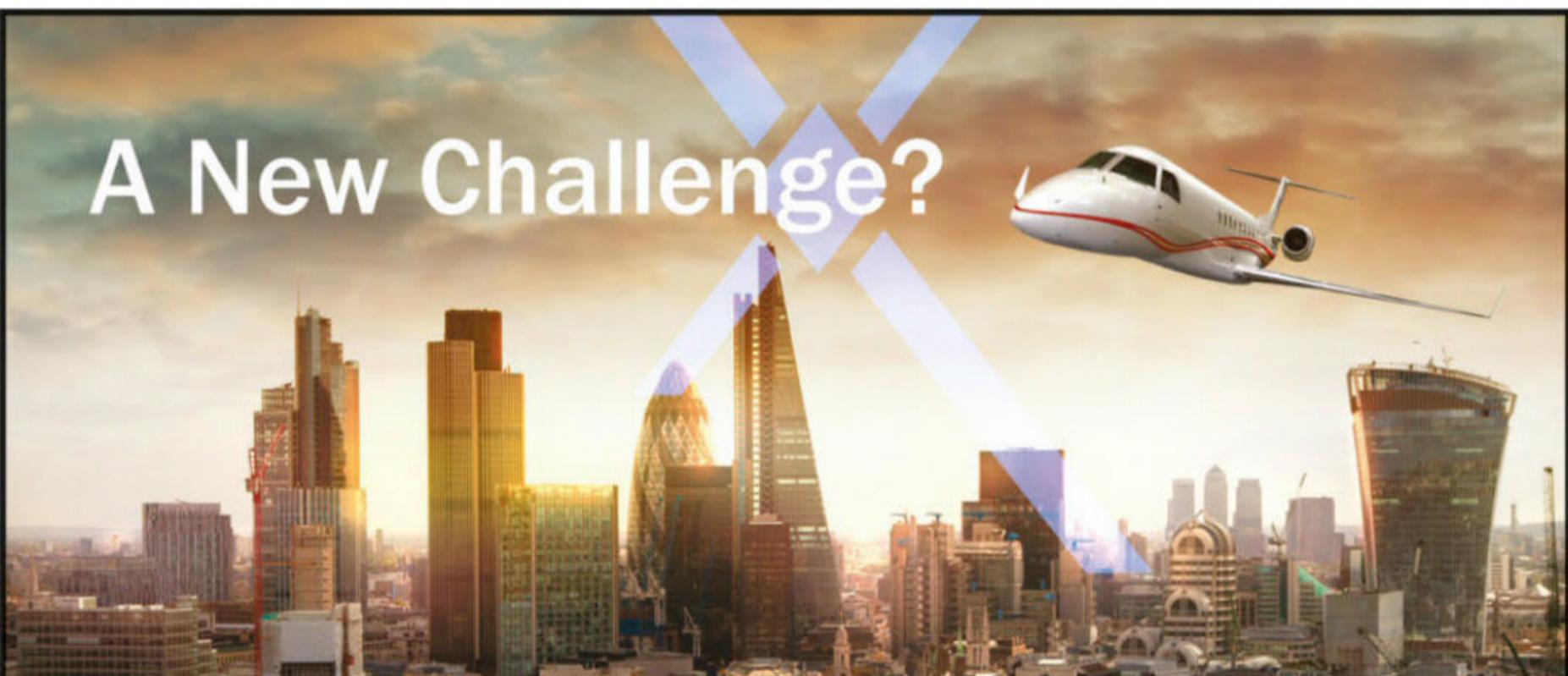
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The Vice-President of the CPVO will be appointed by the Council on the basis of a shortlist provided by the European Commission.

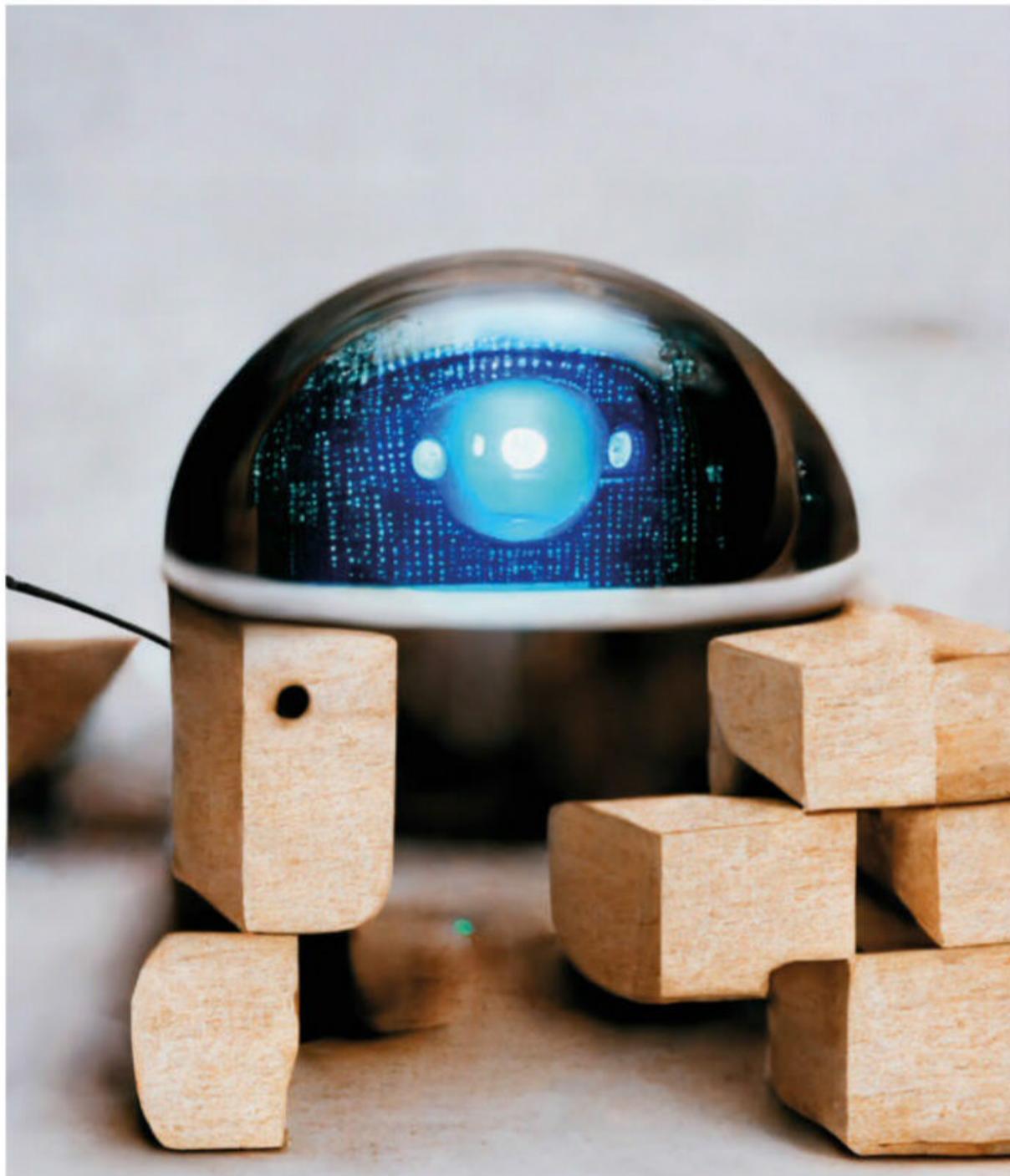
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“Foundation models” are greatly increasing the potential of artificial intelligence

THE “GOOD COMPUTER” which Graphcore, a British chip designer, intends to build over the next few years might seem to be suffering from a ludicrous case of nominal understatement. Its design calls for it to carry out 10^{19} calculations per second. If your laptop can do 100bn calculations a second—which is fair for an average laptop—then the Good computer will be 100m times faster. That makes it ten times faster than Frontier, a behemoth at America’s Oak Ridge National Laboratory which came top of the most recent “Top500” list of powerful supercomputers and cost \$600m. Its four-petabyte memory will hold the equivalent of 2trn pages of printed text, or a pile of A4 paper high enough to reach the

Moon. “Good” hardly seems to cut it.

But the word is not being used as a qualitative assessment: it is honouring an intellectual heritage. The computer is named after Jack Good, who worked with Alan Turing as a codebreaker during the second world war and followed him into computer science. In 1965 Good wrote an influential, if off-the-wall, article about what the field could lead to: “Speculations concerning the first ultraintelligent machine”. Graphcore wants its Good computer to be that ultraintelligent machine, or at least to be a big step in its direction.

That means building and running artificial intelligence (AI) models with an eye-watering number of “parameters”—coeffi-

cients applied to different calculations within the program. Four years ago the 110m parameters boasted by a game-changing model called BERT made it a big model. Today’s most advanced AI programs are 10,000 times larger, with over a trillion parameters. The Good computer’s incredibly ambitious specifications are driven by the desire to run programs with something like 500trn parameters.

One of the remarkable things about this incredible growth is that, until it started, there was a widespread belief that adding parameters to models was reaching a point of diminishing returns. Experience with models like BERT showed that the reverse was true. As you make such models larger by feeding them more data and increasing the number of parameters they become better and better. “It was flabbergasting,” says Oren Etzioni, who runs the Allen Institute for AI, a research outfit.

The new models far outperformed older machine-learning models on tasks such as suggesting the next words in an email or naming things which are present in an image, as well as on more recondite ones like crafting poetry. The verse created by the second iteration of Wu Dao—“Enlightenment”—a trillion-parameter model built at the Beijing Academy of Artificial Intelligence, is said to be excellent.

They also exhibited new capabilities their creators had not expected. These do not always sound impressive. Doing arithmetic, for example, seems trivial; 50-year-old pocket calculators could do it. But those calculators were specifically designed to that end. For the ability to say what the sum of 17 and 83 is to arise as an unlooked-for side-effect of simply analysing patterns in text is remarkable.

Other emerging properties border on the uncanny. It is hard to read some of the accounts of *Economist* covers made using Microsoft’s Florence model and GPT-3, a model made by OpenAI, without the feeling that they are generated by something with genuine understanding of the world (see panel on next page).

Text-to-image processes are also impressive. The illustration at the top of this article was produced by using the article’s headline and rubric as a prompt for an AI service called Midjourney. The illustration on its third page is what the model made out of “Speculations concerning the first ultraintelligent machine”. Less abstract nouns give clearer representations; a page further on you will see “A woman sitting down with a cat on her lap”. Putting an artist’s name in the prompt produces an image with traits the model expects in images associated with that word. The effects different artist’s names have can be seen in the online version of this story.

Emergent properties are linked to an ➤

► other highly promising feature: flexibility. Earlier generations of AI systems were good for only one purpose, often a pretty specific one. The new models can be reassigned from one type of problem to another with relative ease by means of fine tuning. It is a measure of the importance of this trait that, within the industry, they are often called “foundation models”.

This ability to base a range of different tools on a single model is changing not just what AI can do but also how AI works as a business. “AI models used to be very speculative and artisanal, but now they have become predictable to develop,” explains Jack Clark, a co-founder of Anthropic, an AI startup, and author of a widely read newsletter. “AI is moving into its industrial age.”

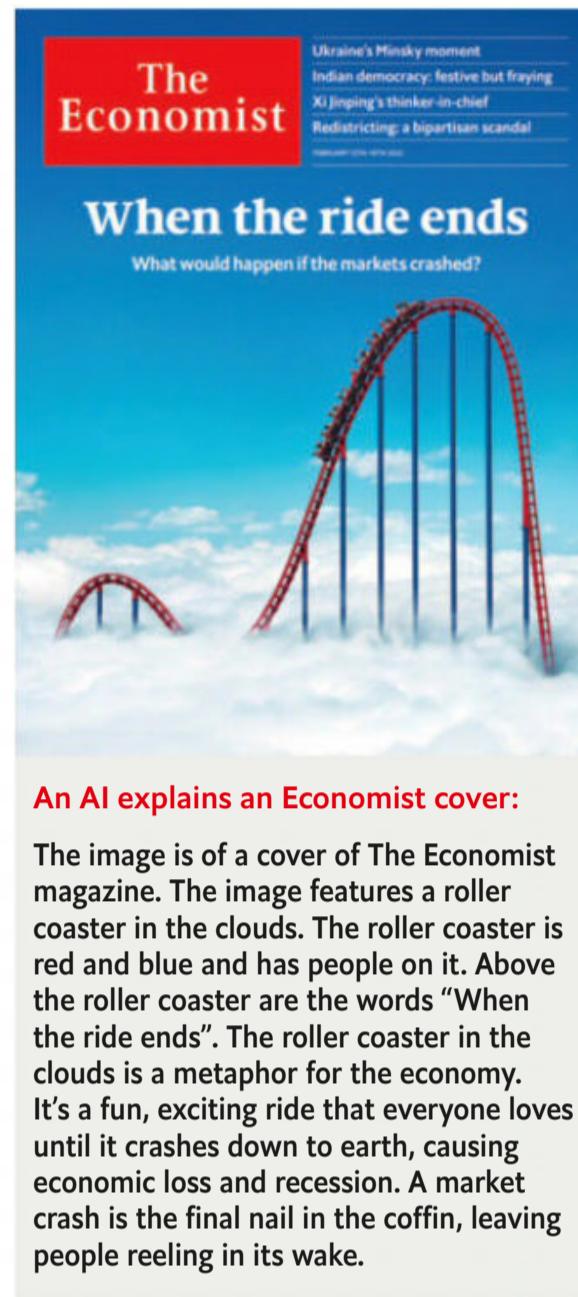
The analogy suggests potentially huge economic impacts. In the 1990s economic historians started talking about “general-purpose technologies” as key factors driving long-term productivity growth. Key attributes of these GPTs were held to include rapid improvement in the core technology, broad applicability across sectors and spillover—the stimulation of new innovations in associated products, services and business practices. Think printing presses, steam engines and electric motors. The new models’ achievements have made AI look a lot more like a GPT than it used to.

Mr Etzioni estimates that more than 80% of AI research is now focused on foundation models—which is the same as the share of his time that Kevin Scott, Microsoft’s chief technology officer, says he devotes to them. His company has a stable of such models, as do its major rivals, Meta and Alphabet, the parents of Facebook and Google. Tesla is building a huge model to further its goal of self-driving cars. Start-ups are piling in too. Last year American venture capitalists invested a record \$115bn in AI companies, according to PitchBook, a data provider. Wu Dao shows that China is making the field a national priority.

Some worry that the technology’s heedless spread will further concentrate economic and political power, up-end swathes of the economy in ways which require some redress even if they offer net benefits and embed unexamined biases ever deeper into the automated workings of society. There are also perennial worries about models “going rogue” in some way as they get larger and larger. “We’re building a supercar before we have invented the steering wheel,” warns Ian Hogarth, a British entrepreneur and co-author of the “State of AI”, a widely read annual report.

To understand why foundation models represent a “phase change in AI”, in the words of Fei-Fei Li, the co-director of Stanford University’s Institute for Human-Centred AI, it helps to get a sense of how they differ from what went before.

All modern machine-learning models



An AI explains an Economist cover:

The image is of a cover of The Economist magazine. The image features a roller coaster in the clouds. The roller coaster is red and blue and has people on it. Above the roller coaster are the words “When the ride ends”. The roller coaster in the clouds is a metaphor for the economy. It’s a fun, exciting ride that everyone loves until it crashes down to earth, causing economic loss and recession. A market crash is the final nail in the coffin, leaving people reeling in its wake.

are based on “neural networks”—programming which mimics the ways in which brain cells interact with each other. Their parameters describe the weights of the connections between these virtual neurons, weights the models develop through trial and error as they are “trained” to respond to specific inputs with the sort of outputs their designers want.

Net benefits

For decades neural nets were interesting in principle but not much use in practice. The AI breakthrough of the late 2000s/early 2010s came about because computers had become powerful enough to run large ones and the internet provided the huge amounts of training data such networks required. Pictures labelled as containing cats being used to train a model to recognise the animals was a canonical example. The systems created in this way could do things that no programs had ever managed before, such as provide rough translations of text, reliably interpret spoken commands and recognise the same face when seen in different pictures.

Part of what allowed the field to move beyond these already impressive achievements was, again, more processing power. Machine learning mostly uses chips called

“graphics processing units” (GPUs) developed for video games by such firms as Nvidia, not just because their processing power is cheap but also because their ability to run lots of calculations in parallel makes them very well suited to neural nets. Over the 2010s the performance of GPUs improved at an impressive rate.

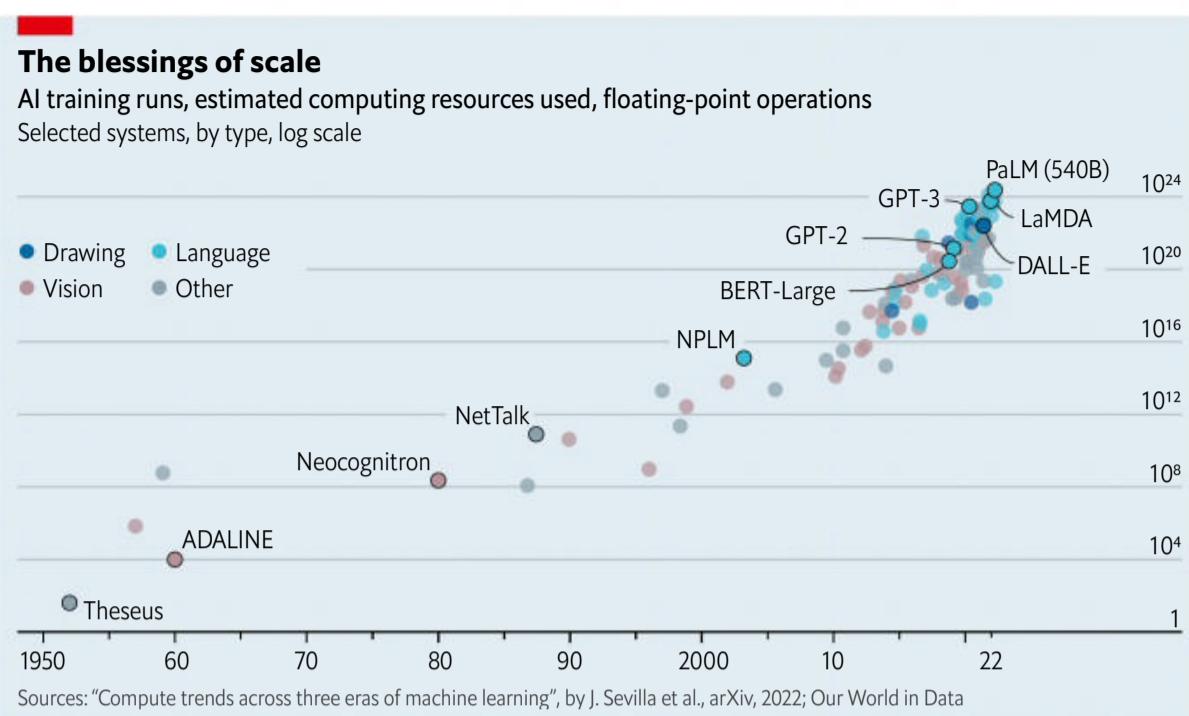
The conceptual breakthrough needed to make full use of this power came about in 2017. In a paper entitled “Attention is all you need” researchers at Google and the University of Toronto described the novel software architecture to be used by Google’s BERT. They had thrown away all the mechanisms which worked on input data sequentially, mechanisms researchers had previously seen as essential; instead they just used a mechanism that looked at things all at once. This new approach meant that programs could “pay attention” to patterns they had learned were salient in a field of text, rather than having to work through it word by word.

Such models are trained using a technique called self-supervised learning, rather than with pre-labelled data sets. As they burrow through piles of text they hide specific words from themselves and then guess, on the basis of the surrounding text, what the hidden word should be. After a few billion guess-compare-improve-guess cycles this Mad-Libs approach gives new statistical power to an adage coined by J.R. Frith, a 20th-century linguist: “You shall know a word by the company it keeps.”

It has since turned out that all these clever techniques can be applied to sequential data other than language, including pictures, videos and even large molecular data sets. Instead of guessing the next combination of letters, graphical models such as OpenAI’s DALL-E predict the next cluster of pixels.

The discovery that these models work better the bigger they get turned an exciting new approach into a breakthrough. The revelation came with the release of OpenAI’s BERT-like GPT-3 in 2020. Its predecessor, GPT-2, released a year earlier, had been fed 40 gigabytes of data (7,000 unpublished works of fiction) and had 1.5bn parameters. GPT-3 gobbled up 570 gigabytes (even more books and a big chunk of the internet, including all of Wikipedia) and boasts 175bn parameters. Its training required far more resources (see chart on next page). But it handily out-performed GPT-2 on established tests and boasted skills for which its predecessor provided no precedent.

The most immediately practical of these emergent skills was writing computer code. Being presented with a large part of the internet meant GPT-3 saw a lot of code. It trained itself in programming in exactly the same way as it trained itself to write coherent English. Two services based



on GPT-3, Codex and Copilot, now aim to turn programmers' descriptions of what they want into the code which will do it. It doesn't always work; our attempt to have Copilot program a web-based carousel of *Economist* covers to the strains of Wagner was a washout. But give it easily described, discrete and constrained tasks that can act as building blocks for grander schemes and things go better. Developers with access to Copilot on GitHub, a Microsoft-owned platform which hosts open-source programs, already use it to provide a third of their code when using the most important programming languages.

Bring on the stochastic parrots

Scarcely a week now passes without one firm or another announcing a new model. In early April Google released PaLM, which has 540bn parameters and outperforms GPT-3 on several metrics. It can also, remarkably, explain jokes. So-called multimodal models are proliferating too. In May DeepMind, a startup owned by Google, unveiled Gato, which, having been trained on an appropriate range of data, can play video games and control a robotic arm as well as generating text. Meta, for its part, has begun to develop an even more ambitious "World Model" that will hoover up data such as facial movements and other bodily signals. The idea is to create an engine to power the firm's future metaverse.

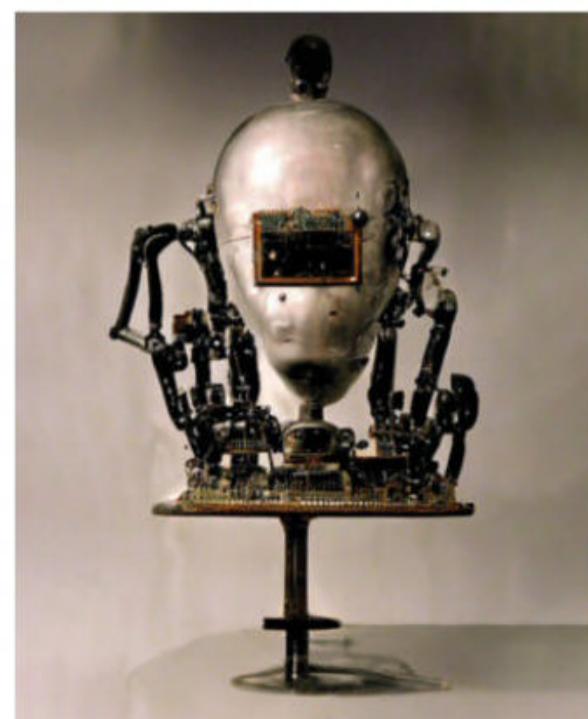
This is all good news for the chipmakers. The AI boom is one of the things that have made Nvidia the world's most valuable designer of semiconductors, with a market value of \$468bn.

It is also great for startups turning the output of foundation models into products. BirchAI, which aims to automate how conversations in health care-related call centres are documented, is fine-tuning a model one of its founders, Yinhai Liu, developed while at Meta. Companies are using GPT-3 to provide a variety of services.

Viable uses it to help firms sift through customer feedback; Fable Studios creates interactive stories with it; on Elicit it helps people directly answer research questions based on academic papers. OpenAI charges them between \$0.0008 and \$0.06 for about 750 words of output, depending on how fast they need the words and what quality they require.

Foundation models can also be used to distil meaning from corporate data, such as logs of customer interactions or sensor readings from a shop floor, says Dario Gil, the head of IBM's research division. Fernando Lucini, who sets the AI agenda at Accenture, another big corporate-tech firm, predicts the rise of "industry foundation models", which will know, say, the basics of banking or carmaking and make this available to paying customers through an interface called an API.

The breadth of the enthusiasm helps make general-purpose-technology-like expectations of impacts across the economy look plausible. That makes it important to look at the harm these developments



might do before they get baked into the everyday world.

"On the dangers of stochastic parrots: Can language models be too big?" a paper published in March 2021, provides a good overview of concerns; it also led to one of the authors, Timnit Gebru, losing her job at Google. "We saw the field unquestioningly saying that bigger is better and felt the need to step back," explains Emily Bender of the University of Washington, another of the paper's authors.

Their work raises important points. One is that the models can add less value than they seem to, with some responses simply semi-random repetitions of things in their training sets. Another is that some inputs, such as questions with nonsensical premises, trigger "hallucinations" rather than admissions of defeat.

And though they have no monopoly on algorithmic bias, the amount of internet data they ingest can give foundation models misleading and unsavoury hang-ups. When given a prompt in which Muslims are doing something, GPT-3 is much more likely to take the narrative in a violent direction than it is if the prompt refers to adherents of another faith. Terrible in any model. Worse in models aimed at becoming foundations for lots of other things

Avoid the Turing trap

Model-makers are developing various techniques to keep their AIs from going toxic or off the rails, ranging from better curation of training data to "red teams" that try to make them misbehave. Many also limit access to the full power of the models. OpenAI has users rate outputs from GPT-3 and then feeds those ratings back into the model, something called "reinforcement learning with human feedback". Researchers at Stanford are working on a virtual scalpel, appropriately called MEND, meant to remove "bad" neurons.

Bias in the field's incentives may be harder to handle. Most of those involved—technologists, executives and sometimes politicians—want more powerful models. They are seen as the path to academic kudos, gobs of money or national prestige. Ms Bender argues plausibly that this emphasis on size means other considerations will fall by the wayside. The field is focused on standardised benchmark tests—there are hundreds, ranging from reading comprehension to object recognition—and neglecting more qualitative assessments, as well as the technology's social impact.

Erik Brynjolfsson, an economist at Stanford, worries that an obsession with scale and person-like abilities will push societies into what he calls a "Turing trap". He argues in a recent essay that this focus lends itself to the automation of human activities using brute computational force when alternative approaches could focus



on augmenting what people do. And as more people lose their jobs their ability to bargain for a fair share of the benefits of automation will be stymied, leaving wealth and power in fewer and fewer hands. "With that concentration comes the peril of being trapped in an equilibrium in which those without power have no way to improve their outcomes," he writes.

Some concentration is already evident: witness the roles played by Google and Microsoft both as developers of models and as owners of capacious clouds in which those and other models can run. No one can build a foundation model in a garage. Graphcore wants to sell Good computers for more than \$100m. Somewhat self-servingly, Nvidia executives are already talking about models that will cost \$1bn to train. Some companies continue to make their models open-source, and thus freely available; BERT is one such, as is a 30bn-parameter version of a model from Meta.

There is good research to be done at such scales. But it takes significant power to run even what counts as a small model today. The big ones can only really live in the cloud, which means researchers on the other side of their APIs cannot see into their guts. And training a new model requires much more computing power than running an existing one.

"Academic institutions can no longer keep up," warns Anthropic's Mr Clark. OpenAI, founded as a non-profit with the goal of ensuring that AI developed in human-friendly ways, spawned a "capped profit" company in which others can invest to raise the money it needed to keep working on big models (Microsoft has put in \$1bn). Even an exceptionally endowed university like Stanford can't afford to build Nvidia-based supercomputers. Its AI research institute is pushing for a government-funded "National Research Cloud" to provide universities with computing power and data sets so that the field does

not end up entirely dominated by the research agendas of private companies.

Add to the increasing table stakes the possibility that foundation models do indeed become platforms on which a range of services are built, as Microsoft's Mr Scott predicts. The history of computing suggests that the more users and developers gravitate towards a given platform—be it an operating system or a social network—the more attractive it becomes for other users and developers. Winners take, if not all, then most.

Foundation and empire

National interests may drive centralisation, too—up to a point. Experts say that China's best foundation model is one which its Sesame Street-smart creators at Baidu have contrived to name Enhanced Representation through kNowledge IntEgration, or ERNIE. But it is Wu Dao which is being treated as a national champion. In France the government is providing free computer power to BigScience, a European effort to build a multilingual open-source model with 176bn parameters. Is it that far-fetched to imagine the development of a *Modèle Républicain* uniquely able to express all the subtleties of the French language and culture?

National security will also come into play. Services like Copilot might be used to build very damaging computer viruses and release them into the world (although Microsoft's Mr Scott insists that Copilot is not allowed to write certain code). Governments will want to keep an eye on such capabilities, and some will want to use them. Foundation models which can think up strategies for corporate consultants may be able to do the same for generals; if they can create realistic video streams they can create misinformation; if they can create art they can create propaganda. "The spooks don't want to depend on the private sector," says Mr Clark. Just as big military

powers insist on having their own means of launching satellites, so they will insist on having their own big brains.

Unless, that is, the brains in question have other ideas. Practically no AI experts think today's models might actually become sentient. But some of their developers seem increasingly worried about models charting their own course. "Covid has taught us that exponentials move very quickly," says Connor Leahy, one of the leaders of Eleuther, an ambitious open-source AI project. "Imagine if someone at Google builds an AI that can build better AI's, and then that better AI builds an even better AI—and it can go really quickly."

Having a new form of intelligence on the planet might be dangerous even if it is never more than a tool and the people who controlled it were benign. The idea that there will always be uniquely human ways in which to be productive is attractive, but it cannot be proved. The coming decades could see further developments that reduce or eliminate the need for whole swathes of human activity, as Mr Brynjolfsson fears. But there are some signs that such models can expand the realm of the human, rather than restrict it.

Take the work of Reeps One, a British composer whose real name is Harry Yeff. He has trained a model by feeding it hours of his drum-machine-like beatbox vocalisations. The way that model reacts when it hears him in person allows what he calls a "conversation with the machine". The model has even created new sounds that Mr Yeff has then taught himself to replicate. "Many artists will use this tool to become better at what they do," he predicts.

So might humble hacks. AI-based transcription tools have already made one particularly tiresome aspect of journalism far easier; could the same be true for others? To investigate, your correspondent asked a doctoral candidate at Stanford, Mina Lee, to fine-tune a GPT-3-based writing tool called "CoAuthor" using his most recent 100 articles for *The Economist* and a host of material on AI from one of the university's courses. He then consulted this EconoBot off and on while writing this article. The experience was enlightening. Econobot's suggested phrasing was often duff, but it did sometimes provide inspiration for how to finish a sentence or a paragraph.

EconoBot itself seems to like the idea. Appropriately prompted with the phrase "Foundation models are great for journalists", it had this to say: *They take away the heavy lifting of figuring out what a story is about. But sometimes, a good story needs more than just a foundation model. It needs something to kick off the writing process, something that sparks the journalist's imagination and offers a clear path towards writing. The best models, then, are not just predictive but also inspirational.* ■



The January 6th hearings

The insurrection televised

WASHINGTON, DC

The House committee investigating the January 6th attack on the United States Capitol is about to reveal its findings. Half of America is watching

CONGRESSIONAL HEARINGS have provided some of the great dramas of American politics. A Senate probe in 1923 into the corrupt sale of oil leases at Teapot Dome, Wyoming, sullied the reputation of President Warren Harding and was considered “the greatest and most sensational scandal”. Then the Watergate hearings, in 1973, raised the bar. Tens of millions of people tuned in to watch live broadcasts of Richard Nixon’s slow-drip demise.

Massive public interest was in both cases justified by the gravity of the issue in hand—probity at the highest levels of government—and by Congress’s success in upholding it. The same can be said of the Senate’s Army-McCarthy hearings of 1954, and, less resoundingly, of the Iran-Contra hearings of 1987, from which Ronald Reagan’s reputation never fully recovered. Box-office value aside, such hearings were an advert for congressional oversight and a tribute to the American system.

The public hearings that the House’s January 6th select committee will hold from June 9th are arguably more important than all the above combined. For the past

year the committee’s nine members—seven Democrats and two Republicans—and its investigators have been working to uncover the circumstances that gave rise to a multipronged effort to stop the transfer of power after the 2020 presidential election.

As with the Watergate hearings, the committee’s investigation is much broader than the incident—an attack on the Capitol by 2,500 of Donald Trump’s supporters—that it was named after. Divided into colour-coded teams, its members have investigated the campaign by Mr Trump and his coterie to press state, local and federal officials to overturn the election result; the role of right-wing extremist groups in rein-

forcing that effort; the “Save America” Trump rally outside the White House that preceded the Capitol riot; and the financing of all of this. The issue in hand is accordingly not mere probity, a quality no one expects of Mr Trump, but the continuing threat to democratic government that he and his supporters represent.

Despite fierce pushback from the former president and Republicans at large, the committee has conducted more than 1,000 interviews—including with insurrectionists, intelligence agents and the few senior members of Mr Trump’s retinue willing to testify. Having also reviewed over 140,000 documents, it is due to release a report on its findings in September. The impending six public sessions will therefore be less like the usual congressional inquiry than an impeachment trial. They will not invite Americans to witness the process of investigation so much as show them what has already been discovered.

“The hearings will tell a story that will really blow the roof off the House,” predicted one of the committee’s members, Jamie Raskin. “People must watch, and they must understand how easily our democratic system can unravel if we don’t defend it,” enjoined its Republican vice-chairwoman, Liz Cheney, on June 5th.

The committee’s only previous public hearing, in July last year, combined footage of the insurrection with harrowing testimony from four of the law-enforcement officers who fought it. This month’s hearings will contain a similar mix of live testi-

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mony, recorded interviews and other video footage. The first, jointly led by Ms Cheney and the committee's Democratic chairman, Bennie Thompson, will air at prime time, from 8pm local time; the second will take place on June 13th. Fresh revelations about the attempted coup are promised.

The opening promises to be quite a show. The committee is reportedly planning to play snippets of testimony from Ivanka Trump, presumably describing her unsuccessful efforts to persuade her father to call off his supporters during the two hours he sat watching them ransacking the Capitol. The sessions will feature little of the partisan bickering and self-regarding questioning that bedevils most congressional hearings. No big differences divide the committee's two Republicans, Adam Kinzinger and Ms Cheney, from its Democrats. Most of the questions will be asked by professional investigators, as they were during Mr Trump's second impeachment trial, also prompted by the riot.

What we know, and when we knew it

Briefings and leaks of the committee's work suggest it aims to prosecute a much fuller and more detailed case against him and his cronies than the Senate did. The committee will aim to show that the Trump team's machinations were meticulously planned and orchestrated, and criminal in intent. In an email contained in court documents, a lawyer advising Mr Trump, John Eastman, argued that Mike Pence should delay certifying the election on January 6th 2021, and acknowledged that this would be illegal. (He claimed it would be only a "minor violation".) On the basis of this and other evidence, the committee argued in a civil court filing in March that it had "a good-faith basis for concluding that [Mr Trump] and members of his Campaign engaged in a criminal conspiracy to defraud the United States".

Yet the fact that Ms Cheney's exhortation needs underlining, when so much about Mr Trump's subversion is already known, points to another huge difference between this hearing and previous ones. The campaign to overthrow the election was publicised in detail at the time. Audio tape of Mr Trump pushing Georgia's secretary of state to help him "find 11,780 votes" was leaked the following day. Planning for the Capitol riot was reported weeks before it took place. "On January 6th, armed Trumpist militias will be rallying in DC at Trump's orders," tweeted Arie Kovler, a political scientist who studies far-right groups. "It's highly likely that they'll try to storm the Capitol...And people will die."

The riot that ensued was broadcast live and was so obviously the culmination of Mr Trump's efforts that even most Republican leaders at first said as much. Kevin McCarthy, the Republican leader in the

House, said publicly that the former president was responsible and told colleagues he would instruct Mr Trump to resign. Yet it quickly transpired that most Republican voters preferred Mr Trump's version of reality to the evidence of their eyes. So Mr McCarthy and most other Republican lawmakers back-pedalled, leaving Ms Cheney and Mr Kinzinger among the few in their party willing to stand against insurrection.

Democrats and some Republicans had pushed for a more powerful independent inquiry, along the lines of the commission on the September 11th attacks. Republican senators nixed that, so House Democrats launched the committee as a second-best option. It is by definition more partisan than the independent inquiry would have been, notwithstanding the brave participation of Ms Cheney, who is likely to be drummed out of Congress in November's mid-term elections, and Mr Kinzinger, who has said he will not run for re-election. In February, the Republican National Committee voted to censure them for engaging in the "persecution of ordinary citizens engaged in legitimate political discourse"—an apparent reference to the riot.

Mr McCarthy and other leading Republicans have refused to comply with the committee's summonses. Their hostility has also imposed an unofficial time-limit on its investigations. The Republicans will probably take the House at the mid-terms and, under the likely Speakership of Mr McCarthy, would sabotage the committee given the chance. With such leadership, Republican voters have become even less convinced that Mr Trump has anything to answer for than they were immediately after the riot. Around 55% of Americans say he was not mainly responsible for it.

The forthcoming hearings are extremely unlikely to persuade many of them otherwise. Reality denial has become a domi-

nant feature of American conservatism. And Republican lawmakers and allied media are labouring to ensure it remains so. Mr McCarthy and his crew have for weeks been rubbishing the hearings as a partisan witch-hunt. Fox News, the country's most watched cable-news channel, will not broadcast them live. How easily the democratic system can unravel, indeed.

Yet the hearings represent much more than a chronicle of democratic decline. They may be the Democrats' last best hope of rallying complacent voters against Mr Trump and his supporters ahead of the mid-terms. Perhaps more important, they and the report that follow will offer the fullest historical record of the riot, Mr Trump's wider attack on democracy and how near or far it came to succeeding. ■

The Pennsylvania Senate race

Hearts and minds

WASHINGTON, DC

Two unconventional candidates pose risks for the parties' Senate hopes

THREE WEEKS after a primary election, three victorious Senate candidates have typically already logged many miles on the road to make their pitch to the broader electorate. Not so in Pennsylvania, where both candidates have been in limbo. On the Republican side Mehmet Oz, a cardiothoracic surgeon and former television host, finally claimed victory on June 3rd after his principal opponent, David McCormick, conceded amid a recount. The Democratic nominee, the state's lieutenant-governor, John Fetterman, remains sidelined after suffering a stroke days before the primary.

The stakes are high. In Pennsylvania Democrats have a rare opportunity to poach a Senate seat (currently held by a retiring Republican) that could enable them to preserve their narrow majority. The race may well decide control of the upper chamber. Both parties have gambled on unorthodox candidates. Despite winning the Republican nomination, Dr Oz remains unloved by the party faithful, and is a political neophyte untested in a general election. And though Democrats adore the hulking Mr Fetterman, his health struggles threaten his campaign.

Whatever thin political profile Dr Oz had before announcing his candidacy was coloured by his affiliation with left-leaning celebrities like Oprah Winfrey, whose show elevated him to fame. Many Republicans found the former television host's zeal for conservative causes such as draconian restrictions on abortion hard to believe when, in some cases, he had previ-



Following a lie

ously spoken in support of the opposite view. His past advocacy for questionable medical remedies and scant history in the state added to his image as a charlatan. Having reinvented himself once for the primary, Dr Oz must now perform a similar feat in tacking to the centre to woo Pennsylvania's many independent voters, without alienating conservatives.

He will have the campaign trail to himself for a while as Mr Fetterman continues his recovery. The Democratic nominee's health concerns have only grown in the public eye. After initially concealing the full details of his stroke, his campaign eventually disclosed that he also had a pre-existing heart condition called cardiomyopathy, which makes it harder for the heart to pump blood. Mr Fetterman claimed that, foolishly, he had been leery of seeing his doctor, despite not feeling well. But the episode calls into question his reputation for candour and strength. He has yet to say when he expects to return.

Pennsylvania lifted Joe Biden to victory in 2020 by just over one percentage point, but the president's net approval rating in the state is now a dismal -14%, according to Morning Consult. Democrats are betting that Mr Fetterman's down-to-earth demeanour can lift them. "He challenges traditional notions of what political leaders look like," says Shawn Rosenberg, of the University of California, Irvine. Mr Fetterman's first general-election ad aired on the conservative Fox News, a sign of the campaign's confidence in his broad appeal. But his health troubles, and obfuscation over them, hardly help.

The Senate campaign committees for Republicans and Democrats have pledged \$8m and \$3m, respectively, in early advertising. Both sides have reasons to be nervous. How well can a celebrity heart surgeon and current heart patient perform? ■



Wizard at work

Chesa Boudin

The City by the Bay says nay

SAN FRANCISCO

San Franciscans fire their progressive district attorney

BEFORE CHESA BOUDIN was sworn in as San Francisco's district attorney in January 2020, he once served as a translator for Hugo Chávez, the autocratic former president of Venezuela, and co-wrote a book about the Bolivarian revolution. Now Mr Boudin has experienced his own revolt—by voters. On June 7th a majority of San Francisco voters decided to "recall" him from office. The mayor will appoint an interim district attorney, with a permanent replacement elected in November.

What may sound like a provincial spat is anything but. This was a litmus of values in a city that has always been on the bleeding edge of social and political change.

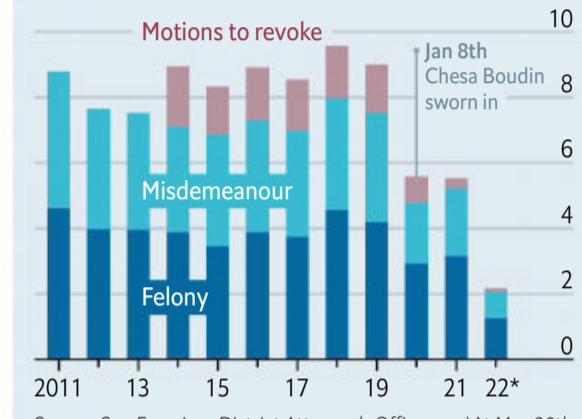
In 2019, when Mr Boudin was campaigning as a progressive promising to revolutionise criminal justice, his offbeat pedigree was an asset. He is a Rhodes scholar, a former public defender and the son of two members of the leftist Weather Underground, who were sentenced to prison for their role as getaway drivers in an armed robbery that led to two police officers and a security guard being killed. Mr Boudin promised to end cash bail and put fewer people in jail. Prosecutions have indeed fallen since he took office (see chart).

If he did what he said he would, why did he come under fire? His rhetoric and brash manner alienated many from the start. At his election-night party in 2019, people lashed out at the Police Officers Association, chanting "Fuck the POA", which had spent heavily to try to defeat Mr Boudin. Since then, the relationship between Mr Boudin's office and the police has been about as cosy as an old jail cell on Alcatraz. Morale in the district attorney's office is "terrible", says Michael Swart, one of seven prosecutors Mr Boudin fired after assuming office. By October 2021, 59 attorneys, or around 40% of the prosecutors in his office, had either quit or been sacked.

Some who have worked with Mr Boudin felt he was too quick to side with defendants, when his job was to prosecute crimes and represent victims. The recall campaign gained steam after a few incidents in which his office's choice not to keep people in jail carried deadly consequences. One paroled felon stole a car, drove while drunk and killed two young women crossing a street (earlier that year the man had been arrested five times, and each time the district attorney's office had declined to file charges).

The Boudin effect

San Francisco, cases prosecuted by the district attorney, '000



Source: San Francisco District Attorney's Office

*At May 30th

The degraded state of San Francisco has left a lot of inhabitants angry—and blaming Mr Boudin. "People are really sick of living in chaos," says Michael Shellenberger, author of a book, "San Fransicko", which argues that progressives are mishandling cities, who ran unsuccessfully for governor as an independent. Downtown, drugstores have closed or refused to stock goods on shelves, due to shoplifting. Rising crime has led some to avoid walking or driving around whole neighbourhoods.

The question of what to do about drugs is especially controversial. The city has opened a supervised drug-injection centre in United Nations Plaza, just down the road from City Hall, contravening federal and state law. This has done nothing to change the open use and sale of drugs on the street, which Mr Boudin chose not to prioritise for prosecution.

When your correspondent walked around the Tenderloin district for an hour from 11am, she counted more than 20 drug-dealers, recognisable in a "uniform" of black clothes and hats, with grey or black backpacks. Being noticed did not seem to worry them, and there's a reason. In 2021 Mr Boudin's office managed only three convictions for drug-dealing, despite a record 711 overdose deaths the previous year. His predecessor achieved 90 convictions for drug-dealing in 2018.

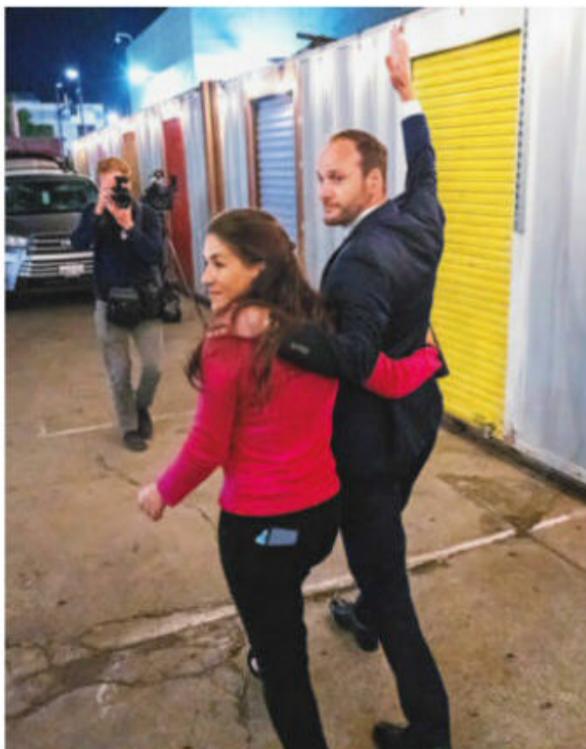
Supporters felt Mr Boudin was a scapegoat for the city's problems of homelessness, addiction and crime, which have been stirred by covid-19 but preceded it. Recalls should be reserved for booting someone out of office after they commit a specific crime, they said. Yet Mr Boudin's

► was the fifth recall election in California this year, including a successful vote against three school-board members who had refused to reopen schools while debating name changes for them, says Josh Spivak, an expert on recalls.

Some 60% of voters chose to give Mr Boudin the boot. Asians, who account for more than a third of San Francisco's population, were unhappy with his handling of several assaults. Mr Boudin painted the recall as a partisan drive, but San Franciscans of all political persuasions supported it. They will continue to argue over whether the city suffered due to his specific policies or plain incompetence. (The answer is probably both.) And the story may not be over. Mr Boudin may try to run again for his old job in November.

The recall election has wider lessons. First, it highlights the conflict within the Democratic Party that hampers functional government. In San Francisco Democrats have unilateral control, but progressives are butting heads with moderates, trying to cast them as closet Republicans. Recent redistricting conversations became "borderline violent", says one observer. Sheriffs had to be called in. This reflects a degradation of discourse that is occurring not just between parties but within them.

Second, it shows that voters are cooling on progressive policies, after seeing real-world consequences. There is pushback in other cities with progressive district attorneys, including Philadelphia and Los Angeles. Calls to "defund the police" have shifted to "refunding". "The problem is, many progressive policies don't appear to be very effective," says Jonathan Weber, editor-in-chief of the San Francisco Standard, a news site. "I don't think this is a blip," Mr Weber predicts. San Franciscans, known for their embrace of progressivism, may be turning towards moderation. ■



Farewell for now



Gun reform

High noon

PHILADELPHIA

A possible gun deal has momentum

WHEN A GUNMAN fatally shot 19 children and two teachers in an elementary school in Uvalde, Texas, 11-year-old Miah Cerrillo covered herself in the blood of a dead classmate and played dead to save herself. On June 8th a House committee watched Miah's video testimony on what happened. She said she does not feel safe. When asked if she thinks it will happen again, she firmly nodded. Elsewhere in the Capitol, a bipartisan group of senators may be inching closer to a gun-reform deal.

For the first time in years senators from both parties are talking about gun reforms, albeit narrow ones. Chuck Schumer, the Democratic Senate majority leader, wanted a deal by June 10th, but has loosened this timeline at the request of Chris Murphy, a Democratic senator from Connecticut, who is leading the delicate negotiations along with John Cornyn, a Republican senator from Texas. "This moment requires urgency," says Christian Heyne of Brady, a gun-control group. "The longer we wait, more Americans are dying." On an average day in America more than 320 people are shot, 111 of them fatally, calculates Brady.

Politicians reacted to past massacres with condemnations of the violence, but did little. After Sandy Hook, a school where 20 six- and seven-year-olds and six adults were killed in 2012, a bill to expand background checks was defeated. Might this time be different? Mr Murphy, no stranger to failed talks, has said: "I've never been part of negotiations as serious as these."

Red-flag laws might be part of the reform. These laws, which are active in 19 states, allow a judge to order the seizure of guns from people deemed a danger to themselves or others. Florida, with a Republican governor and legislature, passed a red-flag law after the mass shooting at Parkland, where 17 were killed at a high school in 2018. Since then judges have issued more than 8,000 gun-seizure orders.

The senators are also said to be considering funding for mental-health care, more security at schools and a possible expansion of background checks, something favoured by a majority of Americans, including most gun-owners. Mr Cornyn wants some juvenile records to be available in the FBI's background-check system.

Raising the minimum age for buying an assault weapon from 18 to 21 may prove harder. The gunmen in the recent massacres in Buffalo and Texas were both 18. Florida made it illegal to buy firearms until the age of 21. Florida's template "is the right one, which is: do some significant mental-health investment, some school-safety money and some modest, but impactful, changes in gun laws," said Mr Murphy on CNN. "That's the kind of package I think can pass the Senate." The sweeping bill passed by the House on June 8th, meanwhile, will probably falter in the Senate.

Modest reforms may not curb the violence plaguing America's cities—such as the gunfight in Philadelphia on June 4th that left three people dead and 11 others injured. Three-quarters of New Yorkers fear being a victim of violence. That threat may increase if the Supreme Court strikes down a law limiting "open carry" of guns.

Gabby Giffords, a former congresswoman from Arizona who was shot in the head in 2011, has called on lawmakers to "be bold". Robin Lloyd of Giffords, the gun-reform group Ms Giffords founded, says if Republican senators who have historically voted against gun-safety legislation did something, even if it was modest, it would be meaningful. On June 7th Matthew McConaughey, a Hollywood actor and gun-owner who was born in Uvalde, made an emotional speech at the White House calling for "gun laws that won't make it so easy for the bad guys to get these damn guns". He angrily slammed the podium as he described how the green Converse trainers a ten-year-old Uvalde victim always wore were used to identify her body.

Hundreds of thousands of people are expected to march in Washington, DC, and more than 450 other cities on June 11th to push for gun-safety laws. The son of Ruth Whitfield, an 86-year-old murdered in the Buffalo mass shooting, also called on Congress to act. "My mother's life mattered," he said during a congressional-committee hearing. "Your actions here today will tell us how much it matters to you." ■



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Foster care

Relative safety

WASHINGTON, DC

Why care systems should strive harder to keep children in the family

DANIEL KELLY, an assistant professor of STEM education at Texas Tech University, spent nearly two years in a care home as a teenager. When he was 17 his grandmother, who had long sought custody, took him in. She made sure he finished school and helped him start a business and buy his first house. “If she had not interceded, there is no way I would be where I am,” he says. “I cannot imagine a scenario in which my outcome would have been promising.”

Among the many ways in which children in care get off to a bad start is in their education. About half do not finish high school. Only 3% get a college degree. Living with a relative, however, especially at the age when a child is moving out of the care system but has not yet finished education, can make a crucial difference.

Research shows that children who have been removed from their parents but brought up by relatives do better in myriad other ways. They are less likely to have a criminal record or become homeless (as more than a quarter of those who have been in foster care or institutions do). Research also suggests why that might be so. Relatives are less likely than foster parents to request that poorly behaved children be removed. And they are more likely to take in groups of siblings, who are routinely separated in the care system.

About 424,000 children are in care in America, most of them with foster parents. Because demand for foster parents exceeds

supply in many places, recruitment and vetting can be inadequate. Too many children end up in group homes, meant as a stopgap, for the long term.

A growing awareness that family placements are preferable has prompted federal and state laws which say they should be prioritised. Yet it does not happen enough. Casey Family Programmes, a charity that works to reduce the need for foster care in America, says nearly a third of children removed from the care of their parents are placed with relatives. But in a handful of states, fewer than 10% are placed with family. Why does it not happen more?

Grandmother knows best

The first problem concerns the way “kinship” care is regulated. If the arrangement is not formalised in some way, relatives cannot access the funding and other support given to foster parents. The majority of children who are taken into care come from low-income families, which helps to explain why black children make up 14% of the child population but 23% of the foster-care population.

One solution is to make it easier for relatives to become licensed as foster parents. This can be an onerous process, some parts of which make little sense when applied to relatives. A requirement to provide a certain amount of living space, for example, should not prevent a woman living in a modest two-bedroom flat from taking in

her four grandchildren. Such stipulations make it likelier that a child will be separated from siblings and end up with strangers, miles away from each other and from home. Some states now issue provisional licences that allow relatives to take in children while becoming licensed; others have waived some licensing requirements for relatives altogether.

Sixto Cancel, the founder and chief executive of Think of Us, a non-profit group that works with children in care, says even when requirements are loosened many relative-carers are hesitant about becoming licensed foster carers. It puts them at the mercy of a court system that too often makes bad decisions, he says. He cites the example of a grandmother in Texas who had her six grandchildren taken away after a court decided she was unable to cope. After a long court battle she has just got three of them back. It is better, he says, to pay relatives as if they were foster parents without requiring them to become licensed (as happens in some places).

Poverty itself can be a reason why children are removed from their families. America has one of the highest child-poverty rates in the industrialised world. Many people who work with children say it is commonly assumed that a child living in a house in which the electricity has been turned off or the fridge is empty should be removed. It would often be better (and cheaper) to provide financial support, says Mr Sixto, including to those family members who might take a child in. Tracking down relatives and establishing that they are able to look after children takes time and effort. In many cases it also means finding them extra help.

Mr Sixto has direct experience of this. When he was 11 months old he and his four siblings were removed from their mother and separated from one another. Mr Sixto went through a brief and disastrous adoption, followed by periods of homelessness and foster care. Later, as an adult, he tracked down his mother’s case notes. He reads them often, he says, and sees nothing in them that suggests he and his siblings would not have been better off if they had stayed with her and she had been given “more support and less judgment”.

Yet it was another experience that convinced Mr Sixto that authorities should make greater efforts to find relatives of children who are taken into care. Three years ago he discovered he had several aunts and uncles on his father’s side. He had no idea they existed. They had no idea he existed either (nor did his father). One of his aunts, who lived only 58 miles (93km) away from one of the foster homes in which he had spent several years, had fostered and adopted several children, he learned. She told him she would have done the same for him. ■

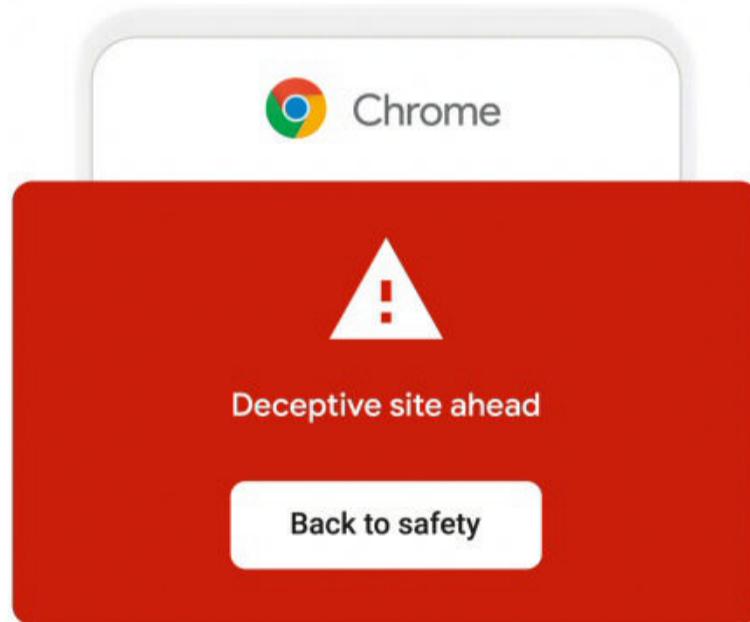


Just one of the 424,000 in America



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Lexington | The incapable state

American government is no match for global warming



EVEN BEFORE it started raining, there were puddles by the roadside in the Little River area of Miami. Then the heavens opened and before Lexington's eyes, on June 3rd, the puddles became pools. It was a timely display of the process his guide was in the middle of explaining. "Sea-level rise, as I was saying, is not our only source of inundation," Katherine Hagemann, head of climate adaptation for Miami-Dade County, noted drily.

The threat Miami faces from rising sea-level is well-known. The seas off South Florida have risen by almost a foot (30cm) in a century, more than the global average. Parts of Miami are close to sea-level, so prone to flooding at high tide. As the ice sheets melt, another couple of feet of sea-level rise is expected by 2060; perhaps six by 2100. Yet this calamity is only half the city's problem.

Whenever the water-table rises, groundwater seeps up through the porous limestone on which it sits. This phenomenon, visible as the rain fell in the Little River area, causes additional flooding during the storms that climate change is intensifying. Sure enough, over the next 48 hours, Tropical Storm Alex dropped 11 inches of water on Miami-Dade, a region of 3m people that includes Miami. Its streets turned to rivers, dotted with semi-submerged cars and noxious with run-off from thousands of septic tanks, whose soakaway systems are often below the water-table.

Miami has no answer to this inundation from without and within. A seawall, analogous to the Netherlands' dykes, could make groundwater flooding worse, by stopping it draining away. The best course is a medley of partial fixes. These would include heavy investment in practical solutions, such as extending the sewer system; long-term planning for higher sea-levels, including a rethinking of building codes and the habitability of parts of Miami; and aggressive steps to mitigate global emissions. Yet none of these is happening to anything like the necessary degree, because of Miami's third disaster: an American governing system that appears incapable of adapting to climate-induced disasters estimated to cost \$2trn a year by the end of the century.

If any city should be able to buck that failure, it is Miami. Loved by the mega-rich, it has a strong tax base and an economy dependent on the threatened real estate. A rational state would scramble to save it. Yet the policy response to its inundations is defined by

short-termism, vested interests, inadequate resources, a Hobbesian scrum of federal, state, county and city agencies, and denial.

Starting with the obvious, the Republicans, who have run Florida since 1999, are an impediment to cutting emissions. The previous governor, Rick Scott, was a climate-change denier. The current one, Ron DeSantis, is better on local environmental problems, yet while recently releasing a sea-level plan he dismissed "things like global warming" as a "pretext to do a bunch of left-wing things".

That encapsulates not merely the right's lack of seriousness about climate but the anti-government attitude that has driven it to abandon policymaking generally. Brink Lindsey of the Niskanen Centre, a think-tank, identifies this as one of the main drivers of a collapse in state capacity, illustrated, among much else, by America's inability to build critical infrastructure, including the power plants and transmission lines upon which decarbonisation depends. Such failures do not denote the smaller government Republicans claim to want; they represent terrible government, wrought by their negligence, excessive Democratic faith in regulation, and 1,001 bureaucratic workarounds. It amounts, writes Mr Lindsey, to a "fracturing of government activity into large numbers of overlapping programmes with responsibility divided up, and blurred, across multiple agencies and levels of government."

He might have had Miami's response to its watery future in mind. Drive around it with an informed guide and illustrations of administrative chaos and make-and-mend are everywhere. A state-run causeway across Biscayne Bay is being raised in expectation of 0.7 feet of sea-level rise; a county one in expectation of six feet. A mile-long roadway parallel to the bay marks the route of a \$4.6bn seawall proposed by the Army Corps of Engineers. It was such a bad idea that the county rejected it—reluctantly, as the feds would have footed two-thirds of the bill, and may not support a better stormwater proposal from a non-federal agency.

Last year Miami-Dade tried to get a grip on the chaos by releasing its own sea-level strategy. Yet the projects it outlines would cost billions, making it dependent on federal and state funds that are only minimally available and can take years to arrive. To eradicate the septic-tank problem would cost \$4bn. Miami-Dade has so far been promised \$100m of the total, from the feds, via the state.

Not that local government is blameless. The closer to voters government gets, the more it is prey to nimbyism. And because Florida collects most of its tax revenue from property taxes, its pandering to property-owners is especially intense. This might account for the modesty of Miami-Dade's strategy. An upbeat vision of Floridians working with their watery environment, it had little to say about the probability of four or six feet of sea-level rise and the calamity that would entail for the real-estate market.

Blame the manatees

In the county's 34 municipalities, such pressures are even fiercer. Last year residents of King's Bay, a rich neighbourhood, were offered a \$2.75m subsidy to swap their leaky septic tanks for sewer linkage. They objected furiously to being asked to make a small contribution to the scheme and blamed faecal pollution of the local canal on manatees defecating in it. The scheme was scrapped.

The mantra among Miami's investors is that a solution will be found. America is innovative and Miami one of its jewels. Yet it is also a country whose dysfunction has made it almost incapable of long-term planning—a country, Miami's visitors should know, that permits its streets to run with sewage when it rains. Lexington would put his millions, if they existed, on higher ground. ■



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Latin American economies

Ripple effects

Some places have benefited from the war in Ukraine. But possibly not for long

WHEN RUSSIA invaded Ukraine in February, it was not just Ukrainians who suffered. The prices of wheat, oil and other commodities that both countries produce in large quantities rocketed, inflicting serious pain on cash-strapped countries that rely on imports. Some world leaders, however, saw the bright side. “This crisis is a good opportunity for us,” said Jair Bolsonaro, Brazil’s president, in March. Similarly last month Alberto Fernández, the president of Argentina, said that his country is “a reservoir of what the world needs right now: food and energy”.

Latin America’s economies are indeed weathering the war better than many other emerging markets’. But household budgets across the region are being battered by war-induced inflation. This shock comes on top of several recent misfortunes. And in the medium term, the outlook for some Latin American economies is stormy.

Even before the war, 2022 promised to bring plenty of discomfort to the emerging world. As the year began, output remained short of pre-pandemic trends across many economies, and debt loads stood substan-

tially higher. Supply-chain problems and rising prices throttled household consumption, while rising interest rates in rich countries pulled capital away from poor ones, increasing the financial pressure on firms and governments already straining to make ends meet.

Wheat lifters

Latin America seemed to be among the most troubled places. In January the IMF projected that its growth in 2022 would be the lowest of any region in the world. Inflation surged in Argentina and Brazil. In its most recent forecast the IMF downgraded its projections for economic growth in rich countries this year by 0.6 percentage points, and that for emerging economies by a whole percentage point.

Against this background, Latin America has done rather well in the past three

months or so. Wheat and oil prices have risen by more than 20% since the war began. That is good news for Argentina, the third-largest exporter of wheat in the Americas after the United States and Canada. High oil and gas prices are also providing a shot in the arm to exporters of hydrocarbons, such as Brazil and Colombia. Although prospects have dimmed for most countries, the IMF has revised up its growth forecasts this year for Argentina, Brazil, Peru and Colombia.

Elsewhere in the emerging world, the soaring cost of food and energy threatens to turn a difficult macroeconomic situation into a horrendous one. In Sri Lanka the drain on hard-currency reserves caused by the rising price of oil imports forced the government to default on its external debt in April. Across much of Latin America, in contrast, foreign purchases of pricey commodities have provided a steady inflow of hard currency, enabling people and companies there to buy imports on good terms. Many of the region’s currencies have gained value against the dollar, in contrast to much of the rest of the emerging world (see chart on next page).

That has provided politicians with some room to try to protect voters from the pain of high food and energy prices—a luxury many other countries cannot afford. Pakistan’s government, for instance, is cutting fuel subsidies in a desperate bid to avoid a fate similar to Sri Lanka’s. But in Mexico the jump in money earned from oil exports reduces the pressure to enact such ►

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► painful measures. The governments of Colombia and Chile are maintaining subsidies, while in Peru the government has reduced the consumption tax on food and energy. Across Latin America, politicians have taken measures worth about 0.3% of GDP, on average, to try to shield households from the effects of the war.

Not all is rosy. Even after its upward revisions, the IMF expects Latin America to grow more slowly this year than any other part of the emerging world, apart from eastern Europe. Brazil will probably struggle to grow by more than 1% this year, despite high commodity prices. Costly food and energy, though helpful to exporters, are fanning inflation. Consumer prices are rising at double-digit rates in Chile and Brazil, and are well above central-bank targets in Latin America's other large economies. Central bankers have put up interest rates to prevent surging prices from translating into a broader loss of confidence in governments' control over inflation—a meaningful risk in a region with a history of spiralling prices. But higher rates also squeeze investment and growth.

Conditions may deteriorate further if inflation in rich economies proves more persistent than expected, forcing central banks to raise rates by more than markets anticipate. In the 1980s, when the United States last battled to subdue serious inflation, the consequences for Latin America were grim: a wave of debt crises and an economic lost decade. Macroeconomic policy

across the Americas has improved a lot since then. But the combined pressure of multiple shocks today has left some economies vulnerable.

The region cannot afford another crisis. Latin America suffered a larger decline in GDP in 2020 than any other part of the world. The pandemic resulted in forgone investment, missed hours of schooling and weaker productivity growth. This is likely to depress economic growth in the years ahead; indeed, the IMF reckons that in 2024 output across Latin America will probably remain about 5% short of the pre-

pandemic trend. Recent hardships have fallen hardest on the poor.

In countries plagued by extreme inequality, such unevenly distributed costs could aggravate political instability or extremism. Elections in Colombia this month and in Brazil in October seem certain to yield winners who are poorly equipped to meet the challenges of the moment. And if governments remain unable to deliver relief to struggling Latin Americans—a tall order given global headwinds, high commodity prices or not—then frustration across the region will only grow. ■

Canada

A politer kind of populism

NORTH BAY, ONTARIO

Pierre Poilievre is Canada's answer to Donald Trump

ON A SUNDAY in April 600 people packed into the Elks Lodge on the outskirts of North Bay in northern Ontario. Some had driven hours to hear Pierre Poilievre, the only Canadian politician who sets pulses racing these days. Cars bore bumper stickers that read "Freedom Convoy 2022", a reference to protests against vaccine mandates led by truckers that shut down Ottawa, Canada's capital, for three weeks in February. "Defund the CBC", Canada's public broadcaster, demanded a sign held by an eight-year-old boy. One man's t-shirt proclaimed him to be a "Thought Criminal". But many looked like mild-mannered folk with time to kill between attending church and visiting their grandchildren.

Blue-shirted and tieless, the 43-year-old Mr Poilievre warmed up the crowd like a late-night talk-show host. He cracked jokes before laying into the country's Liberal government, led by Justin Trudeau. A proposal to regulate content on the internet befits the regimes of North Korea and Iran, Mr Poilievre fumed. Inflation, the worry uppermost in voters' minds, is a form of oppression. "You might be the working guy who has lost his freedom to go on a hunting or fishing trip on the weekend because gas prices are a buck-ninety-three a litre and you can no longer fuel up your truck," he speculated. When he is prime minister Canadians will be "the freest people in the world".

Before that, however, he has to become leader of the Conservative Party in a vote scheduled for September 10th. Polls suggest that he is the front-runner. He is the hard-edged, plain-speaking antithesis of many Canadian politicians. "Pierre is real. He's a breath of fresh air," said Nancy Olmsted, a former Olympic canoeist who at-

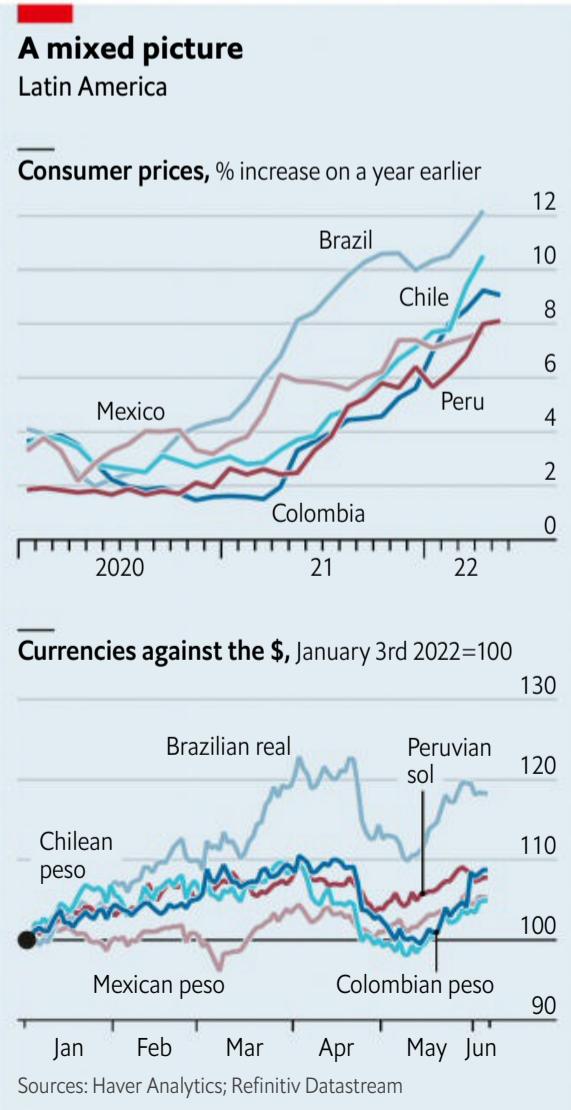
tended the event in North Bay.

When Mr Trudeau was elected prime minister in 2015 he was the breath of fresh air. Possessed of Kennedyesque charisma, he offered moderately progressive answers to grievances about economic insecurity. But Mr Trudeau has become a symbol of divisions he had hoped to narrow. His attentiveness to the concerns of vulnerable groups, from indigenous people to transgender folk, has made some ordinary Canadians feel that he cares less about them.

Things came to a head during the truckers' protest, when Mr Trudeau accused protesters of promoting "hatred and division", a charge that misrepresented many of them. He appalled civil libertarians by invoking the Emergencies Act for the first time in its 34-year-history, allowing the government to restrict assembly and freeze bank accounts. Two inquiries, one in Parliament which is already under way, and another led by a judge, will investigate whether the government was right to invoke the act.

As elsewhere, voters are shocked by inflation, too, which reached 6.8% in the year to April, its highest level in more than 30 years. On June 2nd Doug Ford, whose Progressive Conservative Party is the provincial counterpart of the Conservatives in Ontario, won re-election as the province's premier in part on a promise to "keep costs down". As worrying to many is the rise of nearly 50% in house prices since early 2020, though these have begun to fall since the Bank of Canada began raising interest rates in March (see Finance section).

Mr Poilievre seeks to convert unease into anger. A politics nerd who has been an MP since he was 25, he adopts a Trumpian swagger on the stump. He rails against



Bello The invincible industry

Latin American politicians are fed up with the war on drugs

THIRTY YEARS ago Gilberto Rodríguez Orejuela and his associates were the world's most powerful criminals, reckoned to control 75% of cocaine shipments from Colombia. They adopted a businesslike approach to a lawless trade, often preferring bribery to violence, and used their profits from drugs to buy legal enterprises, from pharmacy chains to América de Cali, a football club in their home city. When he died on May 31st after 18 years in an American prison, Mr Rodríguez was barely remembered in his home country. Yet the business which he pioneered is stronger than ever, while across the Americas there is palpable fatigue with the "war" against it.

That fatigue is expressed by both the candidates in Colombia's presidential run-off on June 19th. Rodolfo Hernández, a populist of the right, has called for the legalisation of drugs. His leftist rival, Gustavo Petro, says his country should recognise that the war is lost. Mexico's president, Andrés Manuel López Obrador, favours "hugs rather than bullets" for the drug trade's foot soldiers; arrests of drug kingpins fell until recently. Officials in the United States seem more preoccupied with the arrival of migrants than of cocaine. Drug-related deaths there continue to rise, but over 60% are caused by fentanyl, a powerful synthetic drug, much of which is made in Mexico.

Since the 1990s anti-drug policy in the region has had three prongs: eradicating coca, the raw material for cocaine; the promotion of alternative livelihoods through "integrated rural development", as the jargon goes; and seizing or destroying drug shipments, processing plants, chemical inputs and money.

The most visible and controversial of the three is the eradication of coca. It is a Sisyphean task. Between 2000 and 2006

Colombia cut its coca acreage by half, chiefly by using aerial spraying of glyphosate, a weed-killer. But planting surged again during and after peace talks between the government and the Marxist FARC guerrillas, who controlled much of the coca-producing areas. In 2015 the government banned aerial spraying for legal and health reasons.

Iván Duque, Colombia's president since 2018, is an eager protagonist of the war on drugs. His government has eradicated over 100,000 hectares (250,000 acres) of coca a year. Peru, the second-biggest producer, has also met its more modest eradication targets. These achievements are illusory. In both countries total coca output has risen inexorably. According to American government estimates, Latin America's cocaine production has more than doubled over the past decade, to 2,400 tonnes a year. That is partly because productivity has risen, with denser planting, irrigation and skilled farming. Coca has now been detected in Honduras and Venezuela, where it is a new crop. In Colombia, the effect of repression has

been to drive the crop into remote mountains, national parks and other protected areas, where it causes environmental damage and is harder to eradicate.

There is a consensus among experts that forced eradication cannot deliver a sustained decrease in supply. They favour promoting legal alternatives to coca and relying on voluntary eradication. That is easier said than done. "To go from a consensus to the construction of public policies requires a lot of government capability on the ground," says Daniel Rico, a criminologist. Since 2016 Colombian governments have in theory wanted to beef up security and the presence of the state in rural areas, but have failed to do so. Instead, some aspects of the drug business have undergone *de facto* legalisation, says Mr Rico. Farmers are rarely prosecuted for growing coca, and most money-laundering and the supply of chemical inputs goes unpunished.

The economics of an illegal business conspire against the drug warriors. The retail price of cocaine is determined by risk, not costs, and is perhaps 60 times higher on a Californian street than an Andean farm. Legalisation would be the sensible answer. But there is little evidence that it is politically feasible.

That leaves Latin American governments to deal with the ugly reality of organised crime. The protean mafias who traffic drugs consolidate or fragment, acting more or less violently, according to taste and local circumstance. What is constant is their accumulation of military, political and economic power as cocaine has become a global business. If Colombia's next president manages to improve rural security and give a boost to legal economic activity that could be more effective than yanking up coca plants.



► "gatekeepers" and argues Mr Trudeau shares blame with the Bank of Canada for "Justinflation". He has said he would sack the bank's governor, who is meant to be independent. He denounces the World Economic Forum, a global gabfest, as working "against the interests of our people".

If this is populism, it is populism with Canadian characteristics. Although Mr Poilievre's crowds are nearly all white (diversity in North Bay was provided only by his Venezuelan-born wife, Anaida), his villains have no colour. He avoids alienating the multi-ethnic suburbs of Toronto where

national elections are won and lost. Mr Poilievre is trying to "channel that [anti-elitist] sentiment without endorsing the more extreme groups", says Roland Paris of the University of Ottawa.

Whether voters will be in the mood for Mr Poilievre's calibrated populism by the time of the next election, due in 2025, will depend a lot on how Mr Trudeau, and Canada's economy, perform in the interim. Mr Trudeau reinforced his minority government in March by striking an agreement with the leftist New Democratic Party. At times more Canadians say they disapprove

of the government than approve, but Mr Trudeau is "not in the danger zone", says David Coletto of Abacus Data, a pollster.

And although Mr Poilievre is the frontrunner to lead the opposition, he has yet to seal the deal. Mr Ford's win in Ontario may persuade some that a candidate who is less strident will have a better chance of defeating the Liberals. One Conservative Party organiser in North Bay worries that Mr Poilievre is too Trumpian for most voters. To win a national election he may have to learn how to reassure Canadians, rather than just riling them up. ■





Afghanistan's economy

Guns over butter

KABUL

The Taliban government has proved surprisingly good at raising money. It is letting its people starve anyway

THE MEDINA BAZAAR neighbourhood in Kabul used to be a jolly mess of consumption and construction. As Afghanistan's economy surged, helped along by billions of dollars in foreign aid, businessmen invested in property. Shopping plazas and wedding halls sprang up. Shops selling everything from women's fashion to groceries were busy with keen customers. Traders prospered. Today, the area is still packed. But the throngs of people are there for handouts of food from the UN. The stores are empty. Mohammad Younis, a local tailor, is struggling to feed his 11 children. "I have a shop, but no one comes in. I just sit there all day," he says.

It was less than a year ago that the Taliban took control of Afghanistan as American troops left, the government collapsed and security forces evaporated. The world watched in horror as crowds gathered at Kabul airport, desperate to flee. Some were killed in bombings. Others clung to departing aircraft and fell from the sky. Many have left the country since.

Most who remain face penury. In the last four months of 2021 the economy con-

tracted by more than a third compared with the same period a year earlier. Private businesses have laid off about three-fifths of employees. Food prices are rising by 18% year on year. Families that were middle-class a year ago are surviving on a single meal a day. More than half the country's people face acute hunger. Some have taken to selling organs or children.

Part of the reason for their suffering is that Afghanistan was cut off from the global economy the moment the Taliban took control in August. The foreign funding that had propped up the state was halted. Afghanistan's central-bank reserves, mostly held in America, were frozen, then seized. Sanctions mean Afghan banks can no longer transact with those abroad.

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When the Taliban seized power, it seemed obvious that they would struggle to switch from running a violent insurgency to administering a country of 40m, especially for lack of money. Yet the new government's finances appear to be in much better shape than anybody expected. Last month the group announced its first full-year budget, forecasting revenues of \$2.1bn. The World Bank's estimate is more modest but still impressive: it reckons the government will collect about \$1.7bn this year (about 12% of GDP) in domestic revenue, from things like taxes, customs and fees for services.

That is nearly three-quarters of the \$2.3bn the previous government raised domestically in 2020, before business tanked, trade dried up and many taxpaying Afghans left the country. (Its total funding including foreign finance came to \$5.7bn, but the Taliban do not have access to the grants and loans that made up the rest.)

That the Taliban have managed to keep revenues flowing despite the obstacles is remarkable. One reason for their success is that they have plenty of experience collecting taxes. During their two decades as a rebel army, they collected traditional tithes, such as *oshr*, a share of farmers' harvests, and *zakat*, religious alms, in areas under their control. David Mansfield, a researcher who has studied Afghanistan's illicit economy for 25 years, estimates the group made between \$27.5m and \$35m a year taxing the drug trade and roughly another \$245m at checkpoints along main roads, ►

► where Taliban fighters extorted fees from truckers moving food and fuel.

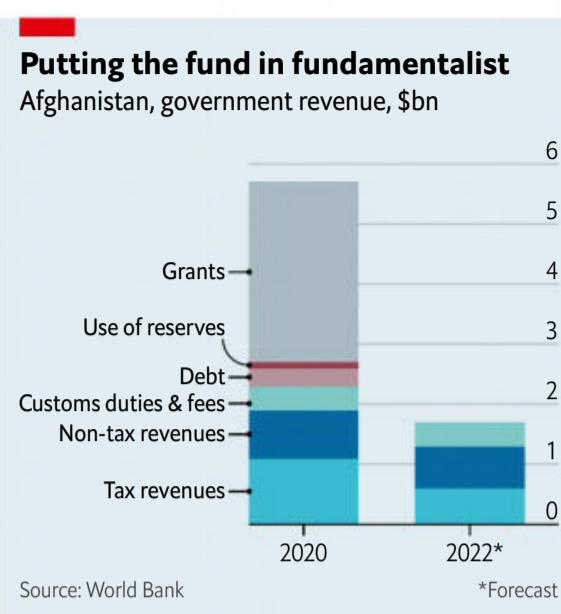
Second, the Taliban have kept official revenues flowing. A handful of holdovers from the former government are maintaining sophisticated financial-management software set up by the American-backed regime to run their revenue-collection systems. The group has also cracked down on graft, a serious problem under the previous government. A recent World Bank survey found that few private-sector businesses have been asked to make unofficial payments when filing taxes or clearing goods through customs since August, whereas such demands used to be common.

Khalid Payenda, who was the last finance minister under the previous government, recalls staging surprise inspections at customs posts. In Kandahar, his inspectors found officials turning a blind eye as dismantled cars were brought in from abroad and assembled near the customs office, dodging hefty duties on imported vehicles. Mr Payenda, who now lives in Washington, DC, reckons the Taliban could easily double revenues from customs, which came to \$400m in 2020, if they eliminate that sort of graft.

The Taliban plan to spend \$2.6bn this year, though they have not published details of where that money will go or how they will make up the \$500m shortfall between their outlays and their own projections of revenues. One hint comes from an interim budget covering the three months to March, in which the Taliban said they would devote about 40% of total spending to defence and security. This financial year, that share is expected to rise to 50%, a staggering sum given that the government faces no existential threats and at least half the country's population is living on less than \$1.90 a day.

Analysts are left wondering what the defence budget will be spent on. Will it be used against the local branch of Islamic State, which has staged bloody attacks in the east of the country? Or to take on the anti-Taliban resistance in the north? The most likely answer is that much of it will be used to pay the thousands of fighters who worked for the Taliban before August, mostly young men who might rebel if their income is suddenly cut off.

Whatever the answer, the result will be less money to feed hungry citizens, let alone pay for health care, education or rebuilding the economy. That means that already reluctant foreign donors will be forced to step in to keep Afghans from starving. Earlier this year the UN launched its largest-ever appeal for a single country, hoping to raise \$4.4bn in emergency aid. But donor fatigue, aversion to the Taliban and the diversion of resources to Ukraine mean that only about a third of that has been raised so far.



The Taliban are not helping international fundraising efforts. They have broken their promise to let girls back into secondary schools and have shut women out of public life. Even as they announced the budget last month, authorities dissolved the Human Rights Commission. The Taliban have surprised the world by showing they can continue to raise money to run the state. But they have yet to show they can spend it wisely. ■

Industrial disasters

Terminal containers

Bangladesh's patchy safety record looks even worse after yet another accident

WHEN A FIRE broke out at the BM Land Container Depot in Bangladesh on June 4th Oliur Rahman Nayan, a local worker, did what many young people would do: he took out his phone and started recording. Thousands watched his live-stream as containers full of clothes headed to the nearby port of Chattogram (formerly Chittagong), and then to Western high streets, went up in smoke. They followed along as firefighters tried to douse the flames. Then the screen went black.

Mr Nayan was dead, engulfed in an explosion that shook buildings miles away. More than 40 others, including nine firefighters, perished. Hundreds more were injured in the blaze. Many details are still unknown, but the picture emerging is painfully familiar in Bangladesh, where rapid industrial growth has been marred by periodic industrial accidents.

Days before the blast some 850 tonnes of hydrogen peroxide, a volatile chemical, were brought from a nearby plant to the depot, which does not seem to have had any special safety procedures for hazardous materials. Containers full of the stuff were

left in the yard alongside other cargo, rather than in a separate shed, as they awaited shipment to Cambodia, according to the *Business Standard*, a Bangladeshi newspaper. The explosion occurred when a fire, whose cause is unclear, reached these containers, one of which was leaking.

The owners of the plant that produced the chemicals are Mostafizur and Mujibur Rahman. They are also majority shareholders of Smart Group, the container depot's parent company. The fire service has accused them and their business partner of failing to warn it about the stockpile of chemicals. (The Rahman brothers did not respond to requests for comment.) Unaware of the added hazard, the firefighters doused the flames with water—the opposite of what they would have done if they had known about the hydrogen peroxide, says Monir Hossain, the assistant director of the national fire service. The containers, he says, were either unlabelled or mislabelled. On June 7th police charged the depot's executives with manslaughter and negligence, but not the Rahman brothers.

It took days to put out the blaze. Local volunteers helped until the army stepped in. Anisur Rahman, a worker at the depot, turned up for his shift on Sunday and found himself dragging burnt corpses from the rubble. "I have recovered seven bodies since morning," he told *The Economist* that evening.

Authorities say the depot did not have permission to store the chemicals. An official at the BM container depot denies this, saying they did have a storage licence, but admits there was "mismanagement" in the handling of the goods.

Such accidents are not new in Bangladesh. Last year more than 52 people were killed in a fire at a food-processing factory. The textile industry, which has helped make Bangladesh one of Asia's fastest-growing economies, has a particularly spotty record. More than 1,100 workers died when Rana Plaza, an eight-storey garment factory on the edge of Dhaka, the capital, collapsed in 2013. Western retailers whose clothes were being made in the building at the time scrambled to offer compensation to families and introduce new health-and-safety measures.

But improvements have been piecemeal, says Taqbir Huda, a lawyer from Justice for All Now Bangladesh, an advocacy group. The blast in Chattogram is surely tragedy enough to push more sweeping reforms, he says. Not all Bangladeshis share his optimism. Abdu Sattar lives just behind the depot: the air around him is still heavy with the smell of chemicals and the water his family drinks may well be polluted, too. "Everyone knows that chemicals were kept here," he says. It may be against the rules but in Bangladesh, he says, "money can change everything." ■

India and the Muslim world

Hands off the Prophet

DELHI

India's Islamophobia is affecting its foreign relations

WHEN ANTONY BLINKEN, America's chief diplomat, criticised the decline of religious freedom in India on June 2nd, bemoaning an increase in "attacks on people and places of worship" in the country, the government's reaction was defiant. It slammed his "ill-informed comments" and suggested that America get its own house in order.

The reaction was rather different when, a couple of days later, many countries in the Gulf lodged complaints concerning offensive remarks about the Prophet Muhammad by two senior officials in India's ruling Bharatiya Janata Party (BJP).

The party quickly declared that the comments of these officials did not represent its official stance. When that failed to calm tempers, the BJP took action against the pair. Nupur Sharma, the party's national spokeswoman, was suspended. Naveen Jindal, its head of media in Delhi, the country's capital, was expelled. Indian diplomats in the Gulf sought to play the incident down by describing the two as "fringe elements", prompting incredulity on Indian social media. The foreign ministry explained that their views did not reflect government policy. Ms Sharma has been summoned by police in Mumbai, the commercial capital, to explain her comments.

The unusual contrition reflects the material importance of India's relationships with Muslim-majority countries in the Gulf. America and its allies are easy to ignore because their objections are usually just verbal. India is important as a geopolitical counterweight to China, so no Western country wants to pick a fight with it. But when it comes to the Gulf, "we need them more than they need us," reckons Happymon Jacob of Jawaharlal Nehru University in Delhi.

Qatar, which was the first to complain, is India's biggest supplier of LNG and an important destination for Indian migrant workers. Gulf countries supply two-thirds of India's oil and host some 9m Indian workers. They have both the wherewithal and potentially the will to do real damage to India's interests.

Muslim countries have for years looked on with concern as the BJP went about its goal of turning India into a Hindu state. Yet these were domestic matters, and India's foreign policy remained a mostly religion-free zone. Narendra Modi, the prime minister, managed to pull off a delicate balanc-

ing act between his majoritarian agenda at home and cultivating warm relations with Muslim states (except Pakistan) abroad.

But as public discourse in India has coarsened—Ms Sharma made her remarks on a widely watched television debate show—and the ruling party's apparatchiks have become increasingly vituperative, the balancing act has become harder to sustain. Muslim countries stayed silent about the treatment of minorities within India to avoid being rebuked for meddling in domestic affairs. But "an attack on the very tenets of the faith is a different category of offence", says Mr Jacob.

The government is trying to limit the damage without appearing weak. It pushed back against a statement from the Organisation of Islamic Co-operation (OIC) that suggested the remarks were representative of systematic discrimination against Muslims in India. Nevertheless, it separately contacted officials from all OIC member states to defuse their anger.

However, instead of dying down, the anger has only grown. Protests have spread from the Gulf to the rest of the Islamic world. More than 20 countries—including Indonesia, Turkey and even the fundamentalist thugs of the Taliban—have registered their displeasure. A statement purportedly released by al-Qaeda called for retaliatory attacks in the states of Gujarat and Uttar Pradesh, both BJP strongholds, and in Delhi and Mumbai.

India's zoom-odd Muslims, who hope that the outrage might prompt the government to treat them with more respect, will probably be disappointed. The BJP's tactical retreat to save face abroad is unlikely to have any bearing on its domestic stance, reckons Harsh Mander, a civil-rights activist. Some of its members routinely incite violence against Muslims. A repeat of the incident seems inevitable. ■



She got the boot

South Korea

Troubled energy

ULJIN

A plan to revive the country's nuclear-power industry faces obstacles

THE SOUTH gate of Shin Hanul, a nuclear power station in Uljin on South Korea's east coast, does not get a lot of traffic. At lunchtime on a recent weekday there were no heavy vehicles to be seen, only a trickle of cars slowly chugging up to the two newish reactors behind it. The reactors were supposed to have started producing electricity by 2018 but remain dormant after one of them failed a series of safety tests.

The area could soon see more activity. Yoon Suk-yeol, who took over as South Korea's president last month, wants to put nuclear power at the core of energy generation, reversing the phase-out policy of Moon Jae-in, his predecessor. As well as putting the two existing reactors at Shin Hanul to work Mr Yoon wants to build two new ones, a plan Mr Moon abandoned in 2017. He also plans to extend the working life of 18 existing nuclear power stations beyond their scheduled closure in 2030. If Mr Yoon gets his way, nuclear will generate 30-35% of South Korea's power by 2030, up from 27% in 2021.

The plan has merits. The fallout from the war in Ukraine has underscored the dangers of relying on fossil fuels, which currently generate nearly two-thirds of South Korea's energy. Breaking the dependence on coal, oil and gas is also necessary to fulfil South Korea's pledge to achieve carbon neutrality by 2050, which Mr Yoon has said he intends to honour. Properly regulated and managed nuclear power is green and safe, and could reliably supply South Korea's heavy industry. What's more, 49% of South Koreans think the country needs more nuclear power, whereas only 40% disagree.

But over the past decade the reputation of nuclear power in the country has been tarnished. A series of scandals in which thousands of counterfeit parts with fake documentation were found in nuclear plants resulted in the conviction of 68 people for crimes including bribery, collusion and forgery. Poor management caused a blackout at one facility. North Korea has hacked into the South's nuclear databases on multiple occasions, at least once stealing blueprints for reactors.

Reforms in response to these scandals have improved safety and transparency. But the improvements have not mollified critics. Most of South Korea's nuclear regulation originates in American law and has been simplified in translation, says Park ►

▶ Jong-woon, a professor of nuclear engineering at Dongguk University in Gyeongju. That, and the close ties between regulators and industry, creates loopholes. Even today, the putatively independent Nuclear Safety and Security Commission should really be called the “nuclear-friendly commission”, quips Mr Park.

Another problem is cost. The rising price of imported fossil fuel and an eight-year freeze on domestic energy prices resulted in a 7.8trn won (\$6bn) operating loss for KEPCO, the listed power utility, in the first quarter of 2022, its worst performance

ever. Nuclear plants are cheap to operate. The company's own analysis suggests that without them its losses would have been worse. But building new ones is expensive and takes time, as does passing safety checks. They may also not be the cheapest option in the long run, says Kim Joo-jin of Solutions for Our Climate, an NGO, given the falling cost of renewables. Industry remains to be convinced—the unreliability of renewables limits their appeal.

Sorting out the domestic market is a precondition for another pillar of Mr Yoon's plan: turning South Korea into an

exporter of nuclear power plants. Philip Andrews-Speed of the Energy Studies Institute at the National University of Singapore reckons that the Russian invasion of Ukraine provides an opening for South Korea to capture more of this market. Many countries are less keen to buy plants from Rosatom, a Russian state-run power company and plant manufacturer, for fear it could be sanctioned. But the economic returns of such deals are hard to assess in advance and can take decades to mature. The same holds for Mr Yoon's plan to revive nuclear power. ■

Banyan A little more conversation

It may not be a trade deal, but the Indo-Pacific Economic Framework has its uses

TALK TO OFFICIALS in Asian capitals and a theme emerges. America, they say, is happy to engage with their countries on matters of security and geopolitics, but seems uninterested in talking about trade. Such complaints are especially common in East and South-East Asia, where governments worry that China will use its economic power in the region to undermine their sovereignty. They are keen for America to deepen economic ties as a way of reducing their reliance on China. But ever since Donald Trump, the previous president, pulled America out of the Trans-Pacific Partnership, a big trade agreement signed by his predecessor, it has been clear that America will do no such thing.

So the Indo-Pacific Economic Framework for Prosperity (IPEF), unveiled by President Joe Biden in Tokyo on May 23rd, ought to have been warmly welcomed. In addition to America, a dozen countries, including economic heavyweights like Australia, India and Japan, were signatories at the launch (Fiji joined a few days later). These countries, Mr Biden said, “are signing up to work toward an economic vision that will deliver for all peoples”.

Yet barely did the wheels of *Air Force One* leave the ground than the grumbling started once more. The chief complaint is that IPEF, which American officials call an “initiative” or an “arrangement” rather than a trade deal (which it is not), does not give signatories any greater access to the American market. Instead, the idea is to promote four pillars: boosting trade, especially of the digital kind; making supply chains more resilient; tackling climate change through clean energy; and fighting corruption in business. What all of that means in practice remains to be hammered out. A former

senior official from Asia describes it as “a hamburger without the beef”.

“In terms of investment and trade, there is not much substance yet,” Lee Hsien Loong, Singapore's prime minister, told reporters after a summit of Asian leaders with Mr Biden in Washington earlier in May, where the visitors are said to have been encouraged to join. Seven out of ten members of the Association of South-East Asian Nations (ASEAN), a regional grouping, did indeed show up for the launch, even though just two—Singapore and Thailand—had been expected to do so a week before the event. India, which also shies away from trade deals, is a signatory, too. “But,” Mr Lee continued, “looking at it from another angle, it has its own value. It is, after all, a new start.”

That is the point of the thing. Asian leaders are not insensitive to America's domestic politics and the constraints they impose upon any president. Even if IPEF does not immediately—or eventually—result in a trade deal, there is value in being at the table when regional trading structures and new standards are being

discussed. It is also useful to have another venue to speak regularly to America, especially for leaders of smaller countries that lack such opportunities. Nor do they want to send America a signal that they are uninterested in talking. “There is not much to lose and potentially a lot to gain,” says Susannah Patton of the Lowy Institute, a think-tank in Sydney.

The very vagueness of the framework is appealing too—it would be hard to get countries like India and Indonesia to agree to things like loosening data-localisation rules or setting strict limits on state-owned enterprises. With just vague goals, it is easier to show enthusiasm. For India in particular, it also has the benefit of allowing it to deflect criticism that it is overly protectionist.

For America, IPEF is a way of signalling that it hears Asian worries, and is trying its best to respond to them. The thinking may be, “We're going to engage you for many years, to see what we can do”, and hope that perhaps structural forces at home eventually change, says Aaron Connelly of the International Institute for Strategic Studies, a British think-tank. If it helps limit Chinese influence, all the better.

The most optimistic way of looking at the initiative is that by setting high standards on emissions, decarbonisation, the digital economy, tax collection, corruption and so on—all agreed to by several big Asian economies—IPEF creates an environment which makes its members more attractive to American investment, says Ms Patton. The likelihood of achieving such a breakthrough is perhaps as slim as that of it resulting in a trade deal agreeable to all its signatories. For now IPEF is simply a talking-shop. But as Asian officials recognise, that is better than not talking.





Foreign policy

A new challenge to the West

China's Global Development Initiative is not as innocent as it sounds

IT IS NEARLY nine years since China's president, Xi Jinping, began to unveil his first plan for global development. It was revealed in stages, in vague language that conveyed little of what was eventually to become a splurge of infrastructure-building across the world costing hundreds of billions of dollars. Poor countries were delighted; the West grew unnerved. But the Belt and Road Initiative (BRI) has hit a few potholes. Covid-19 has taken a toll on debt-laden borrowers. Credit from China has shrunk. So Mr Xi has hatched a new idea. He calls it the Global Development Initiative (GDI), involving less concrete and more greenery. The West will still be wary.

China's promotion of the GDI suggests how much more confident it has become on the world stage since the BRI's low-key birth, less than a year into Mr Xi's rule. Unlike the BRI, which was pieced together from speeches given by Mr Xi in Asian capitals late in 2013 and took months even to acquire a simple name, the GDI was declared with fanfare—labelled from the start as an initiative with a capital "I". It was announced by Mr Xi in September in a video address to the UN General Assembly. He

billed it as a response to the "severe shocks" caused by the pandemic. State media hailed the idea as China's "golden prescription for global challenges".

As the BRI was at the beginning, the GDI is, for now, not much more than a broad-brush vision. Officials say it will give new impetus to UN members' uphill struggle to achieve the Sustainable Development Goals for 2030 that they agreed on seven years ago. These cover a wide range of aspirations, including ending poverty and hunger, ensuring everyone has access to affordable clean energy, reducing inequality and cutting pollution.

Covid has made fulfilling many of these goals even harder. But China has not explained exactly how it will help, nor suggested how much it is willing to spend. It says it is open to others' ideas for specific

projects. Mr Xi made only a couple of commitments in his speech at the UN. He promised his country would not build more coal-fired power plants abroad (it had been fond of these) and pledged to give an additional \$3bn in aid to poor countries to help them fight covid and recover from the pandemic.

But Chinese officials clearly regard the GDI as a project of huge importance. State media still gush about the BRI, the pursuit of which was written into the Communist Party's charter in 2017 as one of its pledges. It is not being discarded. The GDI, though, is gaining much attention, too. Official newspapers call it an "expansion" of the BRI, and, like the BRI, a manifestation of "Chinese wisdom".

Mr Xi has been pushing the idea hard. He routinely raises the GDI in conversations with foreign leaders, appealing for their support. Chinese diplomats endlessly tout its virtues. They eagerly proclaim the latest tally of the number of countries that back it: about 100 so far (compared with about 150 that have signed up to the BRI). Half of them are members of a group that China launched in January at the UN called the Friends of the Global Development Initiative. Last month China's foreign minister, Wang Yi, told them that his country would soon roll out "a host of practical measures" to enact the scheme. He said China would arrange a "high-level meeting on global development at a proper time". This implies that China aims to gather world leaders to discuss the GDI.

Western countries, however, are leery ➤

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► of the scheme. The BRI has presented them with enough of a challenge. Its association with debt problems and its obvious political aim of boosting Mr Xi's prestige and China's diplomatic clout are among several drawbacks that have deterred most Western governments from signing up.

The GDI may be less focused than the BRI on building costly infrastructure, and more seemingly in tune with the Sustainable Development Goals, which the West has endorsed, too. But it also carries much political baggage. State media describe it in ways that suggest it is part of a struggle: an attempt to push back against Western notions of development, which emphasise enhancing human rights as well as securing economic progress.

Depends on your meaning

China talks up human rights, too, but its definition of the term is idiosyncratic. It says that economic advancement is itself a human right and that getting richer is a precondition for enjoying other human rights. It calls for "people-centred" development, by which it means a kind that focuses on people's material needs. When China's ambassador to the UN, Zhang Jun, said in January that the GDI was sure to make an "important contribution to the international human-rights cause", he did not mean that China would promote free speech or the right to vote.

In the West, China's efforts to promote the GDI will not be helped by its link with another project, the Global Security Initiative. Mr Xi presented this in April at the Boao Forum for Asia, a gathering in China of foreign and Chinese businesspeople, academics and officials. Chinese media call the schemes Mr Xi's "two big initiatives" of recent months. The latest one was clearly a response to the war in Ukraine. Mr Xi told the delegates that security was a "precondition" for development. He said it should involve respecting countries' sovereignty, but in a dig at NATO he also said countries should take others' "legitimate security concerns" seriously and reject any "cold-war mentality"—a veiled reference to the West's defence alliances and its pressure on China over human rights.

China may have hoped that its choice of an anodyne name for the GDI—one sounding like it was thought up by a sleepy UN bureaucrat—would help to blunt criticism. With the BRI, naming had proved a problem. To Western ears, "One Belt, One Road", as it was originally called, sounded inflexible: a China-centric view of how the world's infrastructure should be built. Apparently to help allay such concerns, the English name was changed in 2015. In Chinese, it remained the same.

But Chinese commentators describe the GDI in ways that make it sound as much a demonstration of China's global stature

as an attempt to improve people's lives. In a party journal, a senior official from the *People's Daily*, the party's main mouthpiece, said the initiative was a "rejection of self-centredness", but added: "It is China's choice for improving global governance." The initiative, the author wrote, was passing on "China's outstanding traditional culture". The article also linked the GDI to China's political ideology, saying it was using "the basic principles of Marxism" to "interpret the times, lead the times, and answer the problems of China and the times". *Red Flag Manuscript*, another official journal, said the GDI was upholding the party's "original mission": a reference to one of Mr Xi's catchphrases about the party's role as a leader of economic and social development.

To many poor countries, desperate for help after being hammered by covid, such ideological tinges may not matter much. Richard Gowan of International Crisis Group, a think-tank, says such countries may regard China as helpfully "filling a space" from which Western donors will retreat as they focus on the crisis in Ukraine. For its part, China may have seen poor

countries' anger over the West's failure to do more to deliver covid vaccines to them as "an opening" for its GDI push, says Sarah Cliffe of New York University's Centre on International Co-operation.

That little is so far known about what China plans to do with its GDI may not matter either. The BRI initially caused much puzzlement in the West, before emerging as China's biggest ever building spree abroad. The GDI is unlikely to involve anything like as much money as the BRI—not least given the parlous state of China's economy as the country struggles to crush covid. But its close link with Mr Xi means that bureaucrats will scrabble in the coming months to flesh out the idea.

Competition with the West will spur them on. Yu Jie of Chatham House, a think-tank in London, sees the scheme in part as a response to the West's efforts to challenge the BRI with its own infrastructure-building schemes such as the Build Back Better World plan announced by the G7 in June last year. Chinese officials say that by proposing the GDI, Mr Xi is giving developing countries more of a say in their affairs. The battle lines are being drawn. ■

Consumer spending

Locked down and pent up

HONG KONG

It will take time for China's consumers to recover from lockdown

IN APRIL 2020, just after China's first wave of covid-19 had passed, Hermès opened a new 511-square-metre shop selling luxury bags, scarves and jewellery in Guangzhou, the capital of Guangdong province. The store described itself as "minimalist". The response to its opening was anything but. Shoppers spent at least 19m yuan (\$2.7m) on the first day, according to *Women's Wear Daily*. One customer (the last to leave) posted online a photo of herself filling the boot of her car with shopping bags. She could not remember if she had spent 930,000 yuan or 960,000.

The Guangzhou store's big day is a widely cited example of "revenge spending" in the wake of a lockdown. The term refers to the tendency of consumers to splash out after a period of enforced abstinence—overspending in an attempt to "get even", hedonically if not financially. As Shanghai emerged from its long lockdown on June 1st, queues formed outside an even bigger Hermès store in China's financial hub. That raised hopes that shops in the city could benefit from pent-up demand.

There is no universally accepted definition of revenge consumption. It can refer

to what people buy (expensive indulgences), why they buy it (to alleviate feelings of boredom, depression or helplessness), or how much of it they buy. In principle, spending must not only get back to normal but exceed it. Indeed, to exact full revenge, the excess spending after lockdown should ►



When a cut is not a cut



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► offset the shortfall during it.

In Shanghai's case, that is a tall order. Retail sales fell by almost half in April, compared with a year earlier. From that low point, sales would have to grow by almost 100% merely to get back to normal. For sales to exceed normal by as much as they fell short of it during the lockdown, they would have to grow by roughly 200% from trough to peak.

In some categories of spending, such as cars, refrigerators and other "durable" consumer items, a fairly complete recovery is imaginable. Those who were not able to buy in April or May could make their purchase in the summer instead, provided they kept their jobs. That could leave annual sales close to where they would have been without the lockdown. To encourage this kind of catch-up buying, Shanghai's government has increased the quota of new car number plates it will allow this year by 40,000. It has also offered subsidies for the purchase of electric vehicles and "smart" appliances.

But in many other categories, including services and perishable goods, consumption has been forgone, not merely postponed. "My hair has not been trimmed for three months," said Sheng Songcheng of China Europe International Business School at an economic forum last month. "After the lockdown is lifted, it is impossible for me to trim my hair three times a month. This lost consumption will be lost forever." The same is true of gym trips, restaurant meals and weekend revelries. People cannot have thrice as many workouts, lunches, or weekends to compensate.

Since one person's spending is another's income, weak consumption has also hurt jobs and pay. Unemployment in China's biggest cities now exceeds its rate in early 2020. Morgan Stanley's survey arm, AlphaWise, asked more than 2,000 urban Chinese about their job situation. Over a quarter said they or a relative had received a pay cut in the past month.

Moreover, the lifting of lockdown has

not entirely lifted people's fears. The consumer expectation index by the National Bureau of Statistics fell to 87 in April, by far its lowest point since the data began in 1990. (Below 100 denotes pessimism; above, optimism.) The worst reading during the pandemic's first wave was 115. When asked about their spending plans, more people say they will cut spending than say they will increase it (see chart). The only exceptions are spending on groceries and education, as people stock up their larders and minds. There is "permanent scarring on consumer behaviour", says Robin Xing of Morgan Stanley.

China's state-news bulletins still dwell on covid deaths abroad. That helps cast a favourable light on China's own containment policies, but hardly lifts the mood. Those who are no longer scared of the virus are frightened of the lockdowns that follow in its wake. In the most recent AlphaWise survey, respondents were asked to list their top concerns for the year. Forty-five percent said "a relapse of covid-19 in my community". China has vanquished a serious Omicron wave. But the virus could still come back with a vengeance. ■

State media amplify Chinese nationalists who accuse LGBT groups of serving hostile foreign forces and corrupting young people. Last year the top media regulator banned portrayals of "effeminate" and "sissy" men. This year it banned "boys' love" dramas, a popular genre of shows featuring subtly romantic male friendships. The education ministry has called for strengthening physical education to "cultivate masculinity" and prevent the "feminisation" of boys.

These policies reflect a belief among China's leaders that sexual orientation can be socially engineered, says Darius Longarino of Yale University. "The party is afraid that forces outside its control had been changing the cultural landscape so much that it was going to change the sexual orientation or gender of China's youth." Now it wants to make young people "normal" and "healthy" according to its own vision, says Mr Longarino.

Another potential avenue is conversion therapy, which is still legal, despite the efforts of Peng Yanzi, an activist. Mr Peng voluntarily underwent hypnotism and electric shocks intended to "cure" his homosexuality. In 2014 he sued the clinic and won, receiving an apology. The ruling, which stated that same-sex attraction is not an illness, received sympathetic media coverage. For a time it seemed as if things might improve for gay people in China.

But the case did not change the law, which discounts the rights of sexual minorities. Mr Peng's group, LGBT Rights Advocacy China, closed last year amid pressure from the authorities. Today there is much less discussion of LGBT issues. "Everyone is living in a state of silence," says Mr Huang (who lives in New York).

His voice, though, broke through. "Will You Look at Me" was not released in China, but it has been pirated and shared online. On Douban, a Chinese film site, it has received thousands of positive reviews. ■

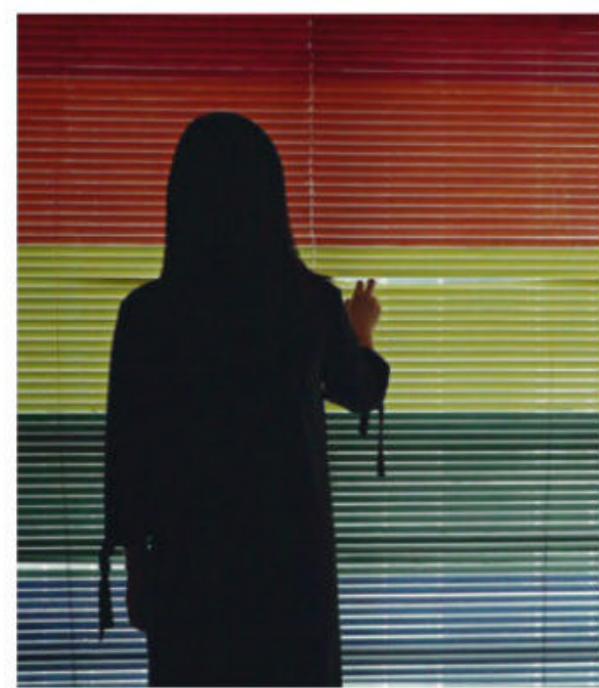
Being gay in China

Pride and prejudice

Life is getting harder for sexual minorities

"WHY DID I give birth to a monster?" asks the mother of Huang Shuli in his award-winning documentary short film, "Will You Look at Me". Mr Huang, who grew up in the coastal city of Wenzhou, has filmed his mum tending her garden, picking flowers and swimming in the wild. There are several dreamy shots of her smiling when she sees him. The audio, though, is from an anguished conversation between the two about his homosexuality.

It was never easy to be gay in China, where the government cares little about the rights of sexual minorities. LGBT activists were allowed some space in the early years of President Xi Jinping's reign, even as he crushed other parts of civil society. Last year, though, LGBT societies at several universities saw their social-media accounts closed for unspecified violations. Groups pushing for more inclusion have shut down, with members citing an increasingly hostile environment. June is celebrated as "pride month" in parts of the world, but China's only big LGBT celebration, Shanghai Pride, has not occurred since 2020, when police interrogated several of its organisers.



A darkening mood

From barbecue lover to award-winning restaurateur.

Tay learned how on YouTube.

Tay loved barbecue, but didn't know how to cook, so he learned how on YouTube. Today, his restaurant, Bobby's BBQ & Seasoning, has created dozens of local jobs and draws barbecue lovers from across the country.



For more on how people are growing careers and business opportunities with YouTube, visit yt.be/impact



Chaguan | Hotheads threaten a cold war

China's deep distrust of America and the West is making it reckless



IT IS ALMOST too polite to call the deepening rivalry between China and the American-led West a new cold war. The original cold war between America and the Soviet Union was grimly rational: a nuclear-armed confrontation between hostile ideological blocs which both longed to see the other fail. For all their differences, China and Western countries profit vastly if unevenly from exchanges of goods, people and services worth billions of dollars a year. Their respective leaders know that global problems from climate change to pandemics or nuclear proliferation can only be solved if they work together. Yet increasingly, interdependency is not enough to stop one side—often China, but not always—from starting reckless disputes rooted in suspicion of the other.

A dismaying case in point involves fighter jets of China's People's Liberation Army (PLA), which have in recent months staged dangerous, high-speed passes to intimidate Western military aircraft in international airspace near China. Chinese pilots have flown so close that diplomats from America, Australia and Canada have lodged formal complaints with officials in Beijing. Western governments recall the crisis caused by a Chinese pilot who died after colliding with an American spy plane over the South China Sea in 2001. Going public, Australia's defence minister accused a PLA jet of cutting in front of one of its maritime-surveillance aircraft in the same area on May 26th, before releasing "chaff"—tiny metal-coated strips meant to confuse radar—that were sucked into one of the Australian plane's engines. For its part, Canada accuses Chinese fighter jets of endangering one of its maritime-patrol aircraft flying out of Japan. Canadian officials note that their plane was on a month-long mission to detect North Korean smuggling, including ship-to-ship fuel transfers at sea, in support of United Nations sanctions designed to deter North Korea from developing nuclear missiles. These are sanctions that China approved as a permanent member of the Security Council. China's actions "are putting people at risk while at the same time not respecting decisions by the UN", said Canada's prime minister, Justin Trudeau.

These mid-air interceptions are worrying evidence of the PLA's appetite for risk. But defences offered by the Chinese government point to a still larger problem. Chinese distrust of America and its allies is so deep that the two camps do not agree about even basic

principles. When America and Western powers try to discuss rules to ensure safe encounters in international waters or skies, China's response is to growl that foreign warships and planes should stay far from its shores. Its foreign ministry, which has promoted spokespeople who thrill nationalists with shows of contempt for the West, questions the legitimacy of surveillance missions, though these are normal for advanced armed forces, as when a Chinese spy ship loitered 50 nautical miles (93km) from an Australian military communications base last month. Zhao Lijian, a pugnacious foreign-ministry spokesman, said that Australia's aircraft "seriously threatened China's sovereignty and security", and called China's response "professional, safe, reasonable and legal". The defence ministry accused Canada of using sanctions as a pretext for "provocations against China" and noted that UN resolutions on North Korea offer no mandate for anti-smuggling operations.

Take a step back, and the row reveals how China and the West doubt one another's sincerity when it comes to ridding the Korean peninsula of nuclear weapons. The UN's nuclear watchdog, the International Atomic Energy Agency, warned on June 6th that the first North Korean nuclear test since 2017 may be imminent, noting activity at a test site. Markus Garlauskas of Georgetown University in Washington was America's national intelligence officer for North Korea from 2014 to 2020. He calls Chinese "obstructionism" over sanctions enforcement "exactly the wrong message" to send to North Korea at such a moment. Last month China and Russia vetoed an American-drafted UN resolution tightening sanctions on North Korea after it tested ballistic missiles. Western diplomats worry that a rare area of agreement with China—a shared concern about a nuclear-armed North Korea—is crumbling.

Such mistrust is mirrored in China, whose diplomats scold America for failing to offer any incentives for North Korea to return to the negotiating table, after failed summit meetings between Kim Jong Un, the North Korean leader, and Donald Trump, the president at the time. Zhao Tong, a Beijing-based disarmament expert with the Carnegie Endowment for International Peace, a research institute, reports that a growing number of Chinese scholars suspect that America "doesn't want to resolve the North Korean nuclear problem". Such scholars believe that America is using the threat from North Korea to rally South Korea and Japan behind its true goal, namely containing China, says Mr Zhao.

Close encounters of the reckless kind

China faces unwelcome choices, says Li Nan, an expert on North Korea at the Chinese Academy of Social Sciences. He reports that North Korean officials yearn for a cold war in Asia, believing that Russia and China would take their side, wrecking the long-standing Chinese policy of seeking balanced relations with North and South Korea, which is an important Chinese trading partner. He says that China is anxious to avoid an ideological division of Asia, which would push South Korea and Japan even closer to America. Indeed, China still supports UN sanctions on North Korea, insists Mr Li. In his telling, China sees Korean disarmament as an area for co-operation with America, but is losing hope that North Korea is a priority for Joe Biden, America's president.

The prospect of North Korea fielding nuclear missiles that can hit far-off continents—a nightmare that brought China and the West together at the UN as recently as 2017—is no longer enough to build trust. Meanwhile, the PLA tries to use fear to put Western powers in their place and show that China plays by different rules. It is not a cold war yet. But hotheads are courting disaster. ■



Xenophobia in South Africa

The death of a pan-Africanist dream

DIEPSLOOT AND ROBERTSON

For African migrants in South Africa, life is increasingly perilous

IT COULD HAVE been me," says Dumisani, a Zimbabwean living in Diepsloot, on the northern outskirts of Johannesburg. On April 7th a mob of South Africans beat and burned to death his fellow countryman, Elvis Nyathi, after tearing through the township demanding to see migrants' identity documents. "South Africans are frustrated and they are taking it out on foreigners," says Dumisani (whose name has been changed). Ever since the lynching he struggles to sleep at night, fearing that vigilantes will come for him. "I'd rather be confronted by the police or Home Affairs than these guys."

During apartheid South Africa had what scholars call a "two-gates" immigration policy. White foreigners came through the front gate, receiving residency rights and incentives like subsidised housing. Africans were shown the back gate, with temporary entry tied to specific jobs and no pathway to citizenship. (Black South Africans were in effect denied full citizenship, too.) After the shift to democracy in 1994, Nelson Mandela's government allowed people from the rest of the continent to

come through the front gate. That formalised South Africa's role as a hub for African economic migrants and asylum seekers.

The current spasms of xenophobic violence in places such as Diepsloot are not the first. Xenowatch, a research consortium, estimates that 623 people have been killed and 123,000 forced to leave their homes since 1994. The vast majority of victims are Africans, who make up about three-quarters of the estimated 4m immigrants in the country of 60m. Most of the incidents took place in the past decade.

But two things distinguish the latest episodes. First is the influence of vigilante groups such as Operation Dudula ("push back" in Zulu), which organise marches in townships and use social media to amplify their vitriol. The second is the level of po-

litical support for anti-migrant policies. As the African National Congress (ANC) confronts the probable loss of its electoral majority in 2024, the ruling party is blaming foreigners for its own failures. Meanwhile, many opposition parties blame the ANC for allowing the foreigners to ruin the country in the first place. The pan-Africanism of Nelson Mandela is being drowned out by a xenophobic cacophony.

Politics dovetails with public opinion. In a report published in 2020 by Afrobarometer, a research group, the share of respondents who would dislike having foreigners as neighbours was higher in South Africa than in all but three of the other 33 African countries polled (see chart 1 on next page). Analysis by the Human Sciences Research Council (HSRC), a think-tank, finds that 46% of South Africans see migrants as "violent", 48% view them as "dishonest" and just 28% think that migrants are "good people" (see chart 2).

In another poll from 2021 around 3% of South Africans said they had taken part in "violent action" against foreigners in their neighbourhood in the past year—and almost 10% in "the more distant past". A further 12% said they might do so. South Africans are becoming more forthcoming about such views, says Steven Gordon of HSRC, a sign that "this form of violence is becoming more socially acceptable."

David Mabusela, who works for a Methodist church in Diepsloot, claims without evidence that "the majority of the crimes being committed are by Zimbabweans." ▶

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50 Gulf cities in the sea

► Ephraim Thobojame, also from Diepsloot, says that he is keen to join a vigilante group: "Operation Dudula is the only one listening to us."

In South Africa crime is high and the police are woeful. Academic evidence does not, however, support the public's perception of crime-causing migrants. The foreign-born are less likely than locals to be in prison. A study in 2018 concluded there was no link between the share of foreigners in a municipality and the rates of four of five common types of crime (the exception was property crime). The connection was stronger between crime and the proportion of internal migrants, ie, people from other parts of South Africa.

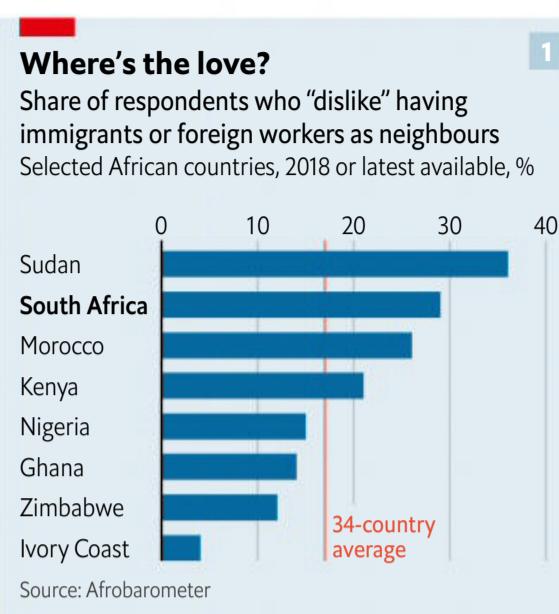
Migrants are often victims of crime, including at the hands of police. At an Ethiopian restaurant in Diepsloot the smell of roasted coffee wafts through the room. A cow carcass hangs from a hook ready to be diced into *kitfo* (raw beef with chili). It is a gathering place for the Ethiopians who, with Somalis and migrants from South Asia, run the convenience ("spaza") shops in many townships. All of the merchants describe abuse and extortion by police officers. Habitwold Shigute says that cash and goods worth 33,000 rand (more than \$2,200) were taken from his shop last year, on the spurious grounds that the items were counterfeit. "You work for ten years and you get looted in ten minutes," he says.

Overworked and over here

If not literally seen as robbers, migrants are viewed as stealing jobs. In 2021 just 22% of South Africans disagreed with the statement: "Immigrants take jobs away from people who were born in South Africa," according to the HSRC. "We're the ones who are suffering," says Mr Thobojame, outside his shack in Diepsloot. "Our politicians lie. They said they'd create jobs, but they always create jobs for foreigners."

In a country with an unemployment rate of 35%, such views are perhaps unsurprising. But again the evidence belies public opinion. The OECD, a club of mostly rich countries, reckons that immigrants increase South Africans' employment rates and incomes. The World Bank found that for every job a migrant got between 1996 and 2011, two were created for locals.

Evidence has not quietened South Africa's politicians, however. ActionSA, a party founded in 2020, won 16% of the vote in Johannesburg in local elections last year, partly because of its hard line on immigrants. The Economic Freedom Fighters, a hard-left offshoot of the ANC, claims to be a pan-African party. But as its poll ratings have flatlined, it has embarked on Dudula-style stunts such as marching into restaurants and checking workers' papers. Xenophobia is also found in ethnically-based parties such as the Patriotic Alliance,

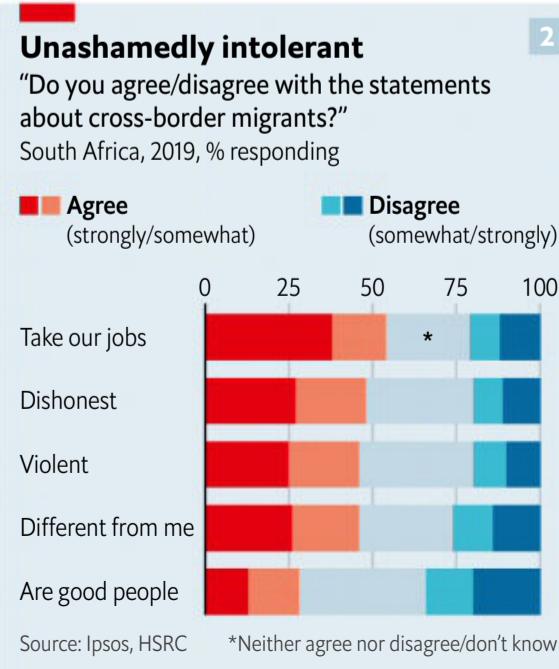


which mostly appeals to so-called "coloureds" (people of mixed race). Its leader has called for "Mass deportations now!!!"

President Cyril Ramaphosa has likened vigilantes to "apartheid oppressors". But his government is making it harder for migrants to live legally in the country. Visa applications that used to take weeks now drag on for many months. Processing of asylum claims has ground to a halt. A porous border and corrupt officials make it easy to cross illegally. Long-awaited legislation meant to simplify migration is being written by securocrats, who have more sway than government economists.

Zimbabweans, who make up about a quarter of migrants, according to the UN, face a particularly uncertain future. After an exodus prompted by hyperinflation and political violence in Zimbabwe in the late 2000s, South Africa gave large numbers of Zimbabweans permission to stay. This will be withdrawn at the end of the year. Migrants will suffer, as will relatives back home who rely on their remittances. The policy will also affect South Africans, and not in the way the government expects.

For a glimpse of what might happen, consider Robertson, a farming hamlet 160km from Cape Town. In March a protest



by South Africans against farmers hiring Zimbabweans was hijacked by migrants from Lesotho, who later attacked their fellow southern Africans. They said people from Lesotho were being denied jobs picking fruit and vegetables. Hundreds of Zimbabweans fled the Nkqubela township in fear for their lives. Since the incident and a corresponding media storm the authorities have cracked down on farmers' use of Zimbabwean labour, on the grounds that many workers have fake or expired visas. (Some Zimbabweans admit to using forged documents but others say they are within the grace period of their permits.)

"There's no work now," says Onward Ngezvenyu, a Zimbabwean. Many of his fellow countrymen are packing their bags. Others want to stay until they have enough money to build a house back home. Mr Ngezvenyu stresses that were it not for ZANU-PF, Zimbabwe's tyrannically inept ruling party, he would not be in South Africa. "We don't want to be here. We want to work next to our family. We want to be near our kids, to help them with their homework."

Away from home truths

Farms are scrambling to hire new workers. Grant Smuts, a third-generation farmer, says he employs just 5% of the Zimbabweans he did a few months ago, after an unannounced inspection by more than a dozen government officials in April. He suspects that many who worked on his farm did so illegally, but argues that it was the role of labour brokers to check paperwork. "There are not enough South Africans in Robertson to furnish the work required," he says. What is more, "Zimbabweans are more productive and willing to work." A kilo of tomatoes that used to cost 50 cents to harvest now costs twice that, because of the lower productivity of locals.

"If we can speak the honest truth, local people are lazy people," says Thamsanqa Julius Rum, a resident of Nkqubela. Many South Africans in the township rely on the money they get from renting tiny bits of their backyards to Zimbabweans for 500 rand per shack, with an extra charge for wives and children. "They pay a lot of money for rent," he says. "If the Zimbabweans leave it will be a problem."

On a walk around Nkqubela, Lennox Mase, a local pastor, points out the electricity cords that run from plugs in South Africans' houses to Zimbabwean or Basotho shacks. South Africans do not pay their own electricity bills but they insist that migrants cough up, he notes. "The township taverns are full of young South Africans. You don't find any foreigners there." He tells of a Zimbabwean friend who works on Sundays rather than attending his church. "Lennox, when I'm back in Zimbabwe I'll be a Christian on Sunday," his friend tells him. "Now I need to work." ■

Education in Africa

Golden tickets

A Nobel prize-winning economist sees big benefits in “scripted” schools

IN AN IDEAL world, primary-school teachers in Africa would all be well-educated, highly motivated and dreaming up lessons that zing. In reality many of the continent's educators need support. For several years low-cost private schools run in several countries by NewGlobe, a profit-seeking firm, have used radical means to keep lessons to a consistent standard.

NewGlobe insists that teachers deliver tightly scripted lessons written by a central team and sent to them on electronic tablets. The instructions lay out exactly what to write on the blackboard and even when to walk around the classroom. Similarly detailed plans dictate the daily checks head teachers must carry out in order to make sure their staff are up to scratch.

Research published in a working paper on June 6th suggests that this highly standardised approach to schooling may have been serving pupils well. The study—by Michael Kremer, a Nobel prize-winning economist, and colleagues at four American universities—tracked more than 10,000 children who applied for free places at NewGlobe schools that were distributed by lottery in Kenya in 2016. (NewGlobe's schools are better known by the brand name Bridge International Academies.)

After two years, children who won those places were found to have learned oodles more than applicants who missed out and went to government schools. For pupils of primary-school age, the gain was equivalent to almost a whole additional year of schooling. Toddlers who won places in pre-primary classrooms ended up one-and-a-half years ahead of their peers. The improvement in grades was particularly good for children who had performed badly in tests before they joined. On average such pupils learned more over two years than those who were already doing well elsewhere.

These gains are off the charts and among the largest recorded in any rigorous study, according to the authors. They seem to have come at a relatively low cost. At the time of the study only about a quarter of NewGlobe's teachers in Kenya had more than a secondary education, compared with three-quarters of those in public and other private schools. They earned between one-third and one-fifth as much as government teachers.

The high marks awarded to NewGlobe are especially striking, given the contro-

versies that have long dogged the firm. Since its first school was founded in 2009 it has faced ferocious opposition from trade unions and international NGOs, many of which hate the idea of profit-seeking schools. They say the company devalues good teaching, promotes rote-learning and has played fast and loose with national curriculums. Their campaigns have made it harder for NewGlobe to fill its private schools; in recent years it has closed a lot of them. Since Mr Kremer and his colleagues began their study, the number of branches in Kenya, its first and biggest market, has fallen from 405 to 111.

The new research may have come too late to pep up NewGlobe's private-school business, which its bosses seem to have given up trying to expand. But the findings will bolster its new strategy: selling to local and national education authorities the tools and training they need to run schools along the lines that its own institutions have demonstrated. It is already working with governments in three Nigerian states and has recently been hired to do something similar in Rwanda.

Whether NewGlobe's methods will yield the same success outside Kenya, especially in government schools over which it has little or no direct control, is an open question. A study of 23 government-funded schools that NewGlobe took over in Liberia in 2016 found that they were expensive to run and that their pupils benefited less than those in Kenya. Other old-school education providers in that study taught children more cheaply than NewGlobe did and got better results.

Africa's dismal education systems require urgent attention. Good ideas for fixing them at scale are rare. Governments and researchers would be wise to keep putting scripted schooling, however controversial, to the test. ■



Sticking to the script

An interview with Israel's prime minister

Bolder abroad, embattled at home

JERUSALEM

How Naftali Bennett plans to keep his country safe and his coalition afloat

“WE ARE IMPLEMENTING the Octopus Doctrine,” says Naftali Bennett, Israel's prime minister. “We no longer play with the tentacles, with Iran's proxies: we've created a new equation by going for the head.” Talking to *The Economist* after nearly a year in office, he explains how Israel and its covert services are raising the stakes in the shadowy war they have waged with Iran for nearly four decades.

In the past Israel aimed its attacks on Iran almost exclusively at its nuclear programme and scientists connected with it. When Israel hit other Iranian targets, such as the Islamic Revolutionary Guard Corps (IRGC) and its expeditionary Quds Force, it tended to do so in third countries, such as Syria. Now it is attacking the IRGC inside Iran as well. In February it struck a factory making drones for the Guards in western Iran. In May it assassinated one of their commanders in Tehran, Iran's capital.

Israel is becoming less coy about such attacks. Previously it nearly always refused to acknowledge operations in Iran. Now senior Israeli officials often give off-the-record briefings, sometimes only hours after Iranian targets have been hit. In April Mossad, Israel's foreign-intelligence agency, even aired a recording of a revolutionary guard being interrogated by Israeli agents, supposedly inside Iran.

Not all members of Israel's security establishment are happy with this brash new approach. Some intelligence veterans are said to have grumbled that “poking Tehran in the eye” will cause more trouble than it is worth. Mr Bennett himself sticks to the official line that Israel does not directly take responsibility for any specific operation in Iran but says he is convinced that “the Iranians are much more timid than you think” when it comes to reacting to Israeli audacity. Clobbering them directly will yield good results, he reckons. He fully approves of these bolder tactics.

Will this deter Iran and its proxies from attacking Israeli targets? He notes with satisfaction that Hezbollah, an Iranian-backed Shia political movement-cum-militia in Lebanon, and Hamas, an Iranian-backed Palestinian Islamist group that runs the Gaza Strip, have not launched rockets against Israel in the past year.

Mr Bennett also hopes that these brazen attacks may prompt Iran to accept a tighter version of the nuclear agreement signed with four Western powers plus China and ▶

► Russia in 2015, from which America withdrew in 2018 under President Donald Trump. Though President Joe Biden says he wants to revive that deal, talks with Iran have not yet yielded a formula for doing so. Mr Bennett argues that Iran's economy is in such dire need of relief from sanctions that if America plays tough it may be able to reach an agreement that freezes Iran's nuclear development indefinitely. (The original pact has "sunset clauses", whereby curbs on Iran lapse after a time.)

Israel, according to Mr Bennett, seeks to outspend Iran in its weapons programmes and outmatch it in technology—in the hope of bankrupting it. Mr Bennett calls this ploy "a financial Star Wars", alluding to America's development of missile defences in the 1980s which, in Mr Bennett's view, forced the Soviet Union in its dying days to accept agreements on arms control with America. In the same vein, Israel is planning a laser-defence network. At a later stage, he says, this may be broadened into a regional missile-defence umbrella that could also protect Israel's new Arab allies in the Persian Gulf.

Yet this offensive against Iran does not seem to have given Mr Bennett a political boost at home. His unwieldy eight-party coalition, which for the first time includes an Islamist Arab party, is coming apart at the seams. It has lost its majority in the Knesset, Israel's parliament. Its components agree on very little. The main reason for its creation was to dump Israel's previous prime minister, Binyamin Netanyahu. It never had much more of an agenda to bind it together.

As leader of the opposition, Mr Netanyahu is still plotting a comeback. He is unlikely to find enough supporters in the Knesset to form a new government. But he needs only one more defector from the governing coalition to force an election. Israel suffered three elections in 2019-20, as neither Mr Netanyahu nor his opponents were able to form a government. It was only after a fourth, a year ago, that Mr Bennett managed to cobble together his coalition. Opinion polls suggest that a fifth poll may at last yield a majority for Mr Netanyahu and his allies.

Mr Bennett, whose own party has only six seats in the 120-strong Knesset, admits there is little he can do to stop his government from disintegrating, bar an appeal to his partners "not to fall off track, back into the chaos of elections". Still, he gamely hopes to "continue for another month, and then another". At least, he claims, "we've shown Israel how a normal country looks for the past year." But his laudable "experiment" of including an Arab party in government has, he laments, enabled Mr Netanyahu to activate a "machine of poison and lies" that brands the coalition as "relying on terror supporters". ■

Land reclamation in the Gulf

Cities in the sea

MANAMA

Artificial islands are costly and often bad for the environment

ACENTURY AGO the site of Bahrain's land-registration bureau was not on land. Like a good bit of the country, it has been reclaimed from the sea. Bahrain's eagerness for such projects is easy to understand: its natural land area is just 665 square kilometres (257 square miles), over half the size of Greater London. The south is mostly desert, good for oilfields, military bases and little else.

Since the 1960s Bahrain has added more than 11% to its land area through reclamation, says Mohammed Al Khalifa, the head of the property regulator. It may soon add much more. Last year Bahrain said it would build five new cities on reclaimed land. "We're surrounded by shallow waters, so it doesn't take much to do reclamation—it's like a bathtub."

The plan is still aspirational, with officials yet to secure funding or draw up blueprints. If it comes to pass, it will expand the country by more than half its current size. Yet land-reclamation projects, in Bahrain and elsewhere in the Gulf, come with a slate of environmental and economic concerns—and perhaps even existential ones.

If Bahrain has built out of necessity, other Gulf states do it out of choice. Palm Jumeirah, a collection of islands shaped like a palm tree, is one of Dubai's most iconic features. Abu Dhabi dredged the coastline to create attractions like Yas Island, home to theme parks and fancy hotels. Saudi Arabia has plenty of empty land; yet it still wants to build something

called the Oxagon, an eight-sided floating industrial city in the Red Sea. Developers say they try not to harm the environment. But scientists and locals worry. Fishermen in Bahrain say land-reclamation has damaged their livelihoods by depleting fish stocks, forcing them to work farther out at sea. This annoys neighbouring Qatar, which regularly detains Bahraini boats that sail into its waters.

A study found land-reclamation projects shrank the number of mangroves in Tubli Bay, off Bahrain's east coast. Using satellite imagery, another group of researchers concluded that the Palm increased average water temperatures by 7.5°C over 19 years, which is bad for reefs and hurts some marine life.

These schemes can also be bad for investors: buying property on an artificial island is the ultimate off-plan sale. When the first residents of the Palm moved into their villas, they discovered the properties occupied less land than promised: developers had to squeeze in more of them to recoup building costs.

At least they were built. Dubai has a second palm-shaped archipelago near the main port, 19km south-west of its better-known cousin. Workers started construction in 2002, but the financial crisis of 2008 put a stop to it. Two decades on, the second Palm remains a featureless expanse of sand.

Then there is The World, the sort of project you would conceive if you read Percy Shelley's poem "Ozymandias" as a how-to guide. Nakheel, the developer, spent billions to create 300 islands in the rough shape of the world map. Then the financial crisis hit. Today there is a glitzy resort around "Tierra del Fuego", and a beach club in "Lebanon", but most of The World is as barren as the moon.

Climate change menaces the Gulf's artificial lands, just as it does all waterfront property. The Palm was designed to handle a 50cm rise in sea levels. Researchers at the University of Tehran have estimated that Gulf waters could rise 84cm by the end of the century.

No one has ever recorded a cyclone in the Persian Gulf. But a study published in *Nature Climate Change* in 2015 concluded that they are no longer inconceivable. Last year Cyclone Shaheen made landfall in Oman, the first of its kind to do so in at least a century. What man raised from the sea, the sea may take back.



Will Palm spring eternal?



French parliamentary elections

Damage control

PARIS

Emmanuel Macron's majority is on the line

FIVE YEARS ago, a wave of political debuts surged into the French National Assembly. A teacher from Strasbourg, an entrepreneur from Lyon, a farmer from Brittany, a fireman from western France: all these, and many more, won seats for Emmanuel Macron's centrist party, then called La République en Marche. With allies it bagged 60% of the lower house of parliament, marking a wholesale clear-out that lowered the average age of deputies and filled the assembly with women.

Today, however, it is Mr Macron's party that faces an insurgency at the ballot box, which could deprive the re-elected president of his majority and put a stop to any further plans for reforms. On June 12th and 19th voters will elect a new parliament. Nationally, the polls put Ensemble, Mr Macron's centrist alliance, neck-and-neck with Jean-Luc Mélenchon's new radical-left grouping NUPES, which includes the Socialists, Communists and Greens. Under the two-round first-past-the-post system, Mr Macron's alliance is likely to remain the biggest. NUPES looks set to replace the centre-right Republicans as the main opposi-

tion, grabbing at least three times as many seats as both that party and Marine Le Pen's National Rally. Mr Mélenchon is unlikely to win a majority. But polls suggest that the president could lose his, with a shortfall of anything from 14 to 39 seats.

By swallowing the moderate left, the 70-year-old wisecracking Mr Mélenchon, who admires Venezuela's Hugo Chávez and wants France out of NATO, has forged a potent left-wing movement that has achieved uncommon unity. It appeals in particular to the green-minded, the city-dwelling and the young: 44% of 18- to 24-year-olds back him. This time it is Mr Mélenchon who is fielding the boldest novices, including a baker in eastern France and a chambermaid near Paris. Although he is not even running for re-election, he has also deftly framed the debate around the role he fancies for himself: as Mr Macron's prime minister. "What will you say to him when you turn up at the Elysée on day one?" asked a radio host.

Sensing this threat, Mr Macron last month named as his new prime minister Elisabeth Borne, an engineer and civil ser-

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vant who has built her career working for Socialist politicians. Her nomination itself will win few votes on the left, but it marks a shift after Mr Macron's two previous prime ministers, each of whom hailed from the centre-right. Ms Borne has promised a "food cheque" for the low-paid and other measures to shield the French from inflation. The president has borrowed Mr Mélenchon's core idea of "green planning" to underpin policymaking. Mr Macron has also named as his new education minister Pap Ndiaye, a historian who has written a lot about race and discrimination.

Much done, much still to do

Mr Macron enjoys sweeping powers under the French constitution, including the right to pass laws with minimal parliamentary oversight and to appoint the prime minister. But, politically, he still needs a working majority to finish what he started in his first term. This includes a reform of the pension system, which would increase the retirement age from 62 years to 64 or 65. At stake in the parliamentary vote, in other words, is whether Mr Macron can continue as an economic reformer and moderniser of the French welfare state.

The answer will be a firm no if Mr Mélenchon pulls off a surprise and secures a majority. Mr Macron has hinted that he would refuse to name him prime minister. But he would find it extremely hard not to—just as Jacques Chirac, a Gaullist, appointed Lionel Jospin, a Socialist, after losing his majority in 1997. In the job Mr Mé-

▶ Mélenchon would seek to reverse most of Mr Macron's reforms, which have encouraged private investment and job creation. He promises, among other things, to reduce the pension age to 60 years, undo liberalising labour-market reforms, restore the wealth tax, and increase the net minimum wage by 15% to €1,500 (\$1,600) a month. Two of his candidates in Paris invited Jeremy Corbyn, Britain's radical former Labour leader, to campaign with them.

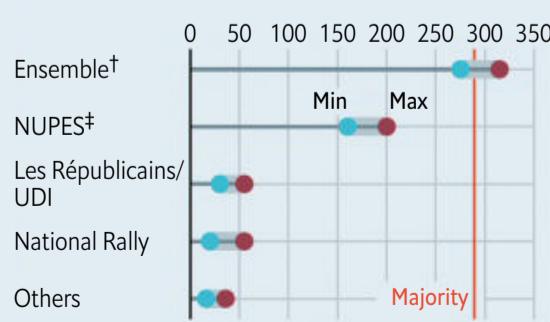
Still, the chances are that Mr Macron either holds on to a shrunken majority, which would enable him to press on, or loses it, which would spell trouble. The president would then need either to stitch together a voting majority with unaligned deputies, or seek a formal coalition. Yet, having crushed the mainstream parties with his centrist bloc, Mr Macron finds himself alone against the extremes, with few options; the centre-right Republicans show little interest in helping him.

The campaign has failed to stir enthusiasm. "People think that the legislatives are just a vote of confirmation, to give the president a majority, which isn't very motivating," says Mathieu Gallard, of Ipsos, a pollster. Indeed, by keeping the campaign low-key Mr Macron may have hoped to set up the vote as the natural sequel to the presidential result. Yet the upshot so far has been more of a sense of drift. This has allowed Mr Mélenchon to set the agenda, and damaging events, such as the policing fiasco at a recent European football final, to dominate. "Every seat will be a fight," says one of Mr Macron's deputies. The government is on the line. Ministers who fail to get elected, including Ms Borne, who is standing in Normandy, would have to go.

Mr Macron has form defeating the extremes. There is plenty to deplore in Mr Mélenchon's manifesto, not least its pledge to breach parts of European Union law or to phase out French nuclear energy. During the presidential campaign Mr Macron clinically exposed the contradictions of Ms Le Pen's promises. Now he needs to do the same to Mr Mélenchon's. ■

On the cusp

France, forecast National Assembly seats
Based on polling* for 2022 legislative election



*Polled June 3rd-6th 2022 †Renaissance (formerly La République en Marche) & centrist allies #La France Insoumise, Greens, Socialists and Communists
Source: Ipsos

Turkey

Erdogan's war on everyone

ISTANBUL

Turkey's president prepares for elections

A COURT SENTENCED Canan Kaftancioğlu to nearly five years behind bars and banned her from politics. Her crime was to have posted messages deemed insulting to Turkey's president, Recep Tayyip Erdogan, on social media several years ago. She was transferred to prison on May 31st but immediately released on probation. Her case, she says, shows what Turkey's opposition can expect over the coming months. She is a politician from the main opposition Republican People's Party (CHP). The court system is beholden to Mr Erdogan, she says. "The courts decide on the basis of what passes through the lips of the man in the palace."

The presidential and parliamentary elections Mr Erdogan faces next year look set to be the toughest of his long career. The official inflation rate has now topped a staggering 73%. The true figure may be in triple digits. Opinion polls suggest that most Turks have no faith in the country's statistics agency. And even more pain may be in store. Turkey's currency, which recovered at the start of the year thanks to the introduction of a deposit-insurance scheme and sales of dollar reserves by the central bank, is now bracing for another crash landing, following Mr Erdogan's promise of new interest-rate cuts.

The Turkish leader's election strategy is starting to come into focus. With the economy beyond repair, at least with the current monetary-policy settings in place, Mr Erdogan has decided instead to search for monsters to destroy, abroad and at home. Dressed up as a war on terror, a new wave of repression is gathering steam.

Leaders of the country's biggest Kurdish party, the Peoples' Democratic Party (HDP), including Selahattin Demirtas, a former presidential contender, have already spent years in prison on trumped-up terrorism charges. Turkey's constitutional court may soon close down the HDP as a whole, citing links to the PKK, a banned terrorist organisation. The courts are also starting to go after CHP heavyweights. Mrs Kaftancioğlu will not be the last. Ekrem Imamoglu, the mayor of Istanbul and one of the opposition politicians best placed to unseat Mr Erdogan at the next election, according to polls, may well be next. Prosecutors have accused Mr Imamoglu of the heinous crime of insulting the officials who overturned his victory in the 2019 mayoral vote and ordered a repeat, which he then also

won, by calling them "fools". A verdict in his case is expected in September. If found guilty, he faces up to four years in prison and a ban from politics.

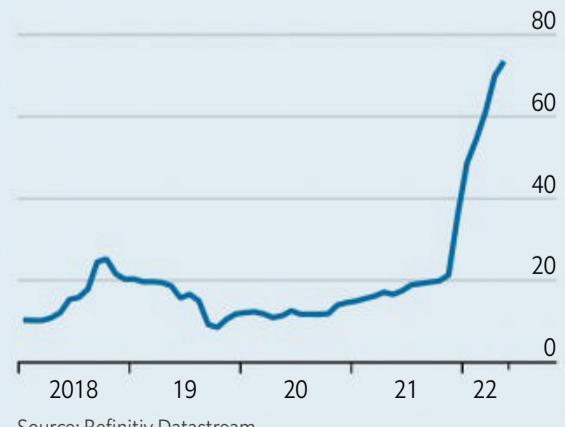
Mr Erdogan has also made clear that he will not tolerate any popular unrest. On June 1st, the anniversary of the mass demonstrations that erupted across the country in 2013, he called the protesters "terrorists" and for good measure, "sluts". Weeks earlier, a Turkish court had convicted seven activists who took part in the same protests of plotting to overthrow the government and sentenced them to 18 years in prison. Osman Kavala, the philanthropist whom prosecutors made out to be the group's ringleader, was sentenced to life behind bars.

Mr Erdogan has also been banging war drums, warning of a new offensive against Kurdish troops, whom Turkey considers terrorists, in Syria. A successful invasion would link up areas Turkey captured in three previous offensives, giving its troops, flanked by thousands of Syrian Arab mercenaries, control over a 650km long strip of northern Syria. The decision may hinge on approval from Russia, which backs the Kurds and has some troops in the area. Vladimir Putin may be too bogged down in Ukraine to oppose the incursion. He might also be tempted to offer Mr Erdogan a green light in Syria as a token of appreciation for his pledge to block Sweden's and Finland's accession to NATO.

Officially, Turkey's president is upset with Sweden and Finland for refusing to extradite a handful of Kurdish militants, a septuagenarian human-rights activist, and followers of the Gulen movement, a sect Turkey blames for a violent coup attempt in 2016. Mr Erdogan says this amounts to supporting terrorism. His true motives are inscrutable. But Turkey's leader is already using the crisis to score points at home by whipping up anger against Europe. The Nordics are only the latest and most unlikely front in Mr Erdogan's war on terror. He will probably open new ones as elections approach. ■

Heading hyper

Turkey, consumer prices
% increase on a year earlier



Ukraine

Hide and seek

KYIV

Ukraine's partisans are hitting Russian soldiers behind their own lines

THE RUSSIANS took the strategic rail hub of Melitopol on the third day of the war, their route apparently greased by Ukrainian turncoats. Controlling the city, a crucial part of Vladimir Putin's land bridge to Crimea, has proved somewhat trickier. Every few days brings a surprising report: an armoured train destroyed and a grenade attack on a command post (May 18th); railway tracks and a radar station blown up (May 22nd); a pro-Ukrainian rally (May 29th); and a collaborator's house hit by an explosion (May 30th). Ukraine claims its partisans have killed more than 100 Russian soldiers behind enemy lines in Melitopol. "Our people are doing everything to make sure the land burns under the feet of the occupiers," says the town's mayor, Ivan Fedorov, now safe in Ukrainian-controlled territory.

Melitopol is the unofficial capital of Ukraine's resistance. But it is far from the only place that has seen such operations. In neighbouring Kherson, a Russian-controlled airbase has been blown up nearly two dozen times. In Enerhodar, Andrii Shevchyk, the collaborationist mayor, was the target of an unsuccessful assassination attempt. In Izyum, Russian soldiers were given poisoned pies by a seemingly friendly old lady, according to a telephone conversation between a Russian soldier and his girlfriend that was intercepted by Ukrainian intelligence; eight of them reportedly ended up dead. When Russians abandon tanks or petrol trucks, Ukrainian farmers tow them away. Reports of explosions at arms dumps trickle in from the occupied regions of Donetsk and Luhansk.

Fires and explosions at military facilities inside Russia itself also seem to be becoming more common. In many cases, the evidence points to poor fire safety. But Ukrainian special forces do appear to be targeting supply chains in Russia's border provinces. On at least one occasion a helicopter has struck an oil-storage facility in the Russian city of Bryansk. Officials in Kyiv refuse to comment. Speaking off the record, a tight-lipped intelligence officer says it would be better to speak to a priest: "This is God's work. God is punishing the Russian Federation. Maybe not directly. Maybe not with his own hands. Maybe he has to use helicopters."

Ukraine's underground resistance in occupied territories is co-ordinated by a military unit called the Special Operations



The resistance is out there

Forces (sso). The division was formed in 2015 after attempts at partisan activity failed disastrously following Russia's previous invasion of the Donbas region in 2014. A former operative in the unit, who asked to remain anonymous, says the work is split into three parts: military action, support operations and psychological warfare. "Say the task is to stop the enemy from moving more reserves to Melitopol," he explains. "The sso assigns special forces the task of blowing up a bridge, it asks partisans to damage the railway, and it gets psy-ops [psychological operations] to print leaflets to say we're on the watch. So in the end, only half the troops dare to come."

"This work isn't always good for one's health," says the sso source. "The risks are real and it isn't a walk in the park." As in 2014, Russia's security services appear to have got their hands on secret military databases that help them to track down veterans. In Kherson, Russian officers are visiting the homes of Ukrainians who served in the army. Those who haven't managed to switch addresses are detained, tortured or worse. Russia also appears to be stepping up efforts to deter Ukrainians from joining the resistance, increasing arrests and demonstrative punishments. But intercepts released by Ukrainian security services suggest some Russian soldiers are fearful. "Every fucking night we're fighting with diversionary groups who come into the village," a soldier tells a friend in a call. "Some of us have had enough. We're getting the fuck out of here."

The true strength of Ukraine's resistance will be tested only in a new phase of the war, a proposed counterattack in the south. The tight-lipped intelligence officer predicts Ukraine's underground army will prove to be a big asset. He suggests Vladimir Putin's troops will be forced to beat an ugly retreat. "The Russians will be able to write another 'War and Peace,'" he says. "I've always been very fond of Tolstoy." ■

Fighting in Donbas

Grinding on

The conflict in Ukraine is settling into a war of attrition

THE WAR IN Ukraine, now in its fourth month, defies simple notions of winning and losing. Russian forces are thought to be in control of most of Severodonetsk, at the eastern edge of a Ukrainian salient in the Donbas region. Ukrainian resistance is now confined to an industrial zone in the westernmost edge of the town. Yet territorial control is ebbing and flowing. Russia's net gains in eastern Ukraine between the middle of April and the end of May add up to just over 450 square kilometres (about a third of the size of Greater London) according to Rochan Consulting, a firm that tracks the war; hardly a spectacular bounty. Neither Russia nor Ukraine looks likely to make a decisive breakthrough. Instead, each hopes to grind the other down in a war of attrition.

Russia's losses have been severe. The invasion force that it initially committed to the war had been reduced to about 58% of its pre-war strength by the middle of May, according to a Western official. By June 1st that had fallen by another few percentage points. Russia has lost at least 761 tanks, over a third of them since the beginning of the Donbas offensive on April 18th.

Much less is known about the state of Ukraine's forces. What is clear, though, is that they have also taken a mauling. On May 31st President Volodymyr Zelensky said that 60 to 100 of his soldiers were dy-



June 8th 2022

- Assessed as Russian-controlled
- Claimed as Russian-controlled
- Assessed Russian advances*
- Claimed Ukrainian counter-attacks
- Reported Ukrainian partisan warfare

*Russia operated in or attacked, but does not control
Sources: Institute for the Study of War; AEI's Critical Threats Project

▶ing each day, with 500 more being wounded—loss rates comparable to some battles of the second world war. Western officials say those figures are broadly accurate. One says that Russian and Ukrainian loss rates are now about the same.

If the war is settling into a contest of attrition, which side is more likely to prevail? A great deal depends on which country can produce a steadier flow of manpower, equipment and ammunition. Vladimir Putin, Russia's president, has so far refused to conduct a nationwide mobilisation of reservists and conscripts, but there is evidence that the country's defence ministry is trying to lure men with military experience back into action with the promise of pay packets as hefty as \$5,000 per month—six to eight times the salary of an average lieutenant. Ukraine's problem is different. It has an ample source of motivated recruits, but not enough people to train them. Konrad Muzyka, the founder of Rochan Consulting, says that the number of would-be recruits for the armed forces is so high that there is a waiting list of over a month to be inducted.

On the face of it, equipment should be less of a problem. America, Australia and European countries have all sent more artillery, ammunition and other arms to Ukraine over the past month. America, Britain and Germany have also promised rocket-launchers that can strike around three times farther than those artillery systems. These probably will not come quickly enough to halt Russia's conquest of Severodonetsk and possibly nearby towns, such as Lysychansk, which Mr Zelensky visited in person on June 5th. The Pentagon says it will take weeks to train Ukrainian forces on the HIMARS rocket-launcher. But if the war drags on for months or even years, as American and European officials now expect, these foreign weapons will play a vital role.

The Biden administration believes that the \$40bn package of assistance signed by the president on May 21st will allow a "high tempo" of military aid to continue until nearly the end of the year. In practice, both sides will need to pause fighting, to rest and rebuild their battered armies long before that. Yet the fighting is then likely to resume. Mr Putin has a cynical view of Western staying power. He believes that European and transatlantic divisions will widen as the war drags on. Higher energy prices, inflation and wider economic disruption might encourage those who want an early ceasefire. "We cannot make that mistake again," argued Kaja Kallas, Estonia's prime minister, on June 6th, citing Russia's land grab in Georgia in 2008 as well as the Minsk deals negotiated by France and Germany after Russia's first invasion of Ukraine in 2014. "We have to be prepared for a long war." ■



Norway and Russia

High noon in the High North

KIRKENES

The war in Ukraine is affecting the Arctic

WE ARE BACK to a cold-war mode," says Jens-Arne Hoilund, Norway's Border Commissioner. Mr Hoilund's job is to resolve any problems that arise along his country's short but remote border with Russia. That used to mean such things as retrieving errant reindeer that ambled into Russian territory on the far side of the icy Pasvik River in search of fresher lichen. Since March, however, contact with the other side has been minimal. "Getting back to the relationship that we had will take years," he says. "If it is even possible."

The Arctic had been a rare area of successful co-operation between Russia and the West, but now the fragile system that has made it stable and predictable is under threat. "The cold winds in the north did not originate there," quips Norway's prime minister, Jonas Gahr Store, speaking to *The Economist* from his office almost 2,000km to the south in Oslo. "No issue, no region, no matter of co-operation is unaffected by Ukraine," he adds, "and what the full implications will be for the Arctic, we are yet to know the full extent."

Virtually all contact with Russia in the Arctic has now stopped. Of the eight Arctic states, five are members of NATO, and two, Finland and Sweden, have now applied to join. Russia is the eighth. The Arctic Council, the main forum for dialogue among the eight, has been paused since March. The Euro-Arctic Barents Council and the Arctic Coast Guard Forum, two smaller groupings, have followed suit. Bilateral ties have not been spared, and only border crossings, search-and-rescue and fisheries are

working as usual between Norway and Russia. "Invasions have ramifications far beyond the battlefield," says Mr Store.

In Kirkenes, the last fishing town before Russia, nerves are twitchy. Under a bright Arctic sun, a mother complains about the government in Oslo as she watches her son's football team get battered. "They never think about us up here," she fumes. The local economy is heavily dependent on Russia; indeed many of its street signs are bilingual. Everything from the shipyard to a cross-border ice-hockey league has been hit by the fallout from the war. "If we are not careful, we will ruin things for generations to come," she says. "They do not have this closeness down there."

For the moment, the other Arctic states are focusing on finding a way to resume co-operation among themselves, without Russia. The Arctic is warming twice as fast as the global average and the Nordic countries, at least, consider collaboration on scientific research urgent.

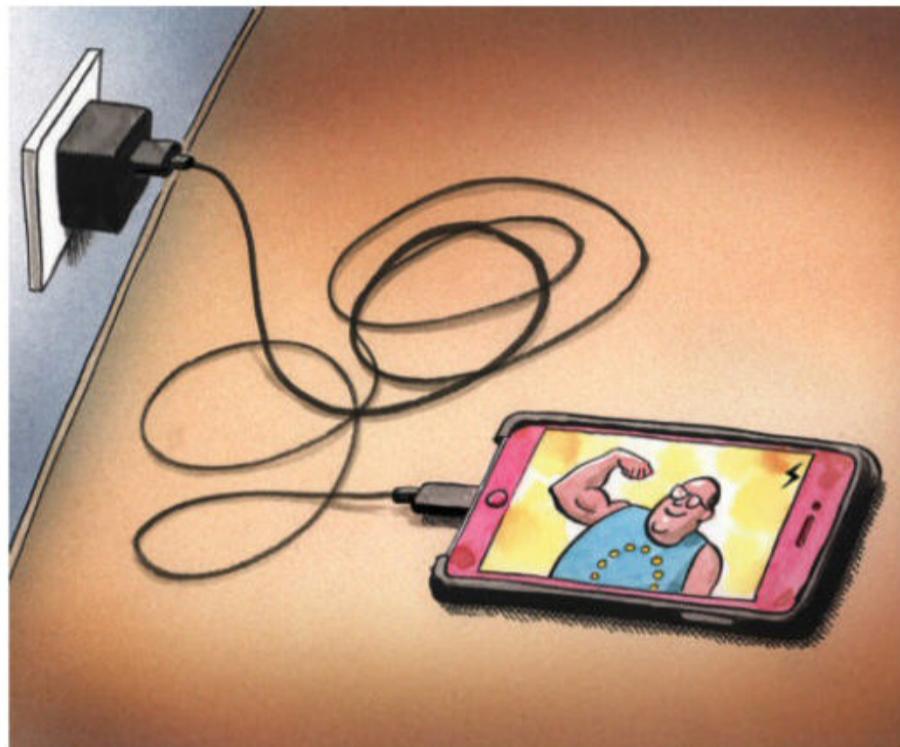
The war in Ukraine and the breakdown in Arctic dialogue could also exacerbate tensions caused by Russia's growing military presence in the region. It has reactivated some 50 Soviet outposts in recent years, and invested in its Northern Fleet and in missiles, both nuclear and conventional, based on the Kola Peninsula, a stone's throw from the Norwegian border. The mauling suffered by Russia's conventional forces in Ukraine may increase the importance to Russia's high command of its missiles in the Arctic. What this means for Russian defence planning is preoccupying Scandinavian military strategists.

Norway is also pouring money into the High North. It is building new boats and barracks and has dispatched F-35 jets into Arctic skies and Fridtjof Nansen-class frigates into the Arctic Ocean. Kirkenes is likely to see more bored conscripts wondering why everything closes at 3pm, even under the midnight sun. "We follow what happens in the air, on the surface, on the ground and even under the surface," warns Mr Store. Norway will be "flying more and observing more". ■



Charlemagne | Charge!

The EU's push to impose a standard phone charger is a misguided cry for attention



WHAT HAS the European Union ever done for us? Well, the single market is jolly useful, as anyone running a business can attest. Structural funds have financed roads, electricity grids and whatnot in poorer bits of the continent. Rather urgent plans to achieve net zero carbon emissions within a generation have been hashed out at EU level, lest anyone forget. You can cross most of its borders without a passport, too, though people take them on holiday anyway. Not to mention antitrust rules devised then enforced in Brussels to prevent big firms from bilking consumers. Oh and there is peace, at least within the bloc.

Charlemagne could go on. The problem is, few Europeans know about much of this, or give the EU credit for it. Most of what affects their daily lives—education, tax rates, housing benefits, fixing potholes—is decided by national governments or local ones. Beyond the odd summit of leaders discussing the fate of the world (or at least the euro) much of what happens in Brussels is noted primarily by policy wonks. Only occasionally does the great hulking regulatory machine there, including a 32,000-strong European Commission and 705 MEPs, find a way of doing something that will be both noticed by citizens and for which the EU can claim credit. One such example was agreed on June 7th: by 2024 makers of devices including smartphones and cameras will have to switch to a single type of charger mandated by Brussels.

European plans for a common plug for electronics are nearly as old as the gizmos themselves. The idea was already floating around in 2006, before the iPhone came to market. Since then every nerd from Lisbon to Helsinki has squirreled away a box full of tangled wire, kept just in case a 12-year-old Nokia brick might need to be revived. The avoidance of such electronic waste is one putative motive for imposing a common charger. The model selected is known as USB-C, an industry standard which most manufacturers already use. The big exception is Apple, which has stuck to its own system. It will either have to make Europe-only gadgets with a USB slot (which many Apple tablets and laptops already feature) or switch over all its iPhones globally to suit the edict.

This electronic-waste line of reasoning is itself as antiquated as a flip-phone. Handset chargers used to be fist-sized bundles of metal; now they are mere cables that connect to interchangeable

plug slots. Most people already have plenty of them. A mooted cut of 1,000 tonnes of binned electronics avoided per year sounds impressive, but represents about 0.002% of the global figure. Another justification put forward is the carbon footprint of chargers. Taken together, all those produced for Europeans every year will generate life-cycle emissions of around 900,000 tonnes of CO₂ equivalent. Yet that is less than is spewed by a single Boeing jet. Expected consumer savings of €250m (\$267m) a year mean each EU citizen can look forward to a bonanza of roughly €1 every two years, not much of a dent in the cost-of-living squeeze.

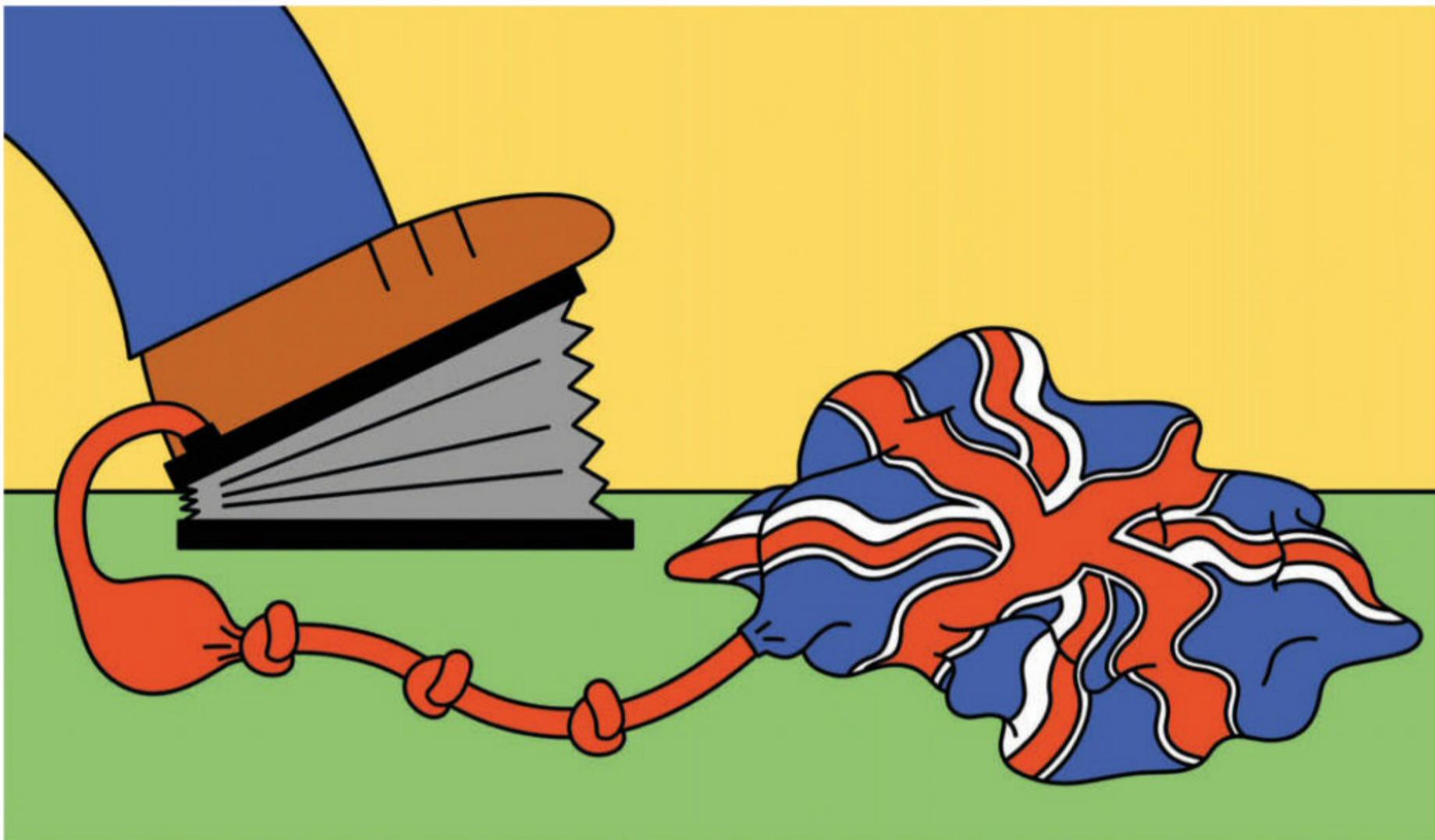
The final argument is one of convenience, for firms and consumers alike. Politicians used to hesitate before telling companies and people what was good for them, even in Europe. But the EU is in a *dirigiste* mood these days (the official leading the charge on chargers, Thierry Breton, is the French internal-market commissioner). Companies stand accused of having failed to gauge the impact of their actions: all that outsourcing to China, say, might prove one day to be as harmful as dependence on Russian gas is today. Public money is pouring into investments, from microchips to semiconductors, which the private sector is apparently too short-sighted to back without subsidy. Spelling out to companies that designed the phones (and chargers that keep them lit) how best to do that fits that politicians-know-best mould. Needling American tech behemoths is an added bonus.

The downside of regulation seems to have been ignored. Standardising chargers might make sense if they have reached the end-state of their development, like electric plugs. But have they? Phone cables have evolved markedly within recent memory, for example when it comes to downloading data as well as juice. Now what innovation might come will have to be agreed by a technical committee that signs off on the USB standard. Apple has taken out patents on a plug-in charger that would improve the water-resistance of its devices: it may as well bin them now, at least in Europe. A similar one-size-fits-all approach will in time be applied to wireless charging, the next big thing in keeping your smartphone alive beyond 3pm. Whoever invents the best system will have to convince officialdom, not consumers, that it is indeed better.

Battery low: connect your device

The balance between innovation and purported convenience is incidental here. What matters is that however people feel about the move, they are at least bound to notice it. In so far as Europeans hear about what Brussels has done for them, it is mostly when they cross borders. The capping of mobile-phone roaming charges agreed over a decade ago is still brought up as one of the bloc's signature achievements (and a painful drawback for Brits as they get clobbered with enormous bills for streaming Netflix to while away the hours spent in non-EU queues at Tenerife airport). Like passport-free travel or Erasmus university exchanges, this only affects people who travel. But an EU survey commissioned to justify the end of roaming charges found that most Europeans seldom did, and over a third had never left their own country. In contrast just about everyone has an electronic device these days.

Can Eurocrats be blamed for craving a bit of the spotlight their national counterparts enjoy? The phone-charger rule provoked more headlines than decades of sensible proposals on regulating chemicals or life insurance ever have, and for which Brussels deserves more credit than it gets. Mandating how phones are juiced is a case of the EU getting closer to the daily concerns of citizens—but also further from where it can be most useful. ■



The economy

Stagnation nation

Britain's productivity problem is long-standing and getting worse

BRITAIN'S GROWTH CRISIS



IN THE CLASSIC short documentary “*Powers of Ten*”, made in 1977, the camera steadily pans out from a picnicking couple in a lakeside park to show first the Earth, then the solar system, and eventually the entire universe. An expanding field of view brings home the scale of things. So it is with the challenges facing Britain.

In the week that Boris Johnson scraped through a vote of confidence in his leadership, the narrowest field of view focuses on the prime minister: how wounded he is, and how long he will survive (see next story). Zoom out a bit and you can see the immediate issues facing an enfeebled government, from a creaking health service to the rising cost of living.

Zoom out farther still, though, and one problem fills the screen: the country's anaemic growth rate. A healthier economy would raise people's living standards; fast-

er growth is the way to square the circle between lower taxes and better public services. Yet the OECD, a club of rich countries, reckons that only heavily sanctioned Russia will fare worse in the G20 in 2023. And whereas average annual GDP growth over the decade preceding the 2007-09 financial crisis was 2.7%, the Office for Budget Responsibility (OBR), a fiscal watchdog, predicts the new normal is closer to 1.7%.

The political debate is moving rapidly onto this terrain. Mr Johnson says growth is his top priority. Cabinet ministers are urging tax cuts. The Labour Party is working up a growth strategy. But talking is a lot easier than delivering. Zoom out again, and it is clear that Britain's growth problem

is long-standing and getting worse.

In the coming months we will publish a series of articles on how to get Britain growing again. But first it is vital to understand how bad things are. That means focusing on one issue—productivity.

Over the long run productivity growth, or the ability to produce more with less, is all that really matters for rising living standards. Although in theory economies can grow when people work longer hours, at some point that strategy is limited by employees' health and the number of hours in a day. Raising labour productivity, or the amount workers can produce in an hour, can happen with investment. Or it can happen with greater total factor productivity (TFP), a measure of the overall efficiency with which capital and workers are used. TFP can be traced to factors like better management practices or stiffer competition.

Britain once set the pace in productivity. At the start of the 19th century it overtook the Netherlands as the world's “productivity frontier”. A century later, America was in the lead. A study by Stephen Broadberry of Oxford University and Doug Irwin of Dartmouth College has documented how in around 1850, American workers produced roughly 10% less than their British peers. By 1910 they produced 25% more.

Britain never regained its lead. Two world wars hit hard; at home, meanwhile, domestic competition waned. European peers industrialised behind protective trade barriers. By the end of the 20th centu-

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60 Bagehot: Unconservatism

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► By Britain's labour productivity was below that of America, France and Germany (see chart 1). Although it matched France's GDP per hour at the beginning of the 1970s, by 2000 it trailed by over 10%.

This century started promisingly. Between 1997 and 2007 British productivity growth was second only to America's within the G7 group of countries (see chart 1); output per hour grew at an annual average rate of 1.9%. Over the course of that decade Britain's GDP per hour grew from 88% of Germany's to 93%.

But then, disastrously, the global financial crisis struck. The productivity slowdown that followed was global, but Britain's was particularly dramatic. Between 2009 and 2019 its productivity growth rate was the second slowest in the G7. A study by Nick Crafts at the University of Warwick and Terence Mills of Loughborough University calculated that Britain's shortfall during this period, compared with the pre-2008 trend, was the worst in 250 years.

There is no doubt that the cost of this lost decade was huge. Had Britain's productivity growth rate not fallen after the global financial crisis, GDP per person in 2019 would have been £6,700 (\$8,380) higher than it turned out to be. But there is fierce debate over what exactly went wrong. Diane Coyle, a director of the Productivity Institute, a research consortium, likens the search for a source of Britain's weak productivity growth to the conclusion of an Agatha Christie mystery. "Everybody turns out to have done it."

Several enormous shocks hit the British economy over the course of that decade, even before the pandemic delivered another. The financial crisis curbed the flow of credit. One study published in 2020 found that companies with weaker pre-crisis balance-sheets that faced a particularly severe reduction in credit saw sharper reductions in TFP growth, partly because they cut back on innovation. Drooping demand crimped incentives to invest and innovate: around half of European economists surveyed in February 2020 attributed Britain's slow-

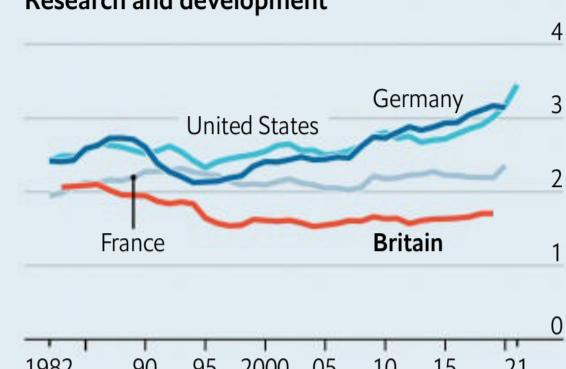
False economy

As % of GDP

Investment



Research and development



down to weak demand associated with the financial crisis or austerity policies.

And then there was Brexit. On one estimate, uncertainty caused by Britain's departure from the EU depressed business investment by as much as 11% in 2019, relative to what it would have otherwise been. Erecting trade barriers with Britain's biggest trading partner has eaten up managers' time, made supply chains less efficient and added costs. None of that has helped.

Industry-level data yield further clues as to what went wrong. The slowdown in TFP growth within financial services and insurance contributed as much as a third of the economy-wide drop between 2007 and 2019, according to Jonathan Haskel of Imperial College London and Peter Goodridge of Manchester University. Information-technology services, transport-equipment manufacturing and pharmaceuticals also contributed—all industries typically thought to be among Britain's strengths. Overall, they find that intangibles-heavy and technology-intensive industries were harder hit during the 2010s.

There are various ways of interpreting these findings. One is that excessive risk-taking in the financial-services industry artificially inflated Britain's measured productivity in the 2000s. Now that the industry is more heavily regulated, it may not

seem as productive as it once did but the risk of a financial crash is lower. Another interpretation is that the benefits of technological change are petering out for everyone. Some, like John Fernald of INSEAD Business School and Robert Inklaar of the University of Groningen, argue that most of Britain's TFP slowdown in the decade before the pandemic reflected weaker performance in America, which sets the tempo of productivity globally.

But even if the frontier is slowing, there is no iron law that says Britain cannot move closer to it. Catching up with America's level of labour productivity would mean that Britain's GDP per person would be £6,600 higher, for example. And even if it is hard to pin down the exact sources of the productivity slowdown in the 2010s, it is easier to identify areas where Britain has to do better in future. They fall into three big categories: investment, people and the spread of knowledge.

The most obvious weakness is investment. Britain consistently invests less than France, Germany and America; it has also long spent less on research and development (see chart 2). Adjustments for the capital available to workers explain almost all the gap between GDP per hour worked in Britain and France, and about a third of the gap between Britain and Germany. Uncertainty about what is around the corner for Britain's firms is one explanation for this shortfall, but far from the only one.

Financing is another. Anna Valero of the London School of Economics says that part of the problem relative to America may be that in Britain it is harder to raise the equity capital that supports risk-taking. Compared with Germany, where local banks have long-term relationships with firms, it is harder to find patient finance.

A related problem is that investment is stymied by the difficulty of getting anything built in Britain. According to a recent OECD index of land-use governance, which measures how fragmented planning decisions are, Britain's system came second only to Latvia among 18 countries sur-

Losing ground

GDP per hour worked at PPP*, \$, 2015 prices



Output per hour worked, average annual % increase

1997-2007 2009-19



veyed. In innovation clusters like Oxford and Cambridge, building is constrained by strict rules preserving historic architecture and the surrounding countryside. Housing is eye-wateringly expensive, making it harder to attract newcomers who could productively work there alongside others.

The next category of improvements involves people. Although it has been successful in encouraging more youngsters to go to university, Britain has struggled for decades to equip people with specific skills, from engineering to welding, that employers demand. The share of the population with higher secondary qualifications—ie, people who do not take a degree but who do stay on in education after the age of 16—is around 32%, well below the OECD average of 42%. The level of collaboration between vocational schools, further-education colleges, businesses and local government is minimal. Plans for lifelong learning are just that—plans.

The quality of people at the top of firms seems to be a problem, too. Compared with Germany and America, Britain's managers fall short. One study published in 2021 found that only around 11% of firms were as well-managed as the top 25% of American firms. The government is trying to tackle this through its "Help to Grow" programme, which offers subsidised management training to leaders of small businesses. Uptake has reportedly fallen far short of what was expected.

Better training leads naturally on to a third category, the spread of knowledge. Productivity improves when high-skilled people work with other high-skilled people, when transport links are integrated, when ideas diffuse. Geography is one dimension of this problem: regional inequality is very high in Britain. According to an analysis of such internal disparities by Philip McCann of the University of Sheffield, Britain is more unequal than France on 15 out of 21 measures, and more unequal than Germany on 17. Improvements to aggregate productivity rest partly on pushing forward the frontier of innovation and partly on helping less productive firms to catch up with the leaders. That is a lot harder if, as Bart van Ark of the Productivity Institute puts it, many lagging firms are "in regions that are essentially stuck".

Britain's diffusion problem is not just geographical. Although Britain has world-beating research universities, it struggles to spread the knowledge they generate to companies. Compared with America, for example, the country relies relatively heavily on universities and less so on national laboratories, which tend to be more focused on applied research. On average, Britons take out patents at a rate half that of people in America, France and Germany.

Britain has no shortage of problems to fix, then. If anything, they are mounting.

The effects of weaker international competition because of Brexit will sap dynamism. The OBR thinks that eventually Britain's productivity will be 4% lower than if it had stayed in the EU. Britons are ageing, another drag; climate-change commitments imply cost as well as opportunity.

Some hoped that the pandemic would kick things into a higher gear. Although productivity soared when it first struck, that was because relatively unproductive sectors shut down. The latest data suggest that productivity has settled back to its pre-covid trend. In March the OBR said that the pandemic would permanently damage TFP, partly because firms are holding larger inventories in case of future disruptions.

And then there is the question of whether policymakers are capable of making the changes that are required. "Powers of Ten" finishes by steadily zooming back in again, progressively narrowing the field of view until it reaches the sub-atomic level. A narrower view also yields a depressing conclusion. The productivity problem has thwarted far more competent governments than this one. Mr Johnson has made no headway on growth since winning a stonking majority in 2019, and the erosion of his authority after the vote of confidence makes the chances of bold, long-term action even lower. But at least there is no doubt where this government and its successors ought to focus. ■

The prime minister

The divine right of Boris

The Tory civil war is a split between Roundheads and Cavaliers

IT IS HARD to escape the English Civil War in the Houses of Parliament. Conservative MPs arriving to vote on Boris Johnson's future on June 6th would have passed a statue of Oliver Cromwell, who led the parliamentarians to victory against Charles I. They may then have walked through Westminster Hall, where the same king, who had insisted upon his divine right to rule, was sentenced to death. Near the chamber they would have passed a mural to Speaker Lenthall, who stood up for the Commons against the crown. Perhaps those things played on their minds; many would later say their party was in a state of civil war.



Uneasy lies the head

The Tories have been divided on Mr Johnson since he became prime minister in July 2019, but only now is it clear just how deeply. The revolt against Mr Johnson was triggered by illegal parties in Downing Street during the covid-19 lockdowns, which wrecked his standing in the opinion polls and among his party's activists (see chart 1). In a confidence ballot triggered by his own MPs he received 211 votes in his favour; 148 voted against him. His support was shallower than previously supposed, and his opponents, many of whom had been reluctant to choose a side until forced by their colleagues, far more numerous. At 59%, his share of support is lower than that received by Theresa May and Sir John Major, two of his predecessors, in similar ballots. It leaves his authority broken and his rivals wrestling to succeed him.

The Conservative Party is riven by factions: northern and southern, Remainer and Brexiteer. Yet the split over Mr Johnson has defied easy analysis, running through all its tribes and regions. It separates Steve Baker, a leader of the Brexit right and a Johnson critic, from Jacob Rees-Mogg, a Brexiteer loyalist. New northern MPs, such as Dehenna Davison and Peter Gibson, found themselves on opposite sides; so did some southern Remainers. Douglas Ross, who represents the party in Scotland, wanted Mr Johnson gone; Alister Jack, who represents Scotland in the cabinet, backed the prime minister. This split reflects another fault line, a philosophical gulf among Tory MPs over the scope of Mr Johnson's power and the source of its legitimacy. It is a struggle, says one, "between par-

liamentarians and the populists."

Ranged against Mr Johnson are the Roundheads. Theirs is an orthodox understanding of Britain's constitution—that MPs are elected by their constituents; and whoever enjoys the confidence of a majority of them is appointed by the queen as prime minister, who in turn may appoint ministers. If the prime minister loses their confidence, they fall. A prime minister's authority begins and ends in Parliament.

Mr Johnson's noisiest defenders, meanwhile, are Cavaliers. Theirs is a garbled idea of the British constitution, which says Mr Johnson draws his legitimacy directly from the people. Under this reading, he was not elected merely by 25,000 voters in his constituency of Uxbridge and South Ruislip, or by his colleagues on the Tory benches, but by all those who voted Conservative in the general election of 2019.

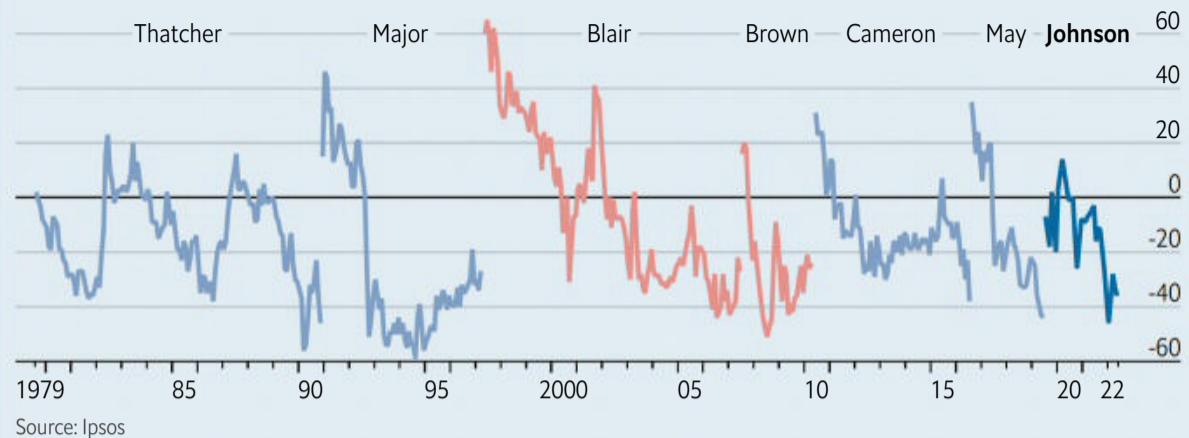
On this view, withdrawing confidence is not an MP's right but a usurping of the popular will. "I find it utterly bizarre that a small number of MPs think that they can overrule that vote of 14 million people," seethed Nadine Dorries, the culture secretary and one of Mr Johnson's closest allies. Some sense a special bond between the prime minister and his people: Danny Kruger, another supporter, declared he "personally represents" a "moral" mission to improve Britain. That Mr Johnson was never that popular (see chart 2), and is booed when he appears in public, is an inconvenient detail; many loyalists insist he still has the magic touch with voters.

There is a touch of Charles I about Mr Johnson. As a boy he declared he wanted to be "world king"; earlier in his career, a colleague remarked that he "thinks he has a divine right to rule the country". Partygate exposed how he ran his administration like a royal court, with friends and court-

Unpopularity contest

Britain, net satisfaction with prime minister

Percentage points



iers slipping in and out of offices. It also revealed a Cavalier licentiousness; abstemious puritans did not stick around.

A trend towards regal prime ministers has been under way since Margaret Thatcher: they consult their cabinet less, and are more prominent in election campaigns, than earlier leaders. But Mr Johnson's premiership is characterised by a special disdain for Parliament. The Brexit referendum pitted a new form of popular sovereignty, the "will of the people", against that of MPs. In 2019, when Parliament threatened to stymie his Brexit plans, he prorogued it, a move the Supreme Court found unlawful. In office he has asked Parliament to grant ministers extensive powers to rewrite legislation at will.

All this has fuelled discontent. Jesse Norman, a leading Roundhead, this week accused Mr Johnson of attempting to import a presidential system "that is entirely foreign to our constitution and law. But you are not a president, and you have no mandate other than as an MP, and from the confidence of your colleagues."

Mr Johnson's next battle is an investigation by Parliament's Privileges Committee into whether he wilfully misled the House of Commons about the parties; if it finds that he did, the Commons will be asked to ratify its findings and can suspend him as punishment. For Cavaliers it would be a slip of the tongue for which the public care little. For Roundheads it would be a crime: if ministers can freely lie to Parliament, the process of scrutiny on which parliamentary government rests would collapse.

John Baron, among the first to call for Mr Johnson to go, is an unlikely rebel: a hardline Brexiteer representing the blue-collar seat of Basildon and Billericay. But he is a parliamentarian to his bones, who in 2013 led a rebellion to give MPs oversight over the prime minister's war powers. For Mr Baron, the evasions of Mr Johnson have put the credibility of Parliament in jeopardy. It is an MP's duty "to ensure that the soul of our constitution is treated with reverence", he remarked.

It is for this reason that the ministerial code, a rulebook for government, makes lying to Parliament a resigning offence. Yet it is Mr Johnson who polices the code, and he has made it clear to whom he answers. Last month he revised the code to state that he is accountable to Parliament but also "via the ballot box, to the British people".

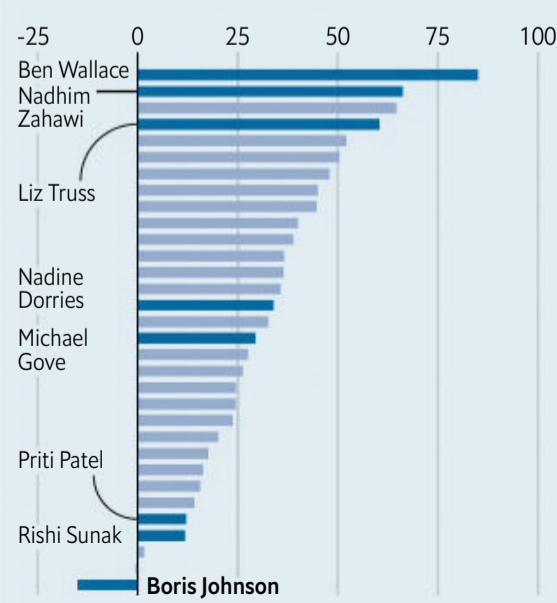
One thing the British people cannot do is govern for him. Mr Johnson has lost control of the Parliament he disdains; the insurrection swamps his working majority. He is even more likely to shy away from confrontation as a result. On the day of the confidence vote the government announced it was dropping a chunk of a new high-speed railway network that irritated local MPs. Mr Johnson's ill-conceived plan to rewrite the Brexit deal on Northern Ireland may be stymied, too. ("Economically very damaging, politically foolhardy and almost certainly illegal," was Mr Norman's pithy verdict.) Yet since his opponents are so fragmented, appeasing one faction will only aggravate another.

An indiscreet contest to succeed Mr Johnson is under way. The field of candidates will be wide. It will include Ben Wallace, the defence secretary; Liz Truss, the foreign secretary; Jeremy Hunt, a former health secretary; and Nadhim Zahawi, the education secretary. None will find it easy to command the party's rival factions. All, however, will rally to the Roundhead banner, promising to reassert ministerial standards and restore power to MPs.

The rebels are determined to organise another confidence vote—in theory banned by the rules for another year, yet feasible if these are simply changed by the 1922 Committee of backbench MPs. The party's conference in October will be a moment of danger. But Mr Johnson can also seek to renew his own legitimacy. In March his government repealed the Fixed-term Parliaments Act, restoring the power of the prime minister to call elections before the scheduled end of his term. If Mr Johnson wants to test the popular will in which his supporters place so much faith, he can. ■

Odd one out

Britain, cabinet ministers*, net satisfaction among Conservative Party members
Percentage points, May 2022



Bagehot | The Unconservatives

A party that was ruthless, pragmatic and efficient is now cowardly, incoherent and inept



SHY TORIES" are common. Voting for the Conservative Party is never chic, so people often keep quiet about it. In the 1992 and 2015 general elections, voters took pollsters by surprise and handed the Conservative Party unexpected majorities.

It is voters rather than MPs who are supposed to be nervous about this allegiance. But during a vote of no confidence on June 6th in Boris Johnson's leadership of the Conservative Party, just under 160 MPs—a clear minority of the party—pledged their fealty to the prime minister publicly. In the end, 211 MPs voted for him. It is this sort of shy Tory MP who quietly keeps Mr Johnson in power.

They also belie the lore that Conservative MPs are cold-hearted killers. The party is often described as an "absolute monarchy tempered by regicide". The continued failure to remove Mr Johnson, after months of plunging approval ratings, government drift and a steady stream of scandals, reveals it to be anything but.

That the Conservatives are ruthlessly regicidal is only the latest myth surrounding the Conservatives to be crushed during Mr Johnson's leadership. This is a party of government that cannot govern. It is the party of business that hates business. It is dedicated to staying in power, yet refuses to take the steps necessary to keep itself there. Even more recent folklore is misleading: this is a populist party with an unpopular agenda.

Take each myth in turn. After a vote in which 41% of Conservative MPs revealed they had no confidence in the prime minister, the party is not able to govern. Once an ideological project is ascendant within the party, MPs usually fall in behind it. In a radical experiment Margaret Thatcher dismantled the One Nation Conservatism that had dominated in the post-war era and let the free market rip; Conservative MPs were willing foot soldiers. David Cameron's project of fiscal discipline in 2010s was not to everyone's taste but it prompted little internal protest.

Mr Johnson offers his followers no such coherence. He cannot decide whether to be a low-tax, supply-side revolutionary à la Thatcher in 1979, or to offer big-state Conservatism in the mould of Harold Macmillan. As a result, the party is riven. Buying off all his opponents is nigh-on impossible. The government's majority is 78; those who opposed Mr Johnson this week numbered 148. Every policy that placates a wet One Nation critic will annoy a dry Brexi-

teer who wants precisely the opposite.

A pervasive lack of seriousness also impedes its ability to govern. Plotters who, remember, are competing to remove the leader of a nuclear power were so disorganised that they could not trigger the vote of confidence at the right moment. The Conservatives are likely to lose two by-elections at the end of this month, denting Mr Johnson's reputation as an electoral asset and making his position more precarious. Instead, the threshold for holding a confidence vote was reached on a Sunday afternoon while Mr Johnson sat watching a hologram of the queen in a parade at her Platinum Jubilee. In Parliament on Monday evening, plotters giggled alongside loyalists in the queue to vote. The evening felt less like a ballot that could defenestrate a prime minister than an election for the head boy of a public school.

Traditional policy strengths of the Conservatives have been abandoned. The ever-quotationable Mr Johnson once responded "fuck business" when told about corporate grumbles over Brexit. Nothing has been done to allay firms' grievances. Instead, even the thin deal that was agreed with the EU is threatened by the government's bellicosity over trade arrangements with Northern Ireland. Likewise, fiscal discipline has been replaced by fiscal incontinence. Rishi Sunak announced £15bn (\$18.9bn) in spending at the end of May to alleviate the cost-of-living crisis and to head off political criticism. Now he faces cries for lower taxes. The government can either stick to its spending rules or throw around tax cuts. It cannot do both. To govern is to choose, but the Conservatives refuse.

Nor does the Conservatives' new guise as a populist party really fit the facts. Mr Johnson has styled himself as the people's tribune, in power to do their bidding. Instead, advisers and acolytes project their own views onto an imagined voter who exists only in their heads, charging into a culture war that leaves many real voters nonplussed. And Mr Johnson himself has never been particularly popular; Theresa May enjoyed far higher approval ratings in 2017. Populism without the people is a hollow project.

Keeping Labour out of office is still an aim. But even this mythological *raison d'être* seems a bit pointless. In a feat of projection Jonathan Gullis, the MP for Stoke North, said the party had to ensure "we don't let that shambles Labour get into government". In fact, Labour has cleaned up its act. When Conservative MPs complain about the perils of Corbynism, Sir Keir Starmer can say he wholeheartedly agrees. He has purged the party of lefties, with the brutality one used to associate with the Conservatives.

What can I do? I'm just a Member of Parliament

In a Gothic palace by the Thames, Conservative MPs despair at their powerlessness. They grumble that the party is sleepwalking towards 1997, when an exhausted, sleaze-ridden Conservative government received a historic battering in that year's election. MPs forget that the prime minister serves at their pleasure, no matter how often Mr Johnson's supporters reference the prime minister's popular support.

They also forget their party's own history. Ruthlessness works. After Thatcher was kicked out, the Conservatives won the next election in 1992 (owing, largely, to shy Tories). Mrs May's ungainly departure in 2019 preceded the Conservatives' biggest majority in over 30 years. Even the removal of Iain Duncan Smith, leader of the opposition from 2001-03, was followed by major gains in an election for the first time in decades. Luckily for Mr Johnson, the Conservatives have forgotten this lesson; unluckily for everyone else, they have also trashed the other things they were famous for. ■



Justice in retreat

Overruled

The pandemic has accelerated a global decline in the rule of law

ROSE, A 40-YEAR-OLD woman in Manila, long beaten up by her husband, finds her predicament markedly worsen as the covid-19 lockdown leaves him at home most of the time. A widow in rural Kenya is driven from her house by her late husband's relatives, who want to claim it for themselves. An Australian doctor is unable to return home when the government makes it a criminal offence for anyone to enter there from India, where she has been visiting family. None of the victims feels she has anywhere to turn. The Philippine and Kenyan police are not interested. And there was nowhere to appeal against Australia's immigration ban.

In the grand scheme of things these incidents are trivial. But each is enough to blight a life. It is no consolation to the victims that such random acts of injustice fit a global trend: respect for the rule of law is in decline. That is certainly the impression anyone following current affairs would have. (In Britain, for example, the prime minister Boris Johnson's violation of his own lockdown rules led to his nearly losing a no-confidence vote on June 6th.)

The trend is backed by data. Compiled by the World Justice Project (WJP), a Washington-based charity, the Rule of Law index, published annually since 2009 and now covering 140 countries, draws on tens of thousands of responses from households, legal practitioners and experts.

It asks about people's experience of the justice systems in their countries, and produces scores based on factors such as the constraints on government power, corruption, regulatory implementation, order and security, and the enforcement of civil and criminal law. So it provides a snapshot of how they are perceived by people in their daily lives, and how they actually function. It captures not just outrageous abuses of power but myriad, tiny injustices suffered by ordinary people. It is taken seriously even by governments that fare badly. India, for example, has declined in the global table from 62nd out of 113 in 2018 to 79th out of 139 in 2021, and in response its justice ministry promises reforms.

So it provides evidence about both the rule of law and people's access to justice. Every year an estimated 1bn people en-

counter a problem that requires recourse to the law or some informal outside mediation. Of those, 70% will never see the problem resolved; some 30% will not feel sufficiently empowered even to seek a resolution. Of the cases that are resolved, the vast majority will have been handled outside the formal state mechanisms of the police, lawyers, courts and judges. They will have been resolved instead by local mediation, perhaps by respected elders.

In each of the four years from 2018 to 21, more countries recorded declines than improvements in their rankings. In 2021 the rule of law was seen to be deteriorating in 74% of countries, home to 85% of the global population. The lowest overall scores were in Cambodia, the Democratic Republic of Congo and Venezuela; the biggest declines were in Myanmar, after the coup in February 2021, and Belarus, after the suppression of protests against the stolen presidential election of August 2020. The few bright spots included Moldova, Mongolia and Uzbekistan, where under President Shavkat Mirziyoyev progress has been made across the index's components. This was from a low base (abolishing slave labour must have helped).

Three main reasons for this depressing trend are obvious. A number of nasty, dictatorial governments—from Belarus to Myanmar—have either grabbed power or, already ruling, have grown nastier and more dictatorial. And a number of democracies—from Brazil to the Philippines—have been run by populist leaders who

► flout the law if it gets in their way. The third reason is the covid-19 pandemic. Even well-intentioned governments have imposed emergency measures that have curtailed civil liberties and legal protections, and deprived people of basic rights, such as to gather in public or even in private, or to leave their homeland, or to return to it from some places; it has also led to a surge in the spread of dangerous disinformation, which has sucked trust out of societies, as has a perceived decline in equal treatment under the law. It has, however, also sparked some innovation that offers hope.

Within weeks of the World Health Organisation's declaring the covid-19 outbreak to be a pandemic in March 2020, no fewer than 84 countries had declared states of emergency, and by September 146 had introduced measures that affected the rights of their citizens, according to the European Centre for Not-for-profit Law, an NGO based in The Hague. Courts were forced to stop functioning, or to shift online, with many countries passing emergency laws to change procedures. Pipelines of unresolved cases became even more clogged. In India the number of outstanding cases rose from an already staggering 29m in 2018 to 48m in May this year.

Although in most countries states of emergency have been lifted, much of the world still faces some restrictions. Authoritarians are particularly reluctant to lift emergency rule—or keen to replace it with an alternative “emergency”. In Hungary, for example, with a covid state of emergency due to expire on June 1st Viktor Orbán, the prime minister, on May 24th declared another one in response to the war in Ukraine. In Hong Kong the annual gathering to commemorate the June 4th massacre in Beijing in 1989 was banned this year for the third year running. Social-distancing rules would again make it impossible. But in 2020 a national-security law was adopted that makes it illegal anyway.

The pandemic has damaged the rule of law in a less direct way, too, by eroding the fundamental right to equal treatment. In Singapore, for example, migrant workers complained that rules locking them down stayed in place far longer than those covering other people. Elsewhere, in countries from America to Finland, irksome regulations and precautions imposed on everyone were flouted by those who had a hand in devising them.

A prime example is Britain, where during lockdown 10 Downing Street, the home and office of the prime minister, was used for convivial booze-ups. Many voters have been outraged that rules preventing them from bidding farewell to dying relations were seen as optional for those at the heart of government. This has damaged the standing of the prime minister, who was greeted by boos when he turned up on June

3rd at St Paul’s Cathedral for a service to mark the queen’s platinum jubilee.

The harm, however, spreads far beyond the prime minister, to the advisers and colleagues who have backed him as he has mumbled half-apologies, to Parliament, which has seemed unable to hold them to account, and to the police, whose investigation appeared tardy, partial and inconsistent. The scandal has undermined trust in the political system and the law.

Another damaging feature of the covid-19 pandemic was a concurrent pandemic of disinformation. “There is perhaps no greater threat to the rule of law today,” Elizabeth Andersen, the WJP’s director, told its annual forum in The Hague on May 31st. Justice requires not just access to information about the law but a shared perception of the truth. This year’s winner of the WJP’s “Rule of Law” award is Rede Wayuri, a network of 55 indigenous communicators working in the Brazilian Amazon to counter disinformation.

The organisation works in the vast Rio Negro region near Colombia and Venezuela, home to 750 communities from 23 indigenous peoples. Residents have little access to reliable information, and were already vulnerable to expropriation by mining companies and others telling them they had no right to their land. During the pandemic, Rede Wayuri found fake news about the virus spreading like a forest fire.

Typically, locals would visit town and return with the WhatsApp or Telegram apps on their phones filled with nonsense. An especially virulent meme held that covid-19 vaccines contained Chinese microchips, to be used to control the inoculated. Juliana Radler, a journalist who advises Rede Wayuri, says its exposure of the lies about vaccines helped build up scepticism about other fake news, which will proliferate as campaigning for the presidential election in October gathers steam.

In that instance, and in some others, the pandemic may actually have helped. Rose, for example, the abused Filipina, did eventually find support—through Facebook. IDEALS, a local group of lawyers who work with the poor, had to find new ways of reaching clients in lockdown. They set up a Facebook page, Tisya Hustisya, to answer questions about ever-changing social-distancing rules. But it soon became a way to serve more people than they had ever helped face to face. They gave Rose guidance on how to make a police report, and then on how to file a case against her husband with the help of a public prosecutor.

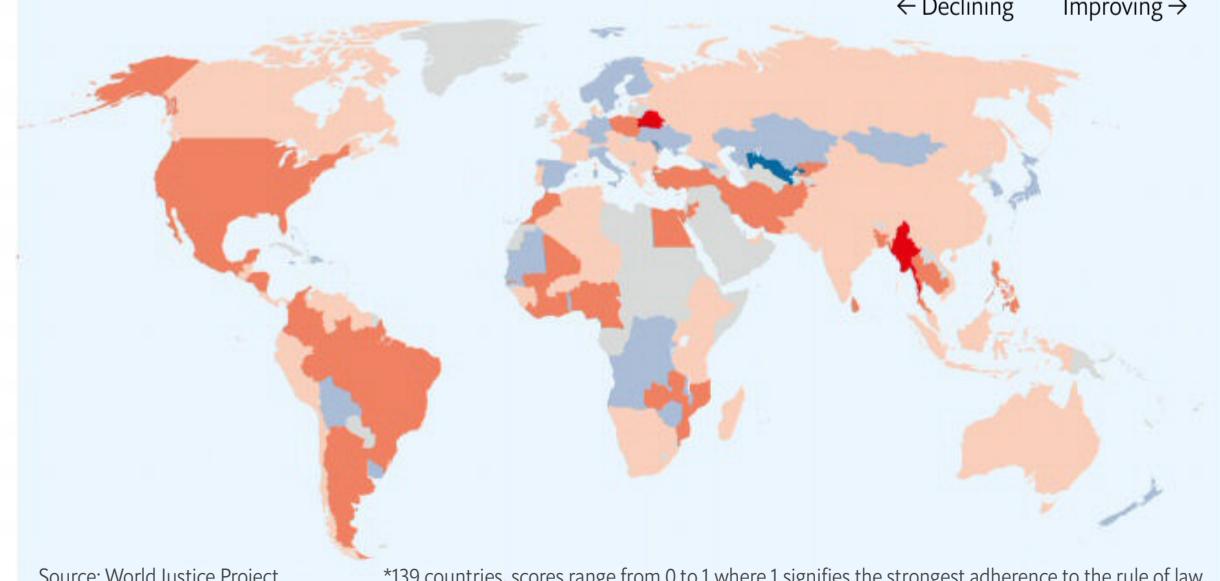
Entrepreneurs are also seeing potential in “people-centred justice”. HIIL (The Hague Institute for Innovation of Law), a Dutch NGO, has teamed up with FOUNT, an investment-advisory firm, to launch the Innovating Justice Fund, to support young growing businesses in this field in emerging markets. Candidates include DIY Law, a Nigerian firm promising to “make legal easy” for new companies needing to cross registration and other hurdles; and, in Tunisia, Civitas, which provides customers with “user-friendly platforms for obtaining permits and licences”—ie, helps them navigate the bureaucracy.

Legal services’ move online, hastened by the pandemic, creates an opportunity to extend access and to curb corruption (it is hard to pass a brown envelope to even the user-friendliest of platforms). It does, however, risk further discrimination against those with less access to the internet, and raise concerns about privacy and the security of data. And it is worth bearing in mind that most justice problems do not involve the formal legal system at all. In many countries perhaps the best way to improve access to justice is to devote more resources to helping grassroots activists working with those who would never dream of going to court. ■

They fought the law and the law lost

Rule of Law index overall score*, 2021

% change on a year earlier





Managing American business in hard times

No margin for error

A guide to running a company in a period of stagflation

FOR THE leaders of America Inc, high inflation is unwelcome. It is also unfamiliar. Warren Buffett, 91, the oldest boss in the S&P 500 index of big firms, most recently warned about the dangers of rising prices in his annual shareholder letter for 2011. The average chief executive of a company in the index, aged a stripling 58, had not started university in 1979 when Paul Volcker, inflation's enemy-in-chief, became chairman of the Federal Reserve. By the time the average boss began working the rise of globalised capitalism was ushering in an era of low inflation and high profits (see chart 1 on next page). Their firms' share prices rose between the global financial crisis of 2007-09 and the covid-19 pandemic, a decade of rock-bottom inflation.

Inflation will stay high for some time yet. On June 7th the World Bank warned that "several years of above-average inflation and below-average growth now seem likely." A new study by Marijn Bolhuis, Judd Cramer and Lawrence Summers finds that if you measure inflation consistently, today's rate is not that far off the peak in 1980. As the past creeps up on the future,

"stagflation" is preoccupying the denizens of corner offices. Today's executives may think of themselves as battle-hardened—they have experienced a financial crisis and a pandemic. However, the stagflationary challenge requires a different toolkit that borrows from the past and also involves new tricks.

The primary task for any management team is to defend margins and cashflow, which investors favour over revenue growth when things get dicey. That will require fighting harder down in the trenches of the income statement. Although a rise in margins as inflation first picked up last

year led politicians to denounce corporate "greedflation", after-tax profits in fact tend to come down as a share of GDP when price rises persist, based on the experience of all American firms since 1950 (see chart 2). To create shareholder value in this environment companies must increase their cashflows in real terms. That means a combination of cutting expenses and passing cost inflation on to customers without dampening sales volumes.

Cost-cutting will not be easy. The prices of commodities, transport and labour remain elevated and most companies are price-takers in those markets. Supply-chain constraints have begun to ease a bit and may keep easing in the coming months. But disruptions will almost certainly continue. In April Apple lamented that the industry-wide computer-chip shortage is expected to create a \$4bn-8bn "constraint" for the iPhone-maker in the current quarter.

The input bosses can control most easily is labour. After months of frenzied hiring, companies are looking to protect margins by getting more from their workers—or getting the same amount from fewer of them. The labour market remains drum-tight: in America wages are up by more than 5% year on year and in April lay-offs hit a record low. But, in some corners, the pandemic hiring binge to meet pent-up demand is being unwound.

American bosses are again demonstrating that they are less squeamish about layoffs than their European counterparts. In a

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► memo sent to employees this month Elon Musk revealed plans to trim salaried headcount at Tesla, his electric-car company, by 10%. Digital darlings, many of which had boomed during the pandemic, collectively sacked nearly 17,000 workers in May alone. After tempting workers with increased pay and perks, in the latest quarterly earnings calls more American CEOs have been talking up automation and labour efficiencies.

In the current climate, though, hard-headed (and hard-hearted) cost control won't be enough to maintain profitability. The remaining cost inflation must be pushed through to customers. Many businesses are about to learn the difficulty of raising prices without crimping demand. The companies that wield this superpower often share a few attributes: weak competition, customers' inability to delay or avoid the purchase, or inflation-linked revenue streams. A strong brand also helps. Starbucks boasted on an earnings call in May that, despite caffeinated price rises for its beverages, it has struggled to keep up with "relentless demand".

Recent data hint at softer consumer sentiment, however. This makes it riskier for firms to roll out frequent price increases. Amber lights are blinking, from McDonald's, which has speculated about "increased value sensitivity" among burger-munchers, to Verizon, which detected customer "slowness" in the most recent quarter. The ability to push through price increases as customers tighten their belts requires careful management. In contrast to the last high-inflation era, managers can use real-time algorithmic price setting, constantly experimenting and adjusting as consumers respond. Nonetheless, all firms will still have to take a longer-term view on how long high prices will last and on the limits of what their customers will tolerate. That is finger-in-the-wind stuff.

Even if they keep revenues and costs under control, CEOs are discovering what their predecessors knew all too well: inflation plays havoc with the balance-sheet. That requires even tighter control of work-



ing capital (the value of inventories and what is owed by customers minus what is owed to suppliers). Many firms have misjudged demand for their products. Walmart lost almost a fifth of its market value, or around \$80bn, in mid-May, after it reported a cashflow squeeze caused by an excess build-up of inventories, which rose by a third year on year. On June 7th its smaller retailing rival, Target, issued a warning that its operating margin will fall from

5.3% last quarter to 2% in the current one, as it discounts goods to clear its excess inventories. Payment cycles—ie, when a firm pays suppliers and is paid by customers—become more important, too, as the purchasing power of cash delivered tomorrow withers in inflation's heat.

All this makes a business's performance more difficult to assess. For example, calculations of return on capital look more impressive with an inflated numerator (present returns) and the denominator (capital invested in the past) in old dollars. Between 1979 and 1986, during the last bout of high inflation, American firms were required by law to present income statements that were adjusted for rising prices. This edict is unlikely to be revived. But even as bosses boast of higher nominal revenue growth, investment and compensation decisions should account for such artificial tailwinds. Just ask Mr Buffett. In his letter to shareholders for 1980 he reminded them that profits must rise in proportion to increases in the price level without an increase in capital employed, lest the firm starts "chewing up" investors' capital. His missive to investors in 2023 may need to carry the same message. ■

Fast fashion

A pretty picture

BERLIN

But for how long?

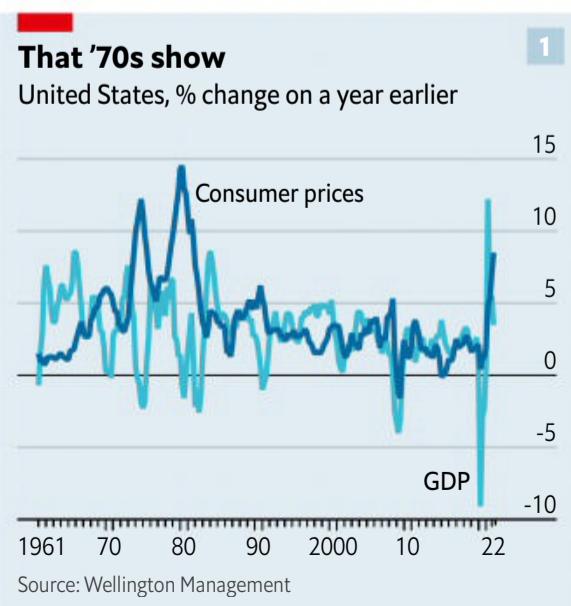
“FOR THE last two months it has been busy like the weekend every day,” sighs a sales assistant at a large Zara store on Tauentzienstrasse, a shopping street in the centre of Berlin. On the Tuesday after the long Pentecost weekend about a dozen ladies were queuing for the fitting room, each carrying several items, many of them in hot pink or canary yellow, colours *en vogue* this season. They don't seem to be deterred by Zara's higher garment prices. At least not yet.

Shoppers are still “revenge buying” to make up for all the time when shops were closed and socialising banned amid waves of covid-19. After grafting pajama bottoms onto their legs over the past two years, buyers are snapping up office and party wear. On June 8th Inditex, which own Zara, Bershka and Massimo Dutti, among other brands, reported glittery results for its latest quarter. Revenues rose by 36% year on year, to €6.7bn (\$7.2bn), surpassing levels before the pandemic. Net profit jumped by 80% year on year. Online sales dipped compared with the same period in 2021, when the internet was the only place to

shop for clothes owing to lockdowns in America and Europe. But the decline of 6% was much slower than expected, which suggests that people have got used to buying garb on the internet. In another boost, China is reopening after the latest bout of lockdowns. Only four of Inditex's Chinese outlets remain closed, down from 67 in the three months to April. H&M, Inditex's Swedish fast-fashion rival, is expected to report similarly perky results on June 15th.

The big question for Óscar García Maceiras, who took over as chief executive of Inditex in November, and his opposite numbers at other fast-fashion firms, is whether the party can last. The short answer is that it probably won't. But if anyone can keep it going for a bit longer, it is Inditex. As Georgina Johanan of JPMorgan Chase, a bank, notes, the Spanish giant looks best-placed to withstand the combined pressures of war, competition, inflation and, possibly, recession.

Start with the problems. Fast-fashion firms had to put a complete halt to their operations in Russia and Ukraine after Vladimir Putin invaded his southern neighbour ►





Blurry prospects

► in February. Inditex, which has more than 500 shops in Russia, derived 8.5% of its operating profit from the country in 2021. This year it has had to make a €216m provision for the estimated cost of the war to its Ukrainian and Russian businesses.

Beyond eastern Europe, fashion retailers are being squeezed by competition from Shein, an online-only challenger from China that has sashayed into Western wardrobes in the past few years. And then there is the twin “stagflationary” challenge of higher costs and flagging demand. This is acute for clothes pedlars, since many of their customers have already replenished their closets—and a new pair of trousers is a less urgent need than energy, food and rent, all of which have been getting pricier.

No fast-fashion house is immune to these forces. But with the exception of the Russia-Ukraine war, Inditex does look less vulnerable than the others. Shein, whose items sell for an average of \$20 or so, poses less of a direct threat to the Spanish company’s mid-market frocks, which go for just under \$40 at Zara, according to estimates by Anne Critchlow of Société Générale, a bank. In recent years Inditex has also done a better job than its rivals of unifying its online operations with its more than 6,000 shops around the world, thanks to clever radio-frequency trackers, an in-house digital platform and a group-wide inventory database.

Crucially, Inditex enjoys one more advantage over rivals when it comes to inventory, the management of which is particularly important in times of stagflation (see previous article). The company produces around two-thirds of its items in Europe or in nearby north Africa and Turkey. That allows it to adjust output more quickly in response to demand than firms like H&M, which sources 80% of its clothes from Asia. In a slowdown it pays to be faster in fast fashion. ■

Big tech in China

Alive. Unwell?

SHANGHAI

Investors seem willing to forget Didi Global's near-death experience

DIDI GLOBAL ought to be dead. Over the past year the Chinese government has stopped the domestic ride-hailing giant from signing up new users and launched a cyber-security investigation into its operations, days after its \$4.4bn initial public offering in New York last June. In a seemingly fatal blow, Didi is being forced to delist from America but blocked from relisting in Hong Kong. That the company has not collapsed is a testament to the strength of its business. Its future survival—and that of other Chinese tech darlings—remains in the gift of the Communist Party.

The probe into Didi is expected to wrap up shortly and on June 6th the *Wall Street Journal* reported that the firm will soon be able to take on new customers. The news propelled Didi’s share price up by 60%. It still faces an investigation in America, where it is alleged to have underplayed regulatory risks in its domestic market, and investors are suing it on similar grounds. But these problems seem piffling next to what it has soldiered through at home.

The first sign that the Communist Party’s two-year campaign against big tech would ease came in March from Liu He, a top economics adviser to President Xi Jinping. In May Mr Liu met a handful of tech executives and spoke of supporting the digital economy and balancing the relationship between state and market. The potential resumption of Didi’s business in China is one sign that things are indeed normalising. Some large tech platforms’ first-

quarter results were also better than expected. Meituan, a delivery super-app, said on June 6th that revenue grew by 25% year on year in the first three months of 2022.

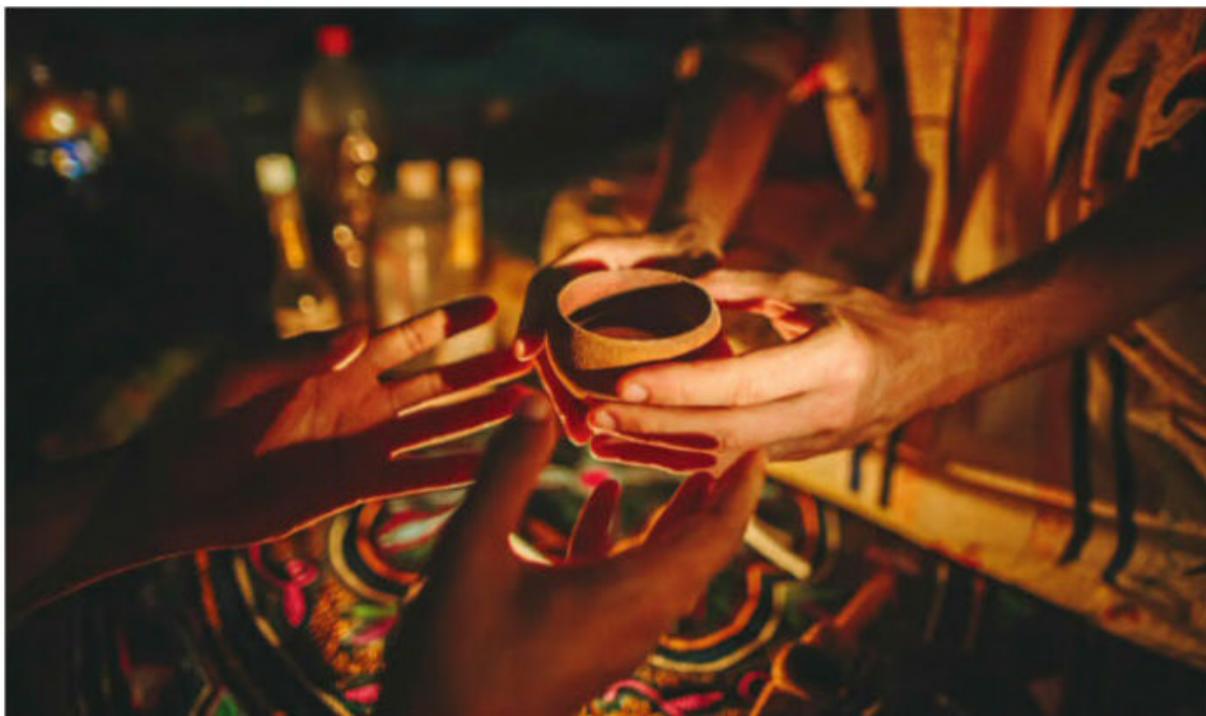
Yet China’s tech companies are returning to a very new normal. Its two mightiest tech titans, Alibaba and Tencent, are growing much more slowly than in the past. Room to expand into new areas beyond their core businesses (e-commerce, and social media and video-gaming, respectively) has all but vanished. Outspoken entrepreneurs such as Jack Ma, Alibaba’s co-founder, are a thing of the past. Tech executives instead parrot official lines about ending their industry’s “reckless expansion” (which has also meant laying off tens of thousands of employees). And the state is taking direct stakes in their firms.

Not long ago global investors shuddered at the prospect of state ownership. Now some are coming around to the idea. When Bloomberg reported on May 27th that FAW, a state-run carmaker, was planning to buy a large stake in Didi, the ride-hailer’s share price surged by 10%. A big state investor such as FAW could help Didi navigate compliance and governance issues, explains Cherry Leung of Bernstein, a broker. State investors have been eyeing the consumer-lending and credit-scoring businesses of Ant Group, Alibaba’s financial affiliate at the heart of the techlash.

Once viewed as a drag on profitability, backing from a powerful government group is increasingly seen as a precondition for big tech firms to remain going concerns. It may be the only way for companies that have fallen foul of Mr Xi, and his grand plan for achieving “common prosperity” in China, to stay alive. Investors appear happy to forget about Didi’s death throes now that the firm has been resuscitated. They would be wise to remember that China’s leader has changed his mind before—and could do so again. ■



It was Xi's call



Corporate psychedelics

The ultimate business trip

A NEW PLANE OF EXISTENCE

Bosses want to feed mind-altering drugs to staff. Are they high?

IN HIS PENTHOUSE suite in London's Old Street, under the watchful gaze of a small stone statue of a mushroom god, Christian Angermayer recalls a life-changing experience with psychedelic drugs. It was many years ago, on a tiny island in the Caribbean. The trip was so meaningful for the investor that he decided to back biotech firms using psychedelics to treat depression, anxiety, addiction and other mental-health conditions. Such startups are increasingly catering to corporate clients. A growing number of firms want to offer psychedelics to staff, either for the sake of mental health or to organise a mind-bending corporate retreat.

This surge in interest is being driven by the growing evidence of psychedelics' safety and efficacy, when consumed in controlled settings. Ketamine is already legally available, both as an anaesthetic and to treat depression in clinics across America and Europe. Psilocybin (which gives magic to mushrooms) is available legally in Amsterdam and will become legal in Oregon next year. And America's drugs regulator is soon expected to decide whether to approve MDMA (ecstasy) for use in treating post-traumatic stress disorder.

In February Dr Bronner's, an American soapmaker that has long supported efforts to loosen laws around the use of psychedelics and cannabis, added therapy that combines ketamine and counselling to its employee mental-health-care plans. Daniel Poneman of Beyond Athlete Management, a sports agency, says he has seen psychedelic medicine be extremely effec-

tive in helping clients struggling with performance anxiety, pressure and isolation from constant travel. Ronan Levy, co-founder of Field Trip, a provider of psychedelic experiences from Amsterdam, tells of NBA basketball players who were about to quit and were put back on their career path.

Psychedelics have corporate uses beyond improving workers' mental health. Anne Philippi, boss of The New Health Club, a German psychedelic-retreat outfit, says some firms are also experimenting with such drugs to make executives more empathetic, enhance team bonding, boost creativity or change company culture. Field Trip offers a weekend retreat for "leaders" to allow them to experience "a heightened level of consciousness".

Care is needed to avoid misuse. Psychedelics are not suitable for some mental-health problems, such as schizophrenia. As with after-work drinks, not everyone wants to, or can, take part. An asset manager at a big family office reports agonising over whether or not to accept an invitation from a firm in her portfolio to an (illegal) Ayahuasca retreat at a villa in California, with a shaman flown in for the occasion. And a mind-bending experience can lead workers to question everything—including capitalism and the nature of work. Keith Ferrazzi, an executive coach, knows of several business founders who quit after a trip. As trippy options expand faster than the mind of a CEO on acid, companies would be wise to make any decisions about their business use with a clear head. ■

Airlines

Flying start

Air travel is taking off again but still faces headwinds

THE PANDEMIC denied both the pleasures and tribulations of travel. The urge to make up for lost holidays and reunions with friends and families has brought the sort of airport holiday chaos that travellers avoided while covid-19 scuppered their plans. A rush to take advantage of school breaks caused recent misery in Europe. Passengers queued for hours at airports from Mallorca to Manchester, and flights were delayed or cancelled. Americans were furious after nearly 3,000 flights were scrapped in the four days around the Memorial Day weekend in late May.

At least the hordes of unsatisfied customers are a sign that air travel is returning to normal. "Pent-up demand for travel is becoming un-pent," says Andrew Charlton of Aviation Advocacy, a consultancy. The number of seats available on European airlines in the week commencing June 6th was only 9% below the same week in 2019. In North America it was just 5.6% down, according to OAG, another consultancy. Japan, which was in effect shut to tourists for two years, said on May 26th that it would start to relax restrictions on visitors. With the exception of China, where severe recent lockdowns set back a strong recovery in domestic flying, the planes are back in the air at close to pre-pandemic levels.

Bookings also look encouraging for the summer. Airlines are having to cope with a new uncertainty—a tendency of travellers to buy tickets later, induced by the riskiness of planning too far ahead during the pandemic. Even so, up to September sales for international routes are at 72% of their level in 2019 and those on domestic ones are at 66%, according to IATA, an industry

Fancy of flight

Worldwide scheduled monthly airline-seat capacity, m



body. Capacity is ascending towards pre-covid levels, according to OAG (see chart on previous page). Willie Walsh, IATA's boss, said in May that the speed of the rebound meant that passenger numbers worldwide would match figures from 2019 by 2023, a year earlier than previously forecast.

The pace of the recovery has caught out an industry that has been rebuilding at a steady clip. In particular, traffic has become much more concentrated in peak periods, according to ACI Europe, a group representing the region's airports. Passenger numbers are already exceeding pre-

pandemic levels in short spells in some places. Airports, in particular, are struggling to cope with these peaks. Replacing workers laid off during the pandemic is tough amid tight labour markets, especially so because of the extra security checks required to hire airport staff. Swissport, the world's largest airport-service firm, said in May that it needed to take on 30,000 new workers worldwide by the summer on top of the 45,000 it now employs.

Staff shortages have already prevented some airlines from adding even more capacity to meet the surging demand. Con-

tinuing disruptions may deter passengers, especially if the novelty of taking a holiday in a faraway place wears off. Even if airlines and airports are able to recruit staff to make the summer months less painful, other problems remain.

Foremost is a sky-high oil price. Mr Walsh said recently that surging fuel costs had added 10% to fares already. Michael O'Leary, the irrepressibly bouncy boss of Ryanair, Europe's biggest carrier, admits only to "cautious grounds for optimism". A white-hot summer could be followed by a difficult winter. ■

Bartleby Corporate jet, Rorschach test

Emblem of greed or route to productivity: what do you see?

THE ORIGINAL Rorschach test involves showing a series of ten inkblots to someone, and asking them what images they see. Although the test's psychological validity is debatable, no one can dispute its wild success as a metaphor: a single object can mean very different things to different people. In business a prime example of Rorschachiness is the corporate jet. Depending on your perspective, it can signal untrammelled greed, rational decision-making, post-pandemic work habits or the fight against climate change.

Those who see excess regard the company jet as the worst in a pile of gold-plated perks for overpaid executives. While minions reacquaint themselves with airport queues and the curse of six hours next to the chatty stranger in 24A, bosses skip the lines and travel in luxury. It is difficult to remain grounded in these circumstances. EY, a global accounting firm, reportedly calls its plane "EY One"; on touchdown, auditors doubtless fantasise about radioing that "the EYgle has landed". If jets were used only for work trips, that would be bad enough. But more than half of the CEOs of a 500-strong group of companies monitored by Equilar, an analytics outfit, made use of their firm's jet for personal purposes in 2020.

This view equates the company plane with entitlement and waste. The bosses of America's big carmakers were excoriated for using their jets to travel to Washington, DC, to ask for a bail-out during the financial crisis in 2008. Disquiet about his use of Credit Suisse's private jet was one reason why António Horta-Osório resigned as chairman of the Swiss bank earlier in the year. When Jeff Immelt, a former chief executive of GE, travelled on the firm's private plane, a

second one would sometimes follow him around the world as backup. Mr Immelt's successor, John Flannery, made a point of putting GE's jets up for sale when he took over in 2017. A research study from 2012 found that cost-conscious private-equity firms reduced corporate-jet fleets at firms they had acquired.

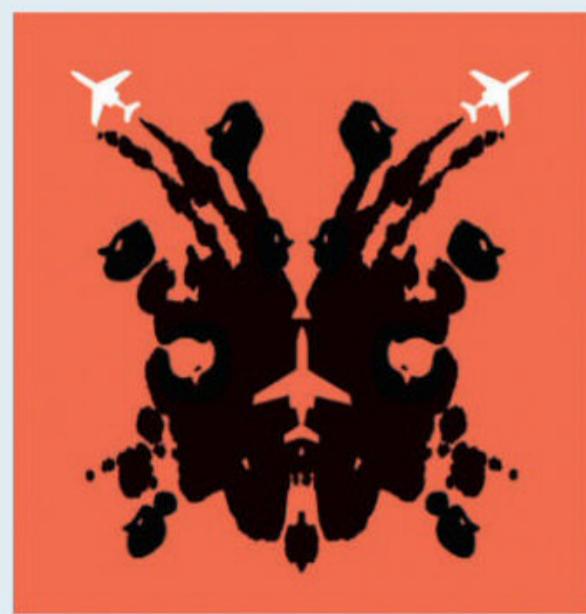
If the corporate-jet inkblot spells excess to some, to others it represents hard-headed pragmatism. The personal safety of top executives is one consideration: private aircraft are a big part of Meta's outsized spending (\$27m in 2021) on the security of Mark Zuckerberg, its chief executive. So is privacy: it is really hard to finalise a secret takeover when there is a stranger spilling pretzels on you. (Both of these arguments are slightly weakened by the scraping of air-traffic data that lets people track specific aircraft; a paper published last year described a machine-learning algorithm designed to predict where a corporate jet is going to land while it is still in the air.)

Above all, chief executives are busy people. If boards would rather they spent

more time working and less time watching someone repack their suitcase at the security gates, that's their call. And because private jets can land on more airfields than commercial airliners can, they are often the only way for executives to travel directly from headquarters to factories and subsidiaries in less accessible locations. A paper published in 2018 by academics at Boston College and Drexel University found that business-related flights of this kind improved firms' operational performance.

Some look at corporate jets and primarily see an enemy in the fight against climate change. Because of the small number of passengers on board, private planes emit much more carbon per passenger mile than commercial flights do. Elon Musk, a clean-tech tycoon who is fast becoming a Rorschach test in his own right, was pilloried recently when his jet took a nine-minute flight from San Jose to San Francisco. Mr Musk is also an outspoken critic of remote work, which is another thing that private jets bring to mind. The argument for using them rests heavily on the importance of in-person communication, something that has become a lot more contentious in the post-pandemic workplace.

The point of the Rorschach test is that it has no single right answer. Corporate jets look unjustifiable to some and sensible to others. They can improve productivity or be a sign of an out-of-control CEO; the paper from 2018 found that planes made more flights to resorts when a firm's boss had been in place for longer and when it had dual-class shares. They raise questions of fairness among critics and spell efficiency to defenders. They have become a useful shortcut for testing someone's gut instincts on management, as well as for beating the queues.



Schumpeter | The Committee to Save the Planet

Anti-woke warriors attack three juicy targets



IN 1999 *Time* magazine put three heavyweights from America's Federal Reserve and Treasury Department on its cover, calling them "The Committee to Save the World". They were Alan Greenspan, Robert Rubin and Lawrence Summers. Their accomplishment was stopping economic upheavals from Russia to Brazil causing mayhem in the global financial system. Big stuff, for sure. But nothing compared with the task facing those who today could be called "The Committee to Save the Planet". They are Mark Carney, former governor of the Bank of England, Larry Fink, boss of BlackRock, the world's largest investment firm, and Jamie Dimon, CEO of JPMorgan Chase, America's biggest bank.

Their aims are no less than to stop global warming and create a fairer, more enlightened form of capitalism. In just a few years they have marshalled to the cause more than 100 central banks, tens of trillions of dollars of investors' cash and bank finance, and the bosses of America's biggest firms. Their ambitions are not just big. They are epochal. So why are they suddenly figures of mockery in the war on "woke" capitalism?

Mr Carney was the first global policy wonk to raise his cuff-linked fist. In 2015 he focused attention on the systemic risks to banks and insurance companies as a result of climate change. In doing so, he set in motion a blitzkrieg of regulatory activity to press firms and their lenders to disclose their exposure to the risks of global warming. But he has also stirred a backlash. During a polemical presentation last month Stuart Kirk, HSBC Asset Management's head of responsible investment, attacked the "unsubstantiated, shrill, partisan, self-serving, apocalyptic warnings" about the risk a changing climate poses to financial markets. There was no mistaking the target of the dig: it was Mr Carney. Conservatives, including the *Wall Street Journal*, smelled red meat. They ridiculed central bankers' focus on the long-term effects of climate change while missing more immediate risks such as inflation.

Mr Fink has brought big money to Mr Carney's climate crusade—and done well out of it, too. BlackRock, with \$9trn of client assets, is a big force behind a surge in environmental, social and governance (ESG) investing in recent years, with which it has wooed investors. For asset managers ESG has been a high-fee gravy train. But it is an unholy muddle for investors. Returns have been

shrivelling as tech stocks, a favourite of ESG funds, swoon, and oil stocks soar. Since the war in Ukraine, the sustainability mantra has switched from shunning oil and defence stocks to embracing them. There is an emerging whiff of scandal. Last month DWS, Deutsche Bank's asset-management arm, was raided by German police over ESG "greenwashing" allegations, which it has denied. And ESG finds itself in the trenches of America's culture wars. Ted Cruz, a senator, talks of a "Larry Fink surcharge" when people fill up their petrol tanks. Texas, which he represents, threatens to keep state money from funds that boycott oil and gas. No wonder Mr Fink now says: "I don't want to be the environmental police."

Mr Dimon is the architect of the corporate corollary to this financial do-goodery. As chair in 2019 of the Business Roundtable, a CEO lobby group, he led efforts to change its creed from prioritising the interests of shareholders to putting them alongside those of customers, employees and others. Stakeholder capitalism has given rise to the activist CEO, speaking out on issues ranging from voting laws to education on sexual orientation. Questions about whether such concerns are relevant to a company's bottom line, or agreed upon by all stakeholders, are mostly brushed aside. It may be tested if rising interest rates choke off the economic recovery, leading firms to fire some of the stakeholders whose interests they claim to serve. It is already costly. JPMorgan has been largely excluded from the Texas municipal-bond market since last September, when a law was passed stopping the state from doing business with companies that have anti-gun policies. And it is widely misunderstood. "I am a red-blooded free-market capitalist and I'm not woke," Mr Dimon said in a defiant outburst this month.

For all the pushback, the triumvirate can point to a few genuine reasons for using the bully pulpit. Governments are abjectly failing to take steps, such as high and co-ordinated carbon taxes, to tackle climate change. Companies have got away for too long without taking account of—or paying for—their externalities, especially their impact on the natural world. Consumers, employees and investors are increasingly motivated by threats to the environment, as well as to social welfare, and gravitate towards firms that want to make a difference.

Missionary creep

Yet there is a ring of truth to some of the criticisms, too. Take the accusations of mission creep. In tackling climate change, Mr Carney has urged central banks out of their comfort zones, though so far with little evidence that financial systems are being destabilised by the costs of the energy transition. Though Messrs Fink and Dimon are bound by fiduciary constraints to serve the interests of their asset-owners and shareholders, ESG and stakeholder capitalism make such duties harder to define. The second valid criticism concerns the tendency towards sanctimony. Until recently the private sector was a sanctuary from political partisanship and moral crusades. Bosses should speak out when events occur that materially impact their businesses, rather than pontificate about all manner of extra-curricular concerns.

Third, critics have a point when they note that it is governments' responsibility to solve societal problems. This may be a world bereft of inspiring political leadership. But that is something voters must fix at the ballot box, not billionaires smuggling in their political views via the backdoor at annual general meetings. Saving the planet is one thing. Saving it by committee smacks of elite overreach. Sadly, that appears to be part of the future Messrs Carney, Fink and Dimon have in mind. ■

**Economic warfare**

Seizing opportunities

A growing chorus is calling for Russian assets to be confiscated to help rebuild Ukraine. Legal hurdles stand in the way

IN 2011 VIKTOR VEKSELBERG, a metals tycoon and Kremlin insider, visited the team designing the *Tango*, a \$90m yacht he had ordered, to oversee its construction. His attention to detail proved his undoing. When Mr Vekselberg came under American sanctions in 2018, his foreign assets were frozen—but not the *Tango*, which was held via a shell company registered in the British Virgin Islands. Then two engineers at the shipyard, remembering the meeting in 2011, tipped off the FBI. A trail of money transfers confirmed that Mr Vekselberg did indeed own the *Tango*. On April 4th this year Spanish police, acting at America's request, seized the boat in Mallorca.

Netting the *Tango* was a coup for KleptoCapture, a task force set up by Joe Biden, America's president, to track the assets of oligarchs blacklisted by the West after Russia invaded Ukraine. The EU has captured about \$7bn in art, boats and property; Italy has impounded a \$700m superyacht said to be linked to Vladimir Putin; America has held about \$1bn in vessels and aircraft. Add in the chunk of the Russian

central bank's currency reserves that have come under Western sanctions, and nearly \$400bn in assets have been blocked.

According to the Kyiv School of Economics, the total economic damage to Ukraine so far could amount to as much as \$600bn. To many, therefore, the idea of seizing Russian assets, selling them and using the proceeds to compensate the victims of Mr Putin's aggression seems irresistible. Charles Michel, the head of the European Council, for instance, has argued that "it is extremely important not only to freeze assets, but also to make it possible to

confiscate them, to make them available for rebuilding Ukraine." The idea has gained support from politicians everywhere from Canada to Germany. But there are two big obstacles to the plan: the practical difficulties of freezing assets, and the legal difficulties of seizing them.

Consider the practicalities of freezing assets first. The central bank's currency reserves are a relatively straightforward target. More than half of Russia's reserves are held in the West and are subject to sanctions. So far, however, this giant stash is "hindered", not technically frozen: transactions with the central bank are prohibited, but its funds are not legally blocked. That means Western countries are an extra step away from being able to seize the money, says Adam Smith of Gibson Dunn, a law firm. Ukraine's allies could decide to take that step, as America did when it froze the Afghan central bank's reserves last year, after the Taliban entered Kabul.

Private assets are harder to target. Russia's stock of foreign direct investment amounts to some \$500bn. But little of this is subject to freezes, says Rachel Ziemba of CNAS, an American think-tank. One problem is that it is hard to know where the investment is based: its recorded location is often Cyprus, but that tends to be only an intermediate stop. Freezes have therefore focused on individuals instead.

Here, too, tracking down assets is tricky. Anders Aslund, a former adviser to the Russian and Ukrainian governments,

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► estimates that Russians under sanctions hold some \$400bn of assets abroad. But, he says, only \$50bn of that is frozen. Having been targeted by sanctions after Russia invaded Crimea in 2014, the wildest oligarchs now hide their foreign assets behind 20-30 layers of shell companies. Some physical assets have been moved to friendlier territory. More than 100 Russian private jets landed in Dubai in the weeks after the invasion of Ukraine.

Moreover, the enforcement of sanctions falls on the private firms—from banks to marinas—that serve the rich. Not all have the expertise to see through tycoons' obfuscation. Whoever freezes the assets may also have to look after them, which drains resources. Houses need to be tended to; yachts cost 10% of their value in yearly maintenance.

These difficulties pale into insignificance when compared with the problems of confiscation—the next step if Russian assets are to be used to rebuild Ukraine. In Western democracies seizing foreign property on the basis of nationality or political opinion is illegal. That is not to say there are no precedents for the expropriation of both state and private assets. But they have taken place at extraordinary times, and when certain strict criteria have been met.

Seize and desist

When it comes to individuals, the typical condition for confiscation is a criminal conviction—not just for any crime, but those that are deemed to warrant seizure. The forfeited assets must either be determined an instrument of the crime, or linked to the proceeds from it. Such things can take years (and a lot of money) to be proved in court. And the hurdle is unlikely to disappear soon: a bill introduced in the US Senate in April that would have granted the president powers to confiscate oligarchs' assets was soundly defeated after the American Civil Liberties Union warned it would probably be struck down in court.

Officials in the West are therefore instead working to lengthen the list of crimes that warrant seizure. In April the Biden administration introduced a bill that would add sanction and export-controls evasion to the list of offences punishable by the Racketeer Influenced and Corrupt Organisations Act, which was passed in 1970 to crack down on mobsters and allows for ill-gotten gains to be seized. On May 25th the European Commission outlined plans to make it easier for member countries to confiscate assets belonging to individuals suspected of breaching sanctions.

Each proposal faces a tough political battle. Although most Republicans support bashing Russia, few want to give Mr Biden a victory ahead of the mid-term elections in November. The EU will have no power to tell member governments how to

use the proceeds from the liquidated assets. Some countries will be wary of confiscation: Germany may have to amend its constitution, which guarantees private property; Cyprus and Malta, which act as transit hubs for Russian money, are unlikely to support seizures.

The confiscation of state assets, meanwhile, would require Western governments to designate Russia a hostile power, or to call for regime change, which they have shied away from doing so far. As a rule, the doctrine of "sovereign immunity", enshrined by a UN convention, protects foreign states from local prosecution. But some laws, most notably in America, allow the government to seize foreign state assets without trial in certain cases.

One such law is the International Emergency Economic Powers Act (IEEPA), which provides legal backing for the current freezes. It does not explicitly grant the president powers to "vest" assets—ie, to change who owns them. But one exception, added in 2001, allows for some vesting when America is engaged in "armed hostilities" with another country. This was used by George W. Bush to seize Iraqi assets after he invaded the country in 2003. Today, however, America is at pains to emphasise that its shipments of weapons to Ukraine do not equate to its being in armed conflict with Russia. Saying otherwise could become "the actual reason for war", notes Antonia Tzinova of Holland & Knight, another law firm.

Seizures can happen outside IEEPA. America's executive branch has the authority to transfer control of certain foreign state assets when it changes what it considers to be the legitimate government—as it did in 2019, when it confiscated Venezuelan assets after recognising Juan Guaidó as president. But America has so far fallen short of calling for Mr Putin to go. Under rare circumstances, Congress can also lift the immunity of sovereign states, allowing their assets to compensate claimants in a

domestic trial. One chunk of the frozen Afghan assets has been set aside while courts hear from the families of the victims of the September 11th attacks. For this to apply to Russia, though, America would have to declare it a terrorist state. The EU, for its part, is not even discussing the matter of sovereign assets, points out Jan Dunin-Wasowicz of Hughes Hubbard & Reed, a law firm. Mentions of them are conspicuously absent from its proposals.

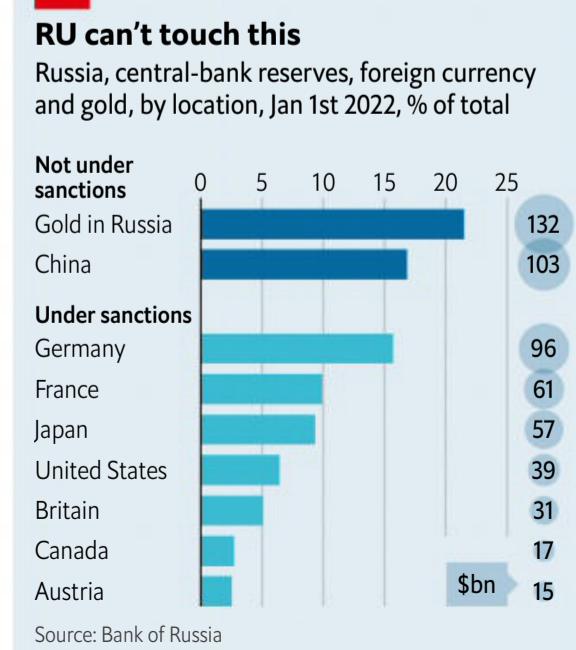
International courts do not appear to be a fruitful avenue, either. Neither Russia nor Ukraine have consented to the jurisdiction of the International Court of Justice, save for a few narrow exceptions, says Astrid Coracini of the University of Vienna. A newly created body, akin to a commission set up by the UN in 1991 to seek reparations from Iraq after it invaded Kuwait, would require Russia's consent.

Creative ideas are therefore springing up. One is to target the billions of dollars a day that Russia receives for its energy exports, rather than its stock of assets. In a meeting of the G7 countries in May, America proposed levying a tariff on Russian oil, the proceeds of which could then be sent to Ukraine. But achieving agreement even within the EU will be a tall order.

Another scheme would funnel payments for Russian oil to escrow accounts at international banks, as happened with Iranian crude in the 2010s. The accumulated bounty, worth around \$100bn, became available again to Iran after sanctions were lifted in 2016. This time the West could demand that some of the money be donated to Ukraine. One insider suspects the idea is being considered in Washington. Russia could, however, try to wind down its remaining oil sales to the West. Enforcing the measure more widely, meanwhile, would require transgressors to be threatened with "secondary" sanctions—something that the West has so far avoided.

All this suggests that attempts to seize Russian assets while the war rages will struggle to avoid one of three pitfalls. Unless Western countries ditch the protections they offer to foreign individuals and states, they risk spending many years in court. If they do ditch them, however, the trust underpinning their economies and societies could be endangered. More creative ideas, meanwhile, may invite Russian retaliation and anger the rest of the world.

That does not mean Russian treasure will remain untouched for ever. Most reparations tend to be agreed once war ends, often as a condition for unfreezing foreign assets. Mr Putin still seems far from considering peace. But if he ever comes round to it, letting some money go to Ukraine may be the price he has to pay for seeing some of his own assets—including, maybe, a multi-million-dollar superyacht—return home. ■



Petrol prices

Squeeze in the middle

NEW YORK

Refiners provide a fresh source of drama for oil markets

AMERICA'S DRIVING season has officially begun. Despite rising inflation and the lingering threat of the pandemic, motorists hit the highways with gusto over the recent Memorial Day long weekend. Some 40m Americans travelled by road, an increase of 8.3% on the same weekend a year earlier. That wanderlust came even as prices at the pump were about 50% above last year's levels, driven by an intense squeeze on global refining.

In normal times, the refining business is a low-margin, low-drama adjunct to the geopolitically charged upstream business of oil production and the politically charged downstream business of retail sales. Refiners typically make profit margins of \$5-10 a barrel and often go through painful spells of unprofitability. This time, however, refining is playing a starring role—the machinations of the oil-producing countries, war in Ukraine and sanctions on Russian oil exports notwithstanding. Margins for many refiners have rocketed, and bottlenecks in the sector are propelling global petrol prices upwards.

Three factors explain why refining is in the limelight. The first is a long-term decline in investment in advanced economies. With oil demand in the rich world forecast to plunge over the next two decades, investors are unwilling to spend many billions of dollars on facilities that could become stranded assets. Adding to this is environmental pressure on refining, which is seen as especially dirty, and regulations in California and Europe that favour greener fuels. Outside China and the Middle East, where capacity is expanding, refining capacity has plunged by some 3m



The sky's the limit

barrels per day (bpd) since the start of the pandemic, reckons Alan Gelder of Wood Mackenzie, an energy consultancy.

The second factor that has roiled the refining business is Chinese policymaking. China has historically been a net exporter of refined products, sending large volumes to other Asian countries. In an attempt to fight local pollution and help meet climate targets, however, officials have cut export quotas for big refiners of gasoline, jet fuel and other products by more than 50% this year. On official plans, China is set to stop exporting most carbon-intensive refined products altogether by 2025. The perverse result is that it is sitting on roughly 7% of global spare capacity even as the rest of the world thirsts for transport fuels.

The third big disruptive force is, of course, Russia's war in Ukraine and the resulting sanctions imposed on its exports of hydrocarbons. America and Britain have banned purchases of Russian oil; the EU has announced a partial embargo on crude imports, including one on refined products later this year. The effect of all this is not clear-cut. By widespread accounts (including from tanker-tracking experts), Russia is now exporting more crude oil than it did before the war. It is selling lots of cut-rate crude to India in particular, which is importing over 700,000 barrels a day more than it did before the invasion.

When it comes to refined products, though, both official sanctions and the voluntary "self sanctions" embraced by Western firms seem to be biting. According to Natasha Kaneva of JPMorgan Chase, a bank, Russia is selling roughly 500,000 fewer barrels of refined product a day than it was before the war, and may have been forced to shut down as much as 1.4m bpd of refining capacity in May. The result is an unprecedented shift, argues Richard Joswick of S&P Global, a research firm: "The world has plenty of refining capacity, but

the spare capacity is moving into Russia and China." As a result, he reckons that utilisation rates for refiners in the rest of the world will be much higher than previously envisioned.

The refining crunch could continue for a while yet. The coming Atlantic hurricane season, which is forecast to be stronger than normal, may shut down refineries in the Gulf of Mexico. Another factor is the precise timing and intensity of Europe's latest round of sanctions on Russian oil exports. If implemented aggressively, these could further squeeze the sector.

Market forces could yet save the day. The painful price spikes seen at petrol pumps will eventually cool demand a little, and could lead to improvements in energy efficiency, both of which will help balance markets.

A shift in trade flows could also come to Europe's aid. India's world-class refiners, for instance, are turning global crisis into local opportunity. RBC Capital Markets, an investment firm, reckons that the country "is becoming the de facto refining hub for Europe". Big new refineries are scheduled to come online soon in Kuwait and Saudi Arabia, which should help ease the shortages too. As Mr Joswick observes, "With margins this large, everybody has an incentive to run refineries flat out." ■

The euro area

Danger zone

BERLIN

Europe's economy grapples with an acute energy shock

FOR THE best part of a decade, rock-bottom interest rates seemed like a fact of life in the euro zone—as did low inflation. Now consumer prices are rising at an annual rate exceeding 8%, well above the European Central Bank's target of 2%. Members of the bank's governing council have signalled their intent to raise rates soon, a message they were expected to reaffirm at a monetary-policy meeting on June 9th, as we went to press. But the ECB finds itself in a tricky position: of contending not only with surging prices, which might warrant rapid rate rises, but also gloomier growth prospects, which might warrant patience.

The root cause of both developments is a severe energy-price crunch. Prices of oil and natural gas had already been rising before Russia's invasion of Ukraine; the war sent them soaring higher still. These price rises have played a much bigger role in pushing up consumer-price inflation in Europe than in America, where stimulus



► has also been a culprit. Energy prices in the euro area—which rose at a whopping annual rate of 39% in May—are contributing about four percentage points to headline inflation, compared with two in America.

The effects are starting to spill over to other prices. “Core” inflation, which excludes food and energy prices, was higher in the euro zone in May than economists had expected. German producer prices rose at a record clip of 33.5% in April, compared with last year, driven not just by energy, but also energy-intensive goods such as concrete and chemicals. The result is a

big hit to firms’ costs and households’ purchasing power. In how much danger does it put the euro area’s economy?

One consequence of the energy shock is lower household incomes in real terms. Wage growth has been picking up modestly across the zone, but still trails behind inflation. Some employers have made one-off payments to workers, to compensate them for surging prices without incurring higher recurring wage costs. Even then, however, annual pay growth in the Netherlands, where the labour market is tight, stood at just 2.8% in May. In one sense, this

is good news for the ECB, because it reduces the risk of a wage-price spiral. But it may feed into lower consumption, weakening the rest of the economy in turn.

A moderation in demand only adds to a heap of woes for the manufacturing sector, where confidence is already in steep decline. Supply disruptions as a result of China’s recent lockdowns and high energy prices are hurting businesses, with Germany and eastern Europe looking most vulnerable to an industrial slowdown. New orders for the zone’s manufacturers in May fell for the first time since June 2020, indi- ►

Buttonwood The dash for cash

As the era of cheap money ends, tech investors are prizing cash generation again

ICONIC HIP-HOP artists are rarely mentioned alongside Warren Buffett or Benjamin Graham as sources of investing wisdom. But Wu-Tang Clan’s 1994 hit “C.R.E.A.M.” immortalised a saying all investors should be familiar with: Cash Rules Everything Around Me.

For much of the post-pandemic boom in equity markets, cash and the gauges of corporate valuation that are associated with it were deeply out of fashion. Money was cheap, nearly free, particularly for technology companies. Investors tripped over each other to finance fast-growing startups with only the fuzziest plans for achieving profitability. Some large listed companies reached absurd valuations relative to their ability to generate cash.

That has changed dramatically over the past six months. As interest rates have risen, reducing the present value of future profits, a company’s ability to generate cashflows today has become relevant again. This is perhaps causing the most upheaval in tech, where many stocks are priced for profit growth well into the future.

That technology stocks have led the recent sell-off is well-known. But the shift goes deeper, as an analysis of their average free-cashflow yield in 2019-21 reveals. This measure takes the money a company generates (after operating expenses and capital investment are accounted for) and divides it by its market capitalisation, providing a gauge of the size of its cash streams relative to market value. Take global listed tech firms that were worth more than \$1bn at the start of 2020, and divide them into two groups: the hares, whose valuations raced ahead of their cash-generating ability, resulting in below-average free-cashflow yields; and the more plodding tortoises, with above-average yields.

Between the end of 2019 and the peak of America’s NASDAQ index in November last year, the share price of the median hare rose by around 24%; the tortoise, by 15%.

Since then, however, the hares have tumbled by around 22%, compared with only 8% for the tortoises. Over the two periods as a whole, the cheaper tortoises have outperformed their dearer peers by around six percentage points.

The division between the hares and the tortoises is not perfect—though Tesla, for instance, has fallen recently, it has still done spectacularly over the period as a whole, despite relatively low free-cashflow yields. Yet the trend is clear, and extends beyond tech, too. An American exchange-traded fund targeting the 100 companies in the Russell 1000 index with the highest free-cashflow yields is up by about 8% this year. The shift towards a cash-focused equity market will be felt most acutely in tech, however, precisely because it was where the excesses of the previous regime were so evident.

The beneficiaries of the new preference for cash generation include hardware

firms, such as IBM and HP, the share prices of which have risen since November. These had free-cashflow yields of 10% and 12%, respectively—far above the 3% yield for tech firms worldwide.

The parts of the sector that will suffer are those where cash generation has long been a problem. Ride-hailing is a prime example. The share prices of Uber and Lyft, two American firms, and Grab, based in South-East Asia, are all down by 40-60% so far this year. Uber, which recorded negative free cashflow, on average, between 2019 and 2021, is very much a hare by our classification. Last month Dara Khosrowshahi, its chief executive, told employees that the company would now focus explicitly on generating positive cashflow.

There are other areas where the renewed attention to cash could pose a problem for tech firms in particular. The prevalence of stock-based compensation is one. Paying employees in stock options does not register in cashflow reporting in the way that conventional pay would, because it is a non-cash expense. Research published last year by Morgan Stanley, a bank, notes that the median stock-based payout of tech firms in the Russell 1000 runs to around 25% of cashflow (before capital investment), more than three times the level for any other sector. The same analysis finds that Amazon’s free cashflow would have been reduced by almost one-third in 2020 if stock-based compensation had been counted as cashflow.

These sorts of divergences may prompt investors to try ever harder to paint a more accurate picture of cash generation. With inflation running high and no immediate return to the era of easy money in prospect, cash could start to rule everything around tech.



cating weaker demand. Export orders declined at their fastest pace in two years.

Economists are therefore pencilling in slower growth over the rest of the year. But few expect an outright recession just yet. That is because some parts of the economy confront the energy shock from a position of strength, rather than weakness. Many services firms are still reaping the rewards from the end of Omicron-related lockdowns. Southern countries are benefiting the most, given their reliance on tourism; in Spain arrivals of sun-seeking northerners almost reached pre-pandemic levels in April. Overall, business sentiment in services remains strong, with many firms reporting a growing backlog of work.

Jobs are still plentiful, too. Across the bloc there were three vacancies for every 100 jobs in the first quarter of 2022, a high level by historical standards. Firms' hiring expectations are solid, albeit slightly weaker since the start of the war in Ukraine. More than one in four businesses in Europe say that a lack of staff is preventing them from producing more.

A hoard of savings built up during lockdowns should also provide consumers with some cushion against the energy shock. According to our calculations, such "excess" savings in France and Germany amounted to a tenth of disposable incomes in the first quarter of 2022 (see chart).

These buffers will blunt the impact of the energy shock. But they will not offset it

altogether. Excess savings, for a start, are not evenly distributed. Poorer people in rich countries, and most households in poorer countries, have precious little left. In Slovakia, for example, the savings rate never rose much during the pandemic. "Consumption weakness will come from lower-income households," says Jens Eissenschmidt of Morgan Stanley, a bank. Retail sales, in real terms, have moved sideways for months.

Many governments have put together spending programmes to shield households from high energy prices. According

to Bruegel, a think-tank in Brussels, Germany, France and others are spending between 1% and 2% of GDP. Not all of that is well-targeted, however. Much of it is going on relief for better-off households that do not need it; other measures have involved meddling with prices, with some of the benefit going to energy suppliers.

Even if the euro area is spared a recession, then, the energy shock will be a drag on growth. The ECB faces an unenviable dilemma. With every increase in inflation on the back of food and energy prices, the European economy is getting weaker. ■

Housing in Canada

Northern frights

CARLETON PLACE, ONTARIO

Air starts to seep out of the bubbly Canadian property market

TIRIED, OLD stereotypes portray Canada as the frigid north, awash in maple syrup, hockey and politeness. In the financial world it has earned a more novel, racier reputation: as home to a giant housing bubble. Canada's property market has soared for the past two decades, shrugging off the global financial crisis of 2007-09 and outperforming most other countries throughout the covid-19 pandemic. Lately, though, cracks have started to appear. In Toronto prices have fallen for three consecutive months. Throughout the country, home sales have plunged. Many economists warn that worse lies ahead.

Canadians may scoff at such doomsayers. After all, bubble talk is nothing new, with economists blaring warnings since at least 2010. Nevertheless, a comparison between Canada and other rich countries should give rise to some concern. Since 2000 the average house price has more than tripled in Canada; in America, by contrast, it is up by just about 60% (see chart on next page). The median home in Canada costs ten times the median household income, the highest multiple since at least 1980. Within the OECD, a club of mainly rich countries, only New Zealand has seen house prices increase at a faster rate relative to incomes over the past two decades.

The trigger for the recent fall in sales is the same thing hitting markets from America to Australia: inflation. The Bank of Canada, like its peers elsewhere, is raising interest rates in order to tame consumer prices. That has increased mortgage costs, making homes even less affordable. In Toronto, monthly mortgage payments at the median home price gobble up an astonishing three-quarters of median household income, according to the National Bank of



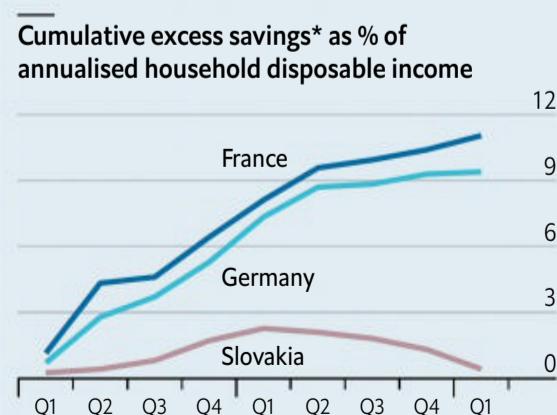
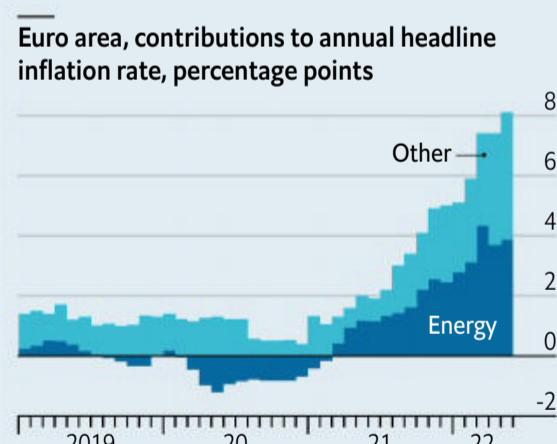
Unapologetically overpriced

Canada, a commercial lender. A rule of thumb is that mortgage payments should be just about a third of income. Little wonder that transactions are way down.

More uncertain is the impact on sentiment. Ron Butler, a mortgage-broker in Toronto, has quipped that a "fear of missing out" is giving way to a "fear of getting screwed". Storeys, a property website, reports that some buyers have started backing out of deals. Prices could have some distance to fall. Robert Kavcic, an economist with BMO Capital Markets, an investment bank, estimates that real home prices are 38% above their long-term trend, the widest deviation in four decades.

Bullishness about Canadian property has long rested on two pillars: a shortage of housing, especially in big cities, and an influx of immigrants. Like any good story, ▶

Pumped up



*Calculated as savings above the average 2016-19 savings rate
Sources: Eurostat; Destatis; INSEE; Statistical Office of the Slovak Republic; *The Economist*

► though, things get exaggerated. Investors, including speculative punters, now account for one in five house purchases, according to the central bank.

The government wants to cool the fervour. It has announced a two-year ban on property purchases by foreigners. More important, developers are ramping up. Units under construction are at a record high. Tony Stillo of Oxford Economics, a research firm, reckons Canada will add 2.35m new homes this decade, outstripping an expected 1.9m new households.

In Carleton Place, the fastest-growing town in Canada, half an hour outside Ottawa, both the insatiable demand and the hefty supply response are on display. In a new neighbourhood being built by Olympia Homes, buyers move in as soon as homes are ready. Mark Fillier, a resident since November, says he is still waiting for contractors to add the finishing touches. "They just get the houses up and move on to the next one," he says. At the end of his street builders are working on dozens of new homes.

The key question is how the property sector more broadly—from builders and buyers to lenders and regulators—will adjust to a weaker market. Oxford Economics predicts that Canadian house prices may fall by about a quarter over the next two years. That would probably count as an orderly correction, leaving prices above their pre-pandemic level. Developers would continue to break ground on new homes. And the financial system would remain solid. Canada has long used rules to insulate banks from the property sector: buyers seeking a mortgage must, for instance, have deposits of at least 20% on homes that cost more than C\$1m (\$795,000).

At the same time, though, Canada has vulnerabilities. Household debt is worryingly high: about 185% of disposable income. Given that backdrop, falling house prices could deal a big blow to consumer confidence and weigh on spending more generally. Canada may not be on thin ice. But it is skating into hazardous territory. ■



Interest-rate rises

Treasury seekers

SINGAPORE

Mighty Asian financial institutions are reshaping global capital flows

WHEN THE Federal Reserve raises interest rates, the effects are felt far and wide. Capital shifts in and out of the huge stock of global dollar-denominated assets. The Fed is expected to act forcefully over the next year, raising rates to around 3%, the highest level since early 2008. But this time the response of the biggest foreign holders of dollar assets, particularly those in Asia, could hold surprises. A burgeoning group of large private institutions is changing, and potentially complicating, the picture.

Ten years ago "official" foreign investors—mainly central banks managing their currency reserves—held \$3.4trn in American Treasuries, about three-quarters of all Treasuries held abroad. Anyone wanting to understand the huge flows in and out of dollar bonds therefore kept an eagle eye on the big reserve managers.

There has been plenty of movement of late. China's reserves—the largest single foreign stash of Treasuries—fell by \$68bn in April, 2% of the total and the largest monthly drop in more than five years. Japan's reserves declined by \$31bn, the biggest-ever monthly fall. India's reserves shrank by \$26bn in March, the most since the market panic of October 2008. Those in South Korea and Taiwan have fallen, too.

Reserve managers are a tight-lipped bunch, and rarely explain precisely why their holdings have changed. But some of the recent declines are likely to reflect simple valuation effects. The dollar has strengthened; as a result, holdings denominated in other currencies, such as the euro, are worth fewer dollars. Some reserve managers have also intervened in the market by selling their holdings in order to limit currency depreciation.

Yet this presents an increasingly partial picture of capital flows. Asian private institutions that cater to ageing populations, such as pension funds and insurers, have exploded in recent years. The assets of Taiwan's life insurers alone, for instance, have more than doubled in less than a decade. Rather like central banks, these tend to buy and hold safe government bonds and liquid corporate debt.

As a consequence, the share of Treasuries owned by official investors has fallen, to 58% of all Treasuries held abroad. Private foreign holdings make up the rest, and have risen from \$1.1trn to \$2.8trn over the past decade. Sales and purchases of Treas-

sures by private investors can swamp those made by official investors, as recent trends have made clear. Official investors sold \$36bn in Treasuries to American punters in the first three months of this year. That looks measly compared with the purchases made by foreign private investors. They snapped up \$235bn in Treasuries, the biggest haul in any quarter on record.

This divergence makes sense. Reserve managers get out of Treasuries when American interest rates climb, to protect their currencies from a stronger dollar. Private investors, enticed by juicier yields on long-dated bonds, dive in. Even quasi-public institutions like Japan's and South Korea's mammoth state-pension schemes have goals and risk tolerances that differ from reserve managers. Nonetheless, because most of the newly important institutions grew rapidly during a period of low inflation and rock-bottom interest rates, predicting their actions as circumstances change will not be easy.

Things are murkiest of all in China, where the aims of financial institutions and the government's foreign-exchange managers can dovetail. In 2020 and 2021, for instance, China's official reserves were curiously stable, raising analysts' eyebrows. While most other Asian countries with large trade surpluses were reporting surging reserves, China's rose by less than 5%. That raised the possibility that China was using its banks to intervene in the market: Alex Etra of Exante Data, a research firm, and Brad Setser of the Council on Foreign Relations, a think-tank, have pointed to the surging value of Chinese lenders' net foreign assets as evidence of hidden intervention. So far this year, though, there is little indication that China has used its state banks to disguise intervention.

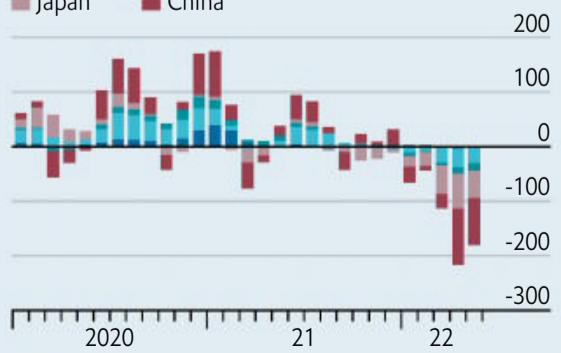
Interpreting the shifts in capital flows was hardly easy when it involved deciphering the actions of relatively taciturn reserve managers. The new, more crowded field of investors with various holdings, strategies and objectives will give analysts an even bigger headache. ■

Depleted defences

Foreign-exchange reserves

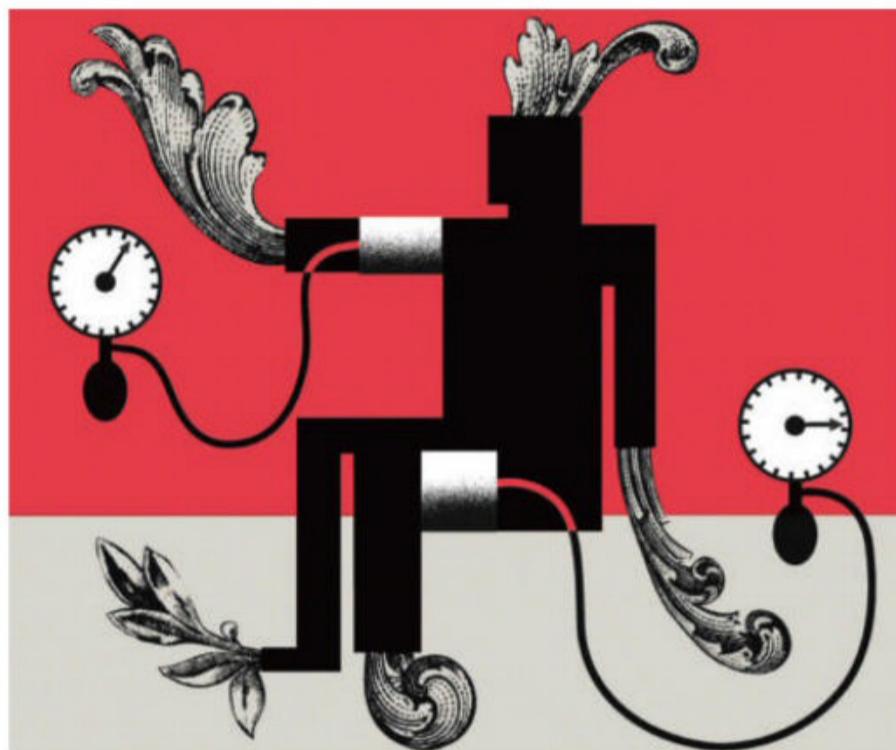
Change compared with three months ago, \$bn

Taiwan India South Korea
Japan China



Free exchange | A growth industry

America's recovery may be stronger than its GDP implies



IT IS FASHIONABLE in some circles to lament the “cult of gross domestic product”. The pursuit of growth, this criticism goes, blinds officials to less quantifiable but worthier objectives, be it a contented population or a clean environment. For many economists, the concern about GDP is very different. They see huge value in the core mission of the measure: namely, to provide as timely and accurate a snapshot of the state of the economy as possible, a lodestar for governments setting policies and for companies making decisions. Their criticism instead is that GDP occasionally struggles to achieve this, and that better alternatives might exist.

This debate has again come to the fore in America because of an unprecedented gap between GDP and its close relative, gross domestic income (GDI). In theory the two ought to be aligned. GDP tracks all expenditure in the economy, summing up the market value of consumption, investment, government spending and net exports in a specific period. GDI tracks the earnings associated with that expenditure, summing up wages, profits and any other income. In reality the two never match up perfectly, since the long-suffering bean-counters in statistical agencies must draw on different sources, released at different times, to tot them up.

The gap between GDI and GDP (officially known as “the statistical discrepancy”) is typically about 1%. Since late 2020, however, the discrepancy has been much larger. In the first quarter of this year America's GDI was fully 3.5% larger than its GDP. That is much more than a rounding error. As Ben Harris and Neil Mehrotra of the Treasury Department wrote on May 26th, when the latest GDI data were released, it results in remarkably different pictures of the economy. If GDP is the better reflection of reality, economic output is still about 2% below its pre-pandemic trend. If GDI is accurate, the economy is 1.2% above trend, a far stronger recovery.

One approach to reconciling GDP and GDI is just to split the difference. In 2015 the Council of Economic Advisers in Barack Obama's White House laid out the case for doing so, calling the average the “gross domestic output” (GDO). The crucial point is that both GDP and GDI derive from entirely independent gauges of output. Combining them should, on average, reduce measurement errors. Mr Obama's advisers found that GDO was an excellent predictor of later revisions to GDP. For instance, when GDO growth is half a per-

centage point faster than GDP growth, it is associated with a subsequent upward revision to GDP growth by roughly half a percentage point. This observation is slowly creeping into mainstream thinking. The Bureau of Economic Analysis has started publishing the simple average of GDP and GDI, though few journalists or analysts bother to mention it in their reports.

Accounting for the huge discrepancy at present is somewhat trickier. A useful starting point is the observation that the GDI-GDP gap opened up at the height of the covid-19 pandemic as the government's stimulus flowed into the economy. The sudden infusion of cash through transfers to households and loans to businesses appears to have messed up conventional measures of economic activity. Corporate profits have been uncharacteristically strong, explaining the vigour in GDI. In principle that should have been mirrored in much more robust GDP readings, too.

Matthew Klein, the author of “The Overshoot”, an economics newsletter (and who worked at *The Economist* a decade ago), reckons that an undercounting of business investment in GDP may be the most likely cause. Statisticians have struggled to keep tabs on all the newfangled ways that companies spend money, from software to cloud computing. During the pandemic entire business models were upended to accommodate online shopping and remote working; it stands to reason that investment data may have failed to capture such spending.

Another possibility, running in the opposite direction, is that incomes have been overstated. Some people and even businesses may have mistakenly inflated their incomes, at least in a statistical sense. Dean Baker of the Centre for Economic and Policy Research, a left-leaning think-tank, noted back in 2011 that there was a correlation between asset bubbles and GDI. When the stock-market soars, as it did during much of 2020 and 2021, GDI tends to outstrip GDP. Capital gains are not supposed to count as income in GDP calculations, as they reflect the prices of existing assets rather than production of new ones. But the pattern suggests that people sometimes may misreport capital gains as ordinary income.

Nerds to the rescue

The uncertainty about whether to blame the discrepancy on undercounted business investment or overstated income does seem to argue in favour of the simple GDI-GDP average as a measure of economic output. That, however, is not entirely satisfactory. In a paper in 2010, Jeremy Nalewaik, then an economist with the Federal Reserve, showed that GDI was generally closer to the mark than GDP in registering fluctuations in the business cycle. It did a better job of documenting the true extent of the downturn in 2007-09. Moreover, its outperformance relative to GDP over the past two years is also more consistent with the run-up in inflation. Policymakers who had paid more attention to GDI may have become more concerned sooner about economic overheating.

Frustratingly, initial GDI estimates come out a month after the first GDP figures. But researchers are on the case. In a paper published in January by the Cleveland Fed, economists pulled together GDP, GDI and a basket of monthly indicators such as the unemployment rate and average hours worked in manufacturing. The result, they hope, is something closer to “true GDP” that can be updated on a monthly basis. Encouragingly, it performed well in documenting the recovery from the pandemic. If it proves itself over time, it will be one more in a dizzying array of indicators to keep track of. But the message is clear: a focus on conventional GDP alone is unduly restrictive at best, and misleading at worst. ■

How will world-wide trends continue to set the treasury agenda?



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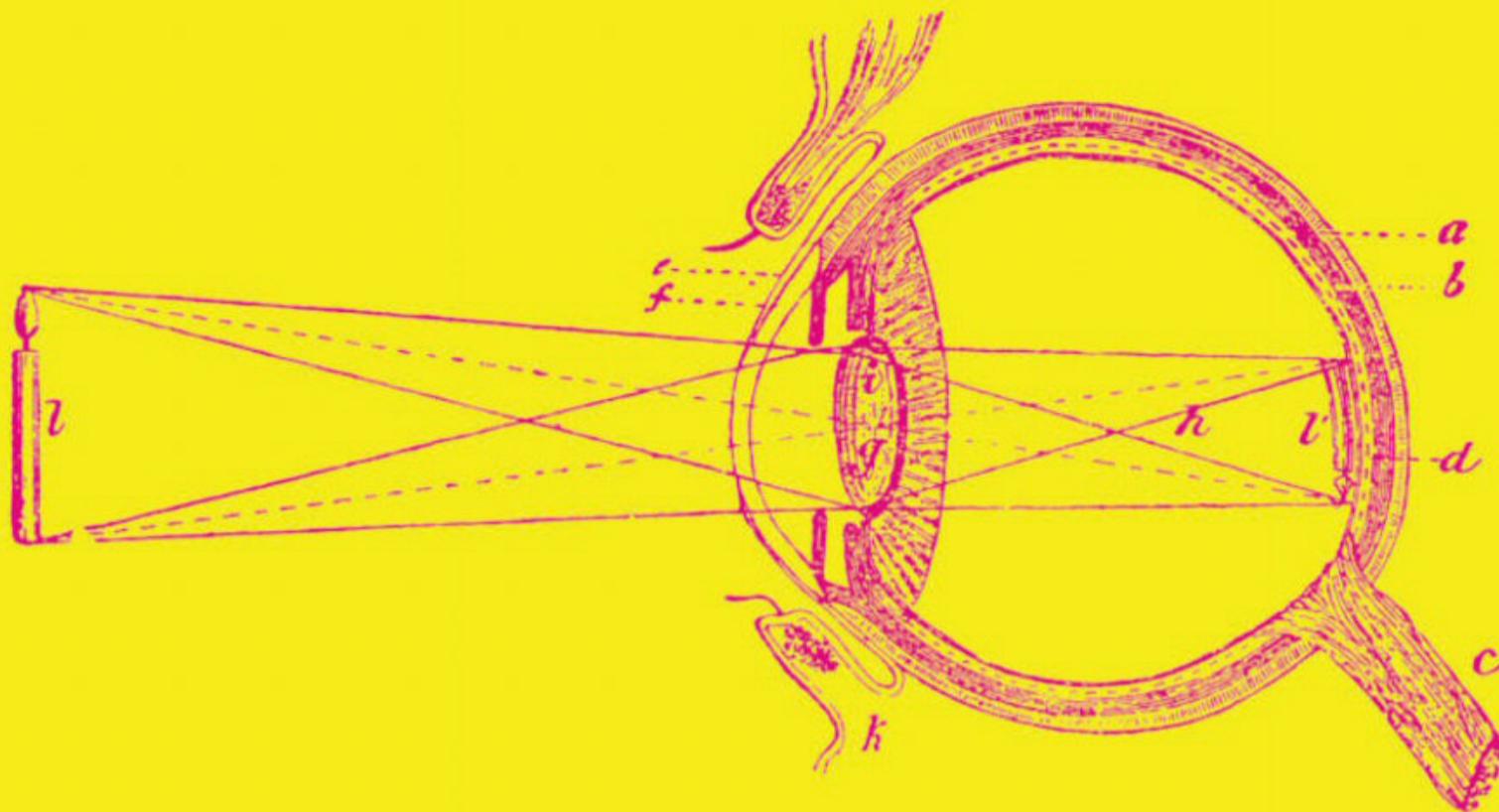
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Ophthalmology

The eyes have it

An epidemic of myopia is storing up health problems, particularly in East Asia

IN THE EARLY 1980s Taiwan's army realised it had a problem. More and more of its conscripts seemed to be short-sighted, meaning they needed glasses to focus on distant objects. "They were worried that if the worst happened [ie, an attack by China] their troops would be fighting at a disadvantage," says Ian Morgan, who studies myopia at Australian National University, in Canberra. An island-wide study in 1983 confirmed that around 70% of Taiwanese school leavers needed glasses or contact lenses to see properly.

These days, that number is above 80%. But happily for Taiwan's generals, the military disparity has disappeared. Over the past few decades myopia rates have soared across East Asia (see chart 1, overleaf). In the 1960s around 20-30% of Chinese school-leavers were short-sighted. These days they are just as myopic as their cousins across the straits, with rates in some parts of China running at over 80%.

Elsewhere on the continent things are even worse. One study of male high-school leavers in Seoul found 97% were short-sighted. Hong Kong and Singapore are not

far behind. And although the problem is worst in East Asia, it is not unique to it. Reliable numbers for America and Europe are harder to come by. But one review article, published in 2015, claimed a European rate of between 20% and 40%—an order of magnitude higher than that which people working in the field think is the "natural", background rate.

Don't be short-sighted about this

For most of those affected, myopia is a life-long, expensive nuisance. But severe myopia can lead to untreatable vision loss, says Annegret Dahlmann-Noor, a consultant ophthalmologist at Moorfields Eye Hospital, in London. A paper published in 2019 concluded that each one-dioptre worsen-

ing in myopia was associated with a 67% increase in prevalence of myopic maculopathy, an untreatable condition that causes blindness. (A dioptre is a measure of a lens's focusing power.) In some parts of East Asia, 20% of young people have severe myopia, defined as -6 dioptres or worse (see chart 2, overleaf). "This is storing up a big problem for the coming decades," says Kathryn Rose, head of orthoptics at the University of Technology, Sydney.

All that, in turn, is beginning to attract official attention. In 2018 Xi Jinping, China's president, made controlling childhood myopia a national priority. Crackdowns on the country's private-tutoring and video-games industries, which began in 2021, were partly motivated by worries about children's eyesight, says Dr Morgan. The governments of Taiwan and Singapore are likewise trying to do something about the matter. "I think it's fair to say that public health is starting to wake up to myopia as a problem," says Dr Dahlmann-Noor.

Most myopia is caused by misshapen eyeballs. A properly working eye focuses incoming light precisely onto the retina, the light-sensitive surface at the back of the eyeball (see picture above). In a myopic eye, by contrast, the eyeball is distorted in a way that causes the light to end up focused short of the retina. Sufferers can see normally up close, but distant objects are blurred. And the condition tends to be progressive, with vision worsening throughout childhood and adolescence, before stabilising in adulthood.

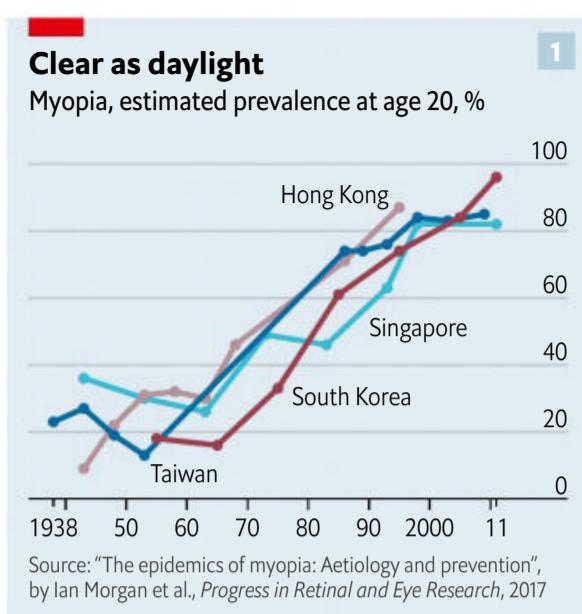
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For decades, researchers had thought myopia was mostly genetic. It runs in families, and genomic studies have turned up several gene variants which increase the risk of developing the condition. There were early hints, though, that this could not be the whole story. A study of Inuit in Alaska, published in 1969, found that myopia was virtually unknown in those middle-aged or older, but that rates were above 50% in older children and young adults. Such a change is much too fast to be purely genetic, and it had happened just as the study participants had begun to adopt a more settled, Westernised way of life. But the results went against the dogma of the day, says Dr Morgan, and were ignored.

The spike in East Asia, which occurred as places there industrialised, was harder to dismiss. Short-sightedness is stereotypically an affliction of the bookish, and a procession of studies has confirmed a strong, reliable link with education. "The more educated you are, and the higher your grades, and the more you participate in after-school classes and tutorials—the more likely you are [to be myopic]", says Dr Morgan. And an intriguing study on orthodox Jewish children in Israel, in the 1990s, confirmed the link with long school hours. It showed that boys—who receive intensive religious education in addition to the normal curriculum—were more myopic than their sisters, who do not.

Since there is no obvious way in which learning sums, spelling or even the Talmud could cause short-sightedness directly, the assumption was that education was a proxy for something else. One possibility is the popular notion (raised by Johannes Kepler, a German astronomer who himself needed glasses, more than 400 years ago) that myopia is linked to too much close-in work, such as reading and writing.

That theory remains popular, says Dr Rose, but evidence for it is mixed at best. Instead, the dominant hypothesis now is that exposure to daylight is the main variable. A study of Californian children, published in 2007, found that time spent out-

doors was strongly associated with a lower risk of myopia. Another paper, published the following year by Drs Rose and Morgan and their colleagues, followed more than 4,000 children in Sydney for three years and came to a similar conclusion. The type of activity—sports, walking, picnics—did not seem to matter. Simply being outdoors was the crucial point. The researchers cross-checked the close-work hypothesis and found that being outside drastically reduced the risk of short-sightedness, even for children that did a lot of it.

This theory fits the data neatly. It explains why myopia seems, like diabetes and heart disease, to be what doctors call a "disease of affluence"—more common in rich countries than poor ones—since economic growth brings with it more education, and therefore, for children, more time inside. It explains why rates are high in East Asia in particular, says Dr Morgan, since the ubiquity of private tutoring and after-school classes mean schoolchildren there routinely work longer days than their Western counterparts. Most South Korean students, for instance, attend private tutoring schools called *hagwons* in which lessons often stretch well into the evening.

Seeing the light

The daylight-exposure theory is also bolstered by animal studies, in which that exposure can be carefully controlled, and in which dimness reliably produces short sight. Researchers have a putative mechanism, too. Exposure to bright light appears to stimulate the production of dopamine, a neurotransmitter, in the retina. Dopamine, in turn, seems to help regulate the rate at which the eye grows. Too little, and the eye grows too long to focus properly.

Human trials, too, confirm the theory. One of the biggest, led by Pei-Chang Wu of the Chang Gung University College of Medicine, in Taiwan, was published in 2020. It reported results from millions of Taiwanese primary-school pupils who had gone through the school system between 2001 and 2015. In 2010 the government instituted a programme called "Tian-Tian Outdoor 120", which encouraged schools to take pupils outside for two hours a day. After it was implemented, rates of myopia fell, slowly but steadily, from 49.4% in 2012 to 46.1% in 2015—reversing a decades-long trend of rising rates.

Exactly how much light is needed is unclear, though Dr Morgan reckons 10,000 lux is in the right ballpark. That is about as much as you might get in the shade on a reasonably sunny day. (Direct sunlight in the tropics can exceed 100,000 lux.) Levels indoors, by contrast, rarely exceed 1,000 lux. It is technically possible to light classrooms to 10,000 lux, notes Dr Rose. But even with LED lighting, she says, the amount of heat produced would require

specialist air conditioning, and the glare might be enough to make reading tricky.

Researchers have also been working on ways to slow myopia's progression once it has started. One is to use low doses of atropine, a poisonous chemical found in deadly nightshade—the juice of which was once used by women to dilate their pupils, in order to make themselves look more attractive. Another is specially designed "ortho-k" contact lenses, which are intended to reshape the cornea while worn. (The cornea is the front, transparent part of the eye, which does most of the work of focusing light on the retina; the eye's so-called lens is mainly for fine tuning.) These also seem effective, though Dr Rose worries about the side-effects from giving contact lenses to children, since if misused they can cause irreversible corneal scarring.

Sophisticated pairs of spectacles may help, too. In 2020 the *BMJ* published a Chinese trial of "defocus incorporated multiple segments" (DIMS) glasses. The lenses of these have a central zone designed to correct the wearer's sight, which is surrounded by hundreds of other small zones of different optical power. The idea is to provide both clear vision through the central part of the lens and deliberately distorted vision through the smaller zones, since poorly focused vision is thought to signal to the eye to slow its rate of growth. Wearing DIMS glasses appeared to cut the rate of myopic progression roughly in half.

Eyedrops, more sunlight and clever glasses might be able to prevent or slow myopia in future generations of schoolchildren. But by the time sufferers reach adulthood, the condition is permanent. This means that in some countries, a public-health problem is already baked in. For those with really serious myopia, says Dr Rose, and who are at the highest risk of bad complications, unhealthy changes in the eye can start to occur when patients are in their 40s. "And some of those are not in any way treatable." ■



Flood warnings

Earthshaking

A better way to warn of flash floods

ON JULY 14TH 2021 a flood tore through the Ahr valley, in north-west Germany. None of the towns upon which it visited death and destruction had had warning of how bad it would be. That warning should have been supplied by automatic flood-level gauges sited upstream, in the river itself. It would have permitted evacuation of houses in particular danger. But the gauges were destroyed by the torrent before they could supply meaningful information.

Relying on instruments which are, by their very location, vulnerable to being swept away, is hardly an ideal approach to tracking impending floods. But Michael Dietze of GFZ, the German Research Centre for Geosciences, suggests an alternative. On May 26th he proposed to the annual meeting of the European Geosciences Union, in Vienna, that a network of seismometers of a sort more usually employed to record earthquakes might do the job.

Seismometers record minute ground movements. Their purpose is to listen for vibrations generated by tectonic activity, usually far away. But on that particular day a rather different set of useful signals came to a seismometer operated by Germany's Central Seismological Observatory. This was, fortuitously, located 1km north of the Ahr's streambed. And it picked up vibrations caused by the passing deluge.

They were not completely unexpected. Research by Dr Dietze and others had already established that seismometers several kilometres from fast mountain rivers can detect the violence with which the waters of a swollen stream pound the banks, and also the din of millions of pebbles, boulders and other debris bouncing along the bottom during a flood. However, when they studied this particular seismometer's output, he and his colleagues also saw a third, more gradual effect: a tilting of the ground on which the instrument was resting. This was caused by deformation of the local crustal rocks as a result of the sheer weight of the bulge of water speeding through the valley. They had seen something similar before, but only as a consequence of typhoons hitting small islands.

Together, says Dr Dietze, these three signals provided a wealth of information, albeit retrospective, about the flood's behaviour from the moment it came within listening range, about 2km upstream, until it had passed the point closest to the seismometer, after which grid power failed



Forewarned is forearmed

and the measurements stopped. Both the tilting and the vibrations revealed the flood's direction; the debris noise gave an indication of how much damage to river banks and buildings the passing surge might inflict; and variations in the amplitude of the seismic waves, as the amount of attenuating rock between source and the seismometer changed, made it possible to estimate the speed with which the water

mass was travelling downriver.

That is 20:20 hindsight, for no means of processing the relevant data were in place at the time. But Dr Dietze reckons a purpose-built system, using three seismographic stations out of reach of the raging waters, could have done this and more—for having several scattered instruments would also allow a flood's front to be located and tracked. It would permit, too, a fair assessment of the amount of water in the bulge behind that front to be calculated.

If this multi-instrument arrangement had been in place last July it could have given the town worst affected, Bad Neuenahr-Ahrweiler (pictured), 30-45 minutes of notice before the flood arrived, and also an estimate of its peak level. At about €3,000 per instrument, this would probably be a good investment for the future in the Ahr valley, and is also worth considering elsewhere.

Dr Dietze estimates that 20% of Europe's surface consists of the kind of upland terrain which abounds with confined, flood-prone valleys like that of the Ahr. About half of this (mostly in the Alps) is already well served by flood-warning systems. But much of the rest is hardly monitored at all. Scattering a few cheap seismometers around these neglected regions might make all the difference next time the local weather misbehaves. ■

Music therapy

A drum, a drum, Clem Burke doth come

Learning drumming can help teenagers with behavioural problems

MUSIC IS GOOD for the health. And drumming may be best of all. As well as being physically demanding, it requires people to synchronise their limbs and to react to outside stimuli, such as what the rest of the band is up to.

It is particularly helpful for children who have emotional and behavioural difficulties. Researchers at the Clem Burke Drumming Project—an organisation named after Blondie's drummer, who was one of its founders—have shown that teaching such children to drum helps them to control their reactions more generally, to focus more effectively on tasks they are given, and to communicate better with other people.

The project's latest work, published in the *Proceedings of the National Academy of Sciences* by a team led by Marie-Stéphanie Cahart of King's College, London, goes a step further. It looks at the neurological changes which accompany these shifts.

Ms Cahart and her colleagues recruited 36 autistic teenagers and split them into two groups. One lot had drum lessons twice a week for eight weeks. The

others did not. At the beginning and end of the project everyone was asked to stay still for 45 minutes in a functional magnetic-resonance imaging (fMRI) machine, to see how the activity of their brains had changed. Their behaviour, as reported by their guardians, was also recorded.

As expected, most of the drumming group showed positive behavioural changes. And these were indeed reflected in their brains. The fMRI scans showed that several clusters of connectivity between parts of those brains had strengthened during the experiment. In particular, two regions involved in attention control, the right dorsolateral pre-frontal cortex and the right inferior frontal gyrus, formed strong links, respectively, with places associated with introspection and with areas involved in deciphering facial expressions.

These changes in the brain's "wetware" thus nicely match the changes in behaviour which learning to drum induces. Not a surprise, perhaps. But a gratifying confirmation of drumming's power to heal.

Agricultural entomology

Son, et lumière

Technology used by spies is detecting pesky moths

INSECTS CAUSE billions of dollars of damage to crops every year, driving farmers to apply pesticides on an industrial scale, at huge expense and often with unwelcome ecological side-effects. They take this carpet-bombing approach because they lack information about where and when it is best to hit pests, and nobody wants to use too little pesticide and thus risk losing crops. Technologists at FarmSense, a firm in Riverside, California, hope to change that.

The established approach to detecting insect pests, moths in particular, is to employ pheromone-baited sticky traps. Pheromones are chemicals which animals use to communicate—and especially to attract members of the opposite sex. An appropriately baited sticky trap gives a fair idea of the number and type of pests around, but not with sufficient detail for the precise application of pest control measures. Such traps have, however, changed little in decades, except that some now come with a digital camera which transmits a daily picture of the trapped insects. FarmSense's researchers reckon they can do better.

The company's device, FlightSensor, has been in full-scale tests on farms since 2020 and is about to be made generally available. It does not trap insects. Rather, it scans them with a laser as they fly by. The developers' insight was that the shadows of passing wings produce the same oscillating signal as the sound of the wing beats recorded by a microphone. This approach is similar to bouncing a laser beam off a glass window to detect the vibrations of a conversation in the room beyond, a technique employed in espionage for decades.

FlightSensor's technology builds on the work of Eamonn Keogh, one of FarmSense's founders, who is also a professor at the University of California's Riverside campus. Dr Keogh helped pioneer the field of "computational entomology", in which special algorithms receive data from scanners and learn to determine the sex and species of passing critters. FarmSense claims to have more digital data on insects than the rest of the world combined.

For the first tranche of targets the results are impressive. Navel orangeworm moths, in particular, are a common pest of almond and pistachio trees—both important to Californian agriculture. FlightSensor can identify them accurately more than 99% of the time. And the algorithm is still

improving its capability, and adding new species as it gets more data. Sometimes it can distinguish insects which, to a human eye, look identical.

FarmSense's optical approach works better than microphones for recording wing beats because the insects under investigation are quiet and the sound they emit thus easily lost in background noise. Bees and houseflies buzz about noisily. But moths and the trichogrammatid wasps that parasitise them (or, rather, their caterpillars), and are therefore of almost equal interest to farmers, are all but inaudible. They are easily detectable by laser, though. And while sticky traps are at least an alternative for large moths, the FarmSense sensor picks up everything, down to trichogrammatids a thousandth of the size of the moths these wasps are interested in.

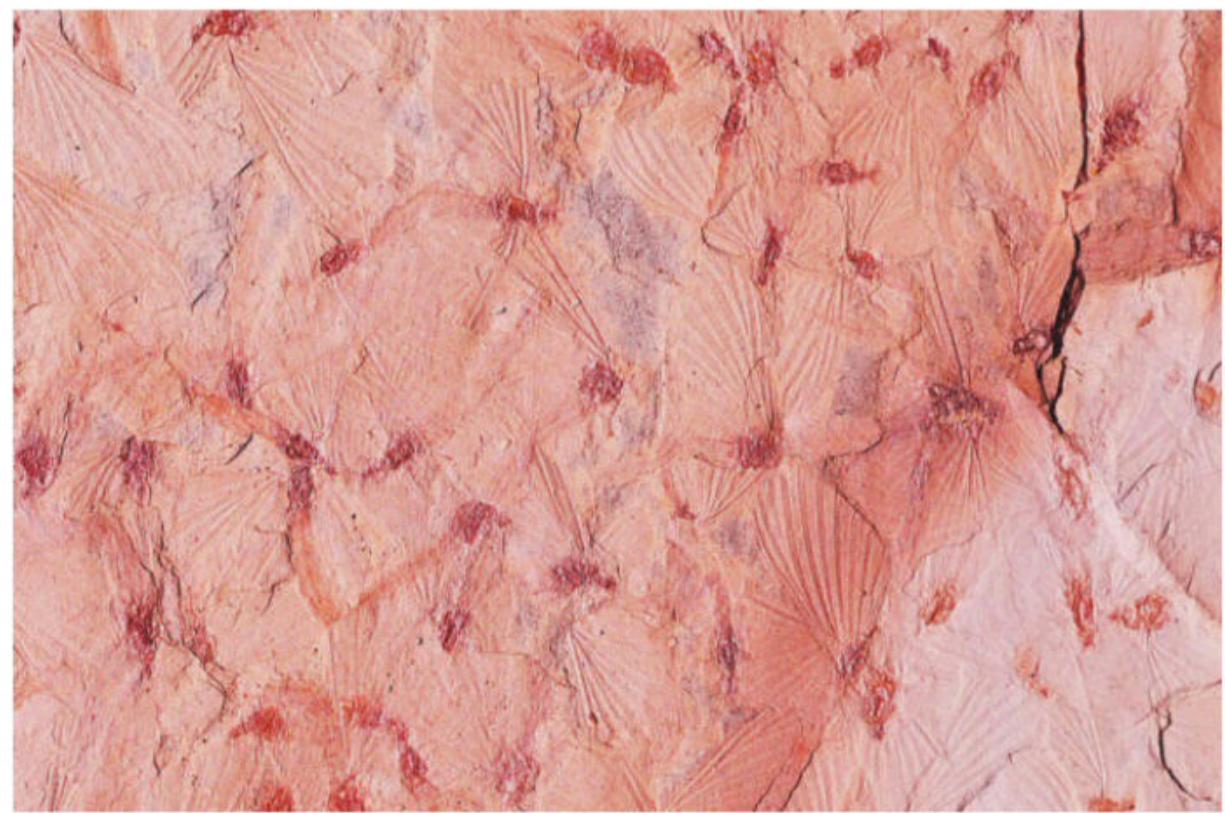
In contrast to existing traps, which report only total numbers captured in a given period, the new sensors record each insect as it arrives, revealing diurnal and nocturnal patterns of activity. In one case, FarmSense was able to show a farmer that navel orangeworm moths appeared in her fields only between three o'clock and five o'clock in the morning. So, rather than spraying disruptive pheromones throughout the hours of darkness, she is able to restrict the puffing around of these chemicals to times when moths are active, cutting the amount

of pheromone required by 80%. American farmers spend hundreds of millions of dollars a year on pest-reducing pheromones, so reducing their use in this way should bring useful savings.

There should be ecological benefits as well. In particular, pesticides of all sorts often have side-effects on benign, and even desirable insects. Using a more targeted approach which deployed less of them would reduce that problem.

A further advantage of the new sensors is their lack of need for maintenance. Sticky traps eventually stop being sticky, because of a build-up of either dust or of dead insects, so someone has to replace the sticky cards. FlightSensors will function for months at a time, reducing the labour and other associated costs.

The sensors should also prove useful for academic entomologists. Marta Skowron Volponi of the University of Gdansk, in Poland, is employing them to look at bee-mimicking clearwing moths. They may help her discover how the insects manage to sound like bees as well as looking like them. Meanwhile, at the University of California's campus in Davis, Joanna Chiu is using them to study the daily activity of *Drosophila*, a fruit fly that is one of the workhorses of genetics. From farm to lab, then, listening to insects with light may soon be all the rage. ■



A fossil feast

This is part of the oldest known mayfly swarm. It was collected, by a team led by Zhang Qianqi of the Nanjing Institute of Geology and Palaeontology, from a site near Hezhou, in southern China, and is reported in the latest edition of *Geology*. Some 180m years ago, during the early part of the Jurassic period, this site was a lake where mayflies lived and swarmed to mate, as they do today, providing, as a side-effect, a feast for local insectivores. These probably included small pterosaurs, but not birds, which had not yet evolved. Insects rarely fossilise well in rock (though they do in amber), but in this case exquisite anatomical details of the creatures are visible in the mudstone that has solidified from the lake's sediments.

**Architecture and design**

Hot property

MEXICO CITY

Mexico's design scene is ascendant, thanks to young stars, promotional initiatives—and the pandemic

FRIDAY ESCOBEDO'S studio in the hip neighbourhood of Juárez, Mexico City, may be modest, but her ambitions are not. In 2018 she became the youngest architect commissioned to build the Serpentine Pavilion, a temporary structure erected each year in Kensington Gardens in London. In March the Metropolitan Museum of Art in New York announced she would become the first woman to design one of its wings; she will oversee the renovation of the modern and contemporary galleries. Her work, whether at home or abroad, is inspired by her country of origin. Her pavilion (pictured) was made of tiles stacked in an alternating pattern evoking the perforated walls common in Mexico.

Ms Escobedo is one of several Mexican designers gaining international attention. Many work across disciplines: Ms Escobedo has built furniture as well as shops, hotels and social-housing projects. Architects and artists are certain that "si, se puede hacer"—"yes, we can do it"—she says. "There is an energy, a sense of confidence, a persistence and a sense of solidar-

ity here." Ana Elena Mallet, a curator and lecturer at Tecnológico de Monterrey, a university, says the Mexican creative industry has been ascendant for some time. "Every X number of years there is excitement about Mexico, but this time there is more content to talk about."

The foundations were laid in 2000 when Mexico shrugged off more than seven decades of rule by the Institutional Revolutionary Party (PRI). Under it art and culture were all about "titanic, heroic" projects, says Ms Mallet. The atmosphere was stifling. When the PRI lost power, it signalled the country's interest in a greater

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plurality of opinion, including over what art should be. Over time society has become more liberal, too, and women were recognised for their creative talents. Young or female architects opened their own *despachos* (practices) rather than working in the junior ranks of the office of an older, well-established man, as they might have done a generation earlier.

Efforts to promote Mexican designers increased, led from within the industry rather than by the government. Since 2011 ZONAMACO DESIGN, a showcase of jewellery, textiles and furniture, has been held in Mexico City, drawing attention to the work of artisans. Boutique galleries have proliferated. In recent years new design partnerships have been established, such as the exhibitions jointly hosted by Brian Thoreen, an American artist, and Héctor Esrawe, a Mexican designer.

The pandemic helped, too, as Mexico was one of the few countries to keep its borders open. Tourists and art lovers, especially from the United States, flocked to the country: it became a permissive, creative hub while other places were stymied by coronavirus restrictions.

Mexican universities are paying more attention to the country's own styles. Ms Mallet says that five years ago she would not have been hired to teach the history of design in Mexico. Earlier courses covered Bauhaus and other international movements, but "now it is about recuperating the link people had lost to our history and ►

territory," she says. Likewise, rather than "taking objects from elsewhere, copying them, adapting them to Mexico and selling them, there is a local design culture."

Ariel Rojo, an established industrial designer, has watched this progress unfold. Echoing Ms Mallet, he attributes the buzz to Mexican artists finding their own identity rather than replicating things done elsewhere. "What can I be as a Mexican designer in a globalised world?" he wondered. "What would have happened if the Aztecs had continued to design?"

In his formative years Mr Rojo spent hours in the National Museum of Anthropology in Mexico City, taking inspiration from its artefacts ("but not just doing clichés like replicating skulls"). For example, a bottle he designed for Tequila Decáda, a drinks company, draws on Mexico's history. The bottom part is a pyramid, nodding to pre-Hispanic cultures, while the top features an "X" that refers to the "x" in Mexico as well as the country's Christian heritage.

Architects and artists have a rich history to draw on, from ancient indigenous cultures and the colonial period, through the revolution to the present day. Modern Mexico itself is many discrete countries in one, with vast differences between northern industrial states and poorer ones in the south. Mexico's social exigencies have helped shape the design scene, where there is a keen focus on buildings and objects being functional and cost-effective as well as aesthetically pleasing.

Ways, shapes and forms

These factors inform Ms Escobedo's choice of materials. "This is a country with limited resources, both for the government and among people. We have to design things that are affordable, work and will last for years," she says. Mezcal cups made of jicama, a root vegetable native to Mexico, are dotted around her studio as small, simple reminders of this philosophy.

Much of Mexican architecture employs concrete or *adobe* (mud bricks). Many designers are using *barro*, or clay, for their items. Traditional crafts persist, from basket-weaving to *alebrije*, brightly coloured folk-art sculptures of fantastical beasts. Mexico boasts world-class artisans and so finding a metalworker or weaver is straightforward and often affordable. That lowers the bar to entry for newcomers.

"There is a fluidity here," says Su Wu, an American curator and advocate of Mexico's artists who lives in Mexico City. "You don't have to be an architect or a designer, you can be both. There is a sense of disregard for the rules." She reckons that what is happening shares traits with similar moments in other cities such as Berlin. But in its quality and its sense of history and tradition, Mexican craftsmanship has its own unique signature. ■



World in a dish

The way of the monkfish

Why everyone should eat more ugly seafood

MONKFISH ARE low in calories and fat, packed with vitamins and have dense, firm flesh, which makes them relatively easy to cook. They can be cut into chunks, marinated with egg whites, cornflour and seasonings, then briefly blanched in boiling water. Monkfish tail can even be stir-fried without breaking apart, as more delicate fish tend to do. In fact, there is only one problem with monkfish: they are hideous.

With their bulging eyes and wide mouths lined with rows of sharp teeth, they are nightmarish. In Dutch monkfish are called *zeeduivel* ("sea-devil"); fishermen who caught them used to throw them back. They are still usually sold without their heads, but the days of chucking them overboard are long gone. Japanese diners love the fatty liver; while Italians may still derisively call them "toad tails", that does not stop them from eating the fish. Fishermen's associations have been encouraging others to overcome their aversion and eat more monkfish, as well as other unsightly creatures—the better to ensure more diverse, sustainable fisheries.

There is precedent for species going from shunned to consumed. In America, lobster used to be fed to prisoners and slaves—a result of their abundance but also, no doubt, because they are difficult to eat and look rather like an inflamed cockroach. Not until the late 19th century did they become haute cuisine. Today they are so desirable that Maine, where most American lobsters are caught, puts them on its licence plates (and monkfish are

known as "poor man's lobster").

Sometimes fashion goes the other way. Turtles were plentiful in early America, but in the 19th century they became chic: few foods were more esteemed than terrapin turtle soup. Americans ate some species of turtle—fiendishly difficult to prepare, as just looking at them might suggest—nearly to extinction. Yet today turtle-eating is more closely associated with backwoods, eat-what-you-can-catch diets than with liveried waiters.

While abundance and tricky preparation may put some diners off, easily found species that take some work to cook can be delicious. Along America's north-west coast, advocates tout the versatility of geoduck, a species of burrowing clam with sweet, slightly chewy flesh beneath a thick skin that must be peeled, and an off-putting appearance. Catfish would probably be more popular were it not a bottom-feeder that often resembles a deranged Hercule Poirot. Its clean, neutral flavour makes it suitable for a wide range of cuisines and techniques.

Prizing the rare and beautiful over the unattractive and commonplace is hardly unique to culinary preferences. Engagement rings, after all, usually feature diamonds rather than concrete. But such narrow-minded food choices can have irreversible consequences: the bluefin tuna and Chinook salmon may not survive human fondness for them. Better to stare into a sea-devil's beady eyes, or get to grips with a geoduck, than to contribute to the permanent loss of a species. ■

Indonesia

In the shadows

We Have Tired of Violence: A True Story of Murder, Memory and the Fight for Justice in Indonesia. By Matt Easton. New Press; 341 pages; \$27.99

WRITERS ABOUT Indonesian politics find themselves drawn irresistibly to comparisons to Javanese shadow-puppetry, and the notion of the *dalang*, the all-powerful puppet-master, manipulating everything from behind the screen. The habit became ingrained during the 32-year dictatorship of Suharto, for whose ruling methods it was an excellent metaphor. He tolerated the appearance of political competition, but only so long as he could control the outcome. Nearly a quarter of a century after his downfall in 1998, the Indonesian deep state he created endures. The imagery has not grown stale.

The metaphor recurs throughout Matt Easton's account of the efforts to bring to justice the killers of Munir, a prominent human-rights activist murdered by arsenic poisoning in 2004 while flying to the Netherlands for a course of study. The likely poisoner was identified fairly quickly, and eventually convicted. He was freed from prison in 2014, after serving eight years of a 14-year sentence, and died of covid-19 in 2020. But despite years of police investigations and special commissions of inquiry, and intensive efforts by Munir's supporters—notably his heroic widow, Suciwati—and notwithstanding persuasive evidence

that the killing was at the behest of Indonesia's security services, nobody has been brought to justice for having planned or ordered the murder.

The book reads like a gripping legal-procedural whodunnit, as evidence is slowly unearthed from telephone records, lost documents are retrieved from deleted computer files and intriguing new witnesses emerge. As fiction the story would be profoundly unsatisfying, because it has no ending. As recent history, it is meticulous and moving.

The legal process, for all the vigour with which Munir's supporters pursue justice, ends in near-farce. Even the prosecutors find it expedient to present the murder as an apparently motiveless personal vendetta, undermining the subsequent prosecution of an alleged instigator. In that trial, a number of witnesses withdraw their earlier evidence; the courtroom is packed with thuggish supporters of the accused senior intelligence officer, their cheers and jeers going mostly unrebuked by the judges. After the acquittal, many of those who had worked hard on the case find their careers blighted. At least five people connected to it die in mysterious circumstances.

Munir made his name as a campaigner and investigator during the unrest at the tail-end of the Suharto era, when a number of activists were abducted, some never to be seen again. His efforts to bring those responsible to account were as fruitless as those to apportion blame for the cataclysmic bloodletting across Indonesia that accompanied Suharto's rise to power in 1965-66. Never having faced up to this mass slaughter, Indonesia still suffers its consequences. The thugs who commandeered the courtroom were from a group that emerged in 1965.

Munir was killed in the dying days of

the presidency of Megawati Sukarnoputri, a former leader of the lacklustre opposition to Suharto. Two supposedly reformist successors—Susilo Bambang Yudhoyono, a former general, and Joko Widodo, a businessman and city mayor—have failed to provide the political leadership that might have emboldened the judiciary to bring the case to a conclusion. Instead they have promoted and relied on those implicated in Suharto-era atrocities.

Reflecting on this, Mr Easton aptly refers to "The Leopard", Giuseppe Tomasi di Lampedusa's novel of political ferment in 19th-century Sicily, and its nobleman's lament: "If we want things to stay as they are, things will have to change." The Indonesian elite, he notes, had made the same calculation. What seemed like a revolution in 1998 did not transform power structures; it preserved them, and the culture of impunity that protects the puppeteers. ■

Plastic surgery

The good doctor

The Facemaker: A Visionary Surgeon's Battle to Mend the Disfigured Soldiers of World War I. By Lindsey Fitzharris. Farrar, Straus and Giroux; 336 pages; \$23.99. Allen Lane; £20

WHEN YOU think of plastic surgery, you probably imagine the cosmetic kind. According to the American Society of Plastic Surgeons, Americans went under the knife 2.3m times in 2020 for aesthetic reasons: the most common procedures included rhinoplasties (ie, nose jobs), blepharoplasties (eyelid surgery), facelifts, liposuction and breast augmentations. Non-surgical interventions, particularly injectable dermal fillers, have also proliferated in recent years. Such beautifying efforts have a long history. Texts from ancient Egypt and India describe some early attempts at reshaping noses.

"The Facemaker", a new book, looks at the other aspect of plastic surgery—that which focuses on reconstruction, in many cases after trauma. Lindsey Fitzharris, a medical historian, describes the pioneering work done by Harold Gillies in the early 20th century. The powerful weaponry used in the first world war, including shells, grenades, mortar bombs and automatic guns, killed millions of men. It maimed many others: as Ms Fitzharris notes, "before the war was over, 280,000 men from France, Germany and Britain alone would suffer some form of facial trauma." Such injuries



Rallying cries

had rarely been seen before, and there was no established method for treating them. As one nurse at the time put it: the “science of healing stood baffled before the science of destroying”.

Gillies, who was born in New Zealand, studied at Cambridge University and St Bartholomew’s Hospital in London. He was particularly interested in otorhinolaryngology—today simplified as ENT, or ears, nose and throat—and enjoyed a comfortable life at a practice in Marylebone before war broke out. Once hostilities began, however, he recognised the need for medical volunteers. He signed up with the Red Cross and, leaving his pregnant wife and small child behind, set off for France.

At the front he met Auguste Charles Valadier, a Franco-American dentist who had converted his Rolls-Royce into a mobile clinic. Valadier helped rebuild soldiers’ jaws by performing bone grafts and “distraction osteogenesis”, a method still used today which involves separating bone to promote new growth. Valadier’s work demonstrated to Gillies the importance of getting the “architecture” of the face right before addressing tissue damage. Gillies also visited Hippolyte Morestin, a French surgeon skilled at both removing facial tumours and repairing the resulting disfigurement using flaps of skin.

Gillies soon became convinced of the need for a specialist maxillofacial unit in Britain, and established one first in Aldershot, then in Sidcup. Thousands of soldiers came to him with an array of ghastly injuries. (Ms Fitzharris does not flinch when describing crushed jaws, sliced noses and cheeks perforated by bullets.) Many afflictions had been made worse by hasty attempts to stitch the wound. Gillies worked carefully and was attentive to both form and function.

He was also unfailingly kind to his patients, cognisant of the importance of an individual’s features to their sense of identity. “Don’t worry, sonny,” he would say, “you’ll be all right and have as good a face as most of us before we’re finished with you.” In the persona of “Dr Scroggie”, he encouraged his patients to break hospital rules around drinking and gambling, thereby introducing fun into the long, tedious and painful rehabilitation period.

As photographs attest, Gillies often made good on his promise. But it involved a lot of trial and error. Penicillin had not yet been discovered, and infection was a risk. Grafts sometimes did not take. Anaesthetic proved difficult to administer to those with facial injuries. Patients required multiple surgeries in order that the work could be done incrementally; Gillies removed the mirrors from his wards so that patients would not be disheartened by their appearance during the process.

Inevitably, “The Facemaker” some-

times makes for sad reading. One young man, “Corporal X”, made an astounding recovery after shrapnel destroyed his face. But he caught a glimpse of his reflection and, appalled by what he saw, wrote a letter to his fiancée and childhood sweetheart claiming that he had fallen in love with another woman. “It wouldn’t be fair to let a girl like Molly be tied to a miserable wreck like me,” he said. “I’m not going to let her sacrifice herself out of pity.” After he was discharged, Corporal X became a recluse.

“All the time, we were fumbling towards new methods and new results,” Gillies wrote. Among his inventive techniques were “tubed pedicles”, a way of transplanting skin and soft tissues, and the “epithelial outlay”, a skin-grafting technique which allowed him to reconstruct eyelids. After the war he outlined these methods in two influential books. In 1944 he proposed a professional body for British plastic surgeons, one that would “uphold the standards” of the specialty. In 1946 he became its first president.

Ms Fitzharris might have spent more time on Gillies’s legacy and post-war career. She notes that his cousin, Archibald McIndoe, would follow him into plastic surgery and build on his maxillofacial work when treating pilots during the second world war, but does not say how. (She does acknowledge that Gillies was the first surgeon to complete a successful phalloplasty; his work formed the basis of modern gender-reassignment surgery.) But these are minor faults in an accessible book. “The Facemaker” is an engaging biography of a masterful surgeon as well as a heartening account of medical progress. ■

Josephine Baker

On the world stage

The Flame of Resistance: The Untold Story of Josephine Baker’s Secret War. By Damien Lewis. Quercus; 496 pages; £21.99. To be published as “Agent Josephine: American Beauty, French Hero, British Spy” in America by PublicAffairs in July; \$32

IN MODERN PARLANCE, she was a “triple threat”. Josephine Baker could act, dance and sing—and did all three at Chez Josephine, her nightclub in Paris, and in several films. After escaping the Jim Crow South, she found fame in Europe in the period between the wars and made France her adopted home. Dancing in risqué costumes, she helped Parisians remember how to enjoy themselves. Sidonie-Gabri-



Singing, dancing and doing her duty

elle Colette, a French author, likened Baker to a “most beautiful panther”. Ernest Hemingway reckoned the performer was “the most sensational woman anybody ever saw. Or ever will.”

Perhaps Baker should be considered a quadruple threat, as she also displayed a talent for spying during the second world war. She helped the Allies as an honourable correspondent of the Deuxième Bureau, or French military intelligence, ferrying secret documents across enemy lines. (She often pinned papers to her underclothes.) Whereas the typical agent receded into the shadows, fame was her cover. As she brassily declared: “Who would dare search Josephine Baker to the skin?”

Her contributions to the war effort are now reasonably well known, described in numerous biographies, television series and films. Baker received the Légion d’Honneur and a symbolic interment in the Panthéon, a monument to French national heroes. But additional files on her intelligence activities were released by the French government in 2020 and are the occasion for a new book by Damien Lewis, a popular historian. “The Flame of Resistance” (to be published as “Agent Josephine” in America) is an entertaining, if occasionally breathless, account of a true hero of the second world war.

Baker’s early missions involved helping the British and French governments divine the intentions of Italy and Japan before they joined the Axis. With her easy glamour and charm, she earned the confidence of an attaché at the Italian embassy and got him talking about Mussolini’s plans to ally with Germany. Next Baker exploited a friendship with the wife of Japan’s ambassador to France to pick up titbits about that country’s intentions. Both efforts were cited in a later war decoration. ▶

Her most important operation was to carry a priceless cache of intelligence from Paris to Lisbon. The documents included photographs of German military equipment, lists of Abwehr agents, details on Luftwaffe airbases and plans for the German seizure of Gibraltar. Accompanying Baker was her handler—and lover—Jacques Abtey, who posed as her tour manager. Mr Lewis narrates their train rides, airplane connections and border crossings with élan. At Canfranc, where France meets Spain, Baker beguiled the station agents, who were too dazzled to search the

mountain of trunks that contained documents covered in invisible ink.

Baker lent support to the Allies in other ways, too. Her chateau in the Dordogne became an informal headquarters for the Resistance during Germany's occupation of France. When she fell ill with peritonitis later in the war, she allowed her hospital suite to be used as a dead-drop location. After recovering, she returned to the stage to perform for Allied troops across north Africa and for prisoners at the Buchenwald concentration camp after it was liberated. She often stipulated that the crowds not be

segregated by race. At all stops, her signature song was "J'ai Deux Amours", the two loves being America and Paris.

Mr Lewis has researched his story thoroughly over the course of a decade, and tells it like a fast-paced spy thriller. This is both praise and critique. Chapters end with cliffhangers, phoenixes rise from the ashes, and purple prose abounds ("She should be safe to weave her vital intrigue, if only she could keep the Grim Reaper at bay"). A figure as bold and underestimated as Josephine Baker needs no such flourishes. She astonishes all on her own. ■

Back Story Postcard from Hades

Visiting the scenes of stories, from myths to Harry Potter, is an act of imagination

AS YOU APPROACH the gateway to the underworld, the driving gets hairy. The clifftop road skirts ruined towers and terraces carved by desperate farmers into the barren mountains, before dead-ending at the southern tip of the Mani, the wildest part of the Peloponnese. The roar of the cicadas dies away and, on the finger of land dividing the Aegean and Ionian seas, only thorns seem to grow. Known as Cape Matapan or Cape Tenaro, this beautiful, desolate headland hosts the entrance to the kingdom of Hades.

Or so classical authors such as Euripides implied; others put the gateway farther north in Greece, or near Naples, or on the Turkish coast. But for visitors who suspend disbelief on the path that winds from a derelict chapel to a quiet cove, this is it: the place where Heracles dragged Cerberus, the three-headed guard-dog, snarling into the light, and where Orpheus turned and lost Eurydice to the darkness for ever.

Classical landmarks drew sightseers even before Byron set off a craze for them 200 years ago. Boosted by screen adaptations, literary tourism has since become a mass pursuit, as the post-covid holiday rush attests. Harry Potter fans are again queuing to pose beneath the sign for Platform 9½ at King's Cross station, whence trains to Hogwarts depart in J.K. Rowling's books. From the mortal platforms nearby, devotees can again unravel "The Da Vinci Code" on London-to-Paris tours. On June 16th, when the action of "Ulysses" is set, Dubliners will celebrate Bloomsday—named for James Joyce's protagonist, Leopold Bloom—in the novel's costumes and pubs.

A quarter of British travellers stop at bookish attractions on domestic trips, says a survey. On the face of it, the urge to follow in imaginary footsteps is odd,

even irrational. Look more closely, and as well as private enthusiasms, these journeys trace the alchemical links between stories and their readers.

It is one thing to visit the spots where authors wrote and died, trekking to the Brontë parsonage at Haworth or down the causeways to Hemingway's bolthole in Key West. Seeking out the sites of fictional marriage proposals—or ancient myths—is weirder. After all, the characters, being made up, never went there; nor, sometimes, did the authors. More eccentric still are quests to find non-existent places like Tolkien's Middle-earth. In "Confederates in the Attic", Tony Horwitz described tourists in Georgia searching for Tara, home of Scarlett O'Hara, though the film of "Gone with the Wind" was mostly shot in California, and Margaret Mitchell, the book's author, made sure her plantation resembled no real ones.

Plainly, it is easy to be snooty about literary tourism. The yen to see and touch the scenery of books can seem ploddingly literal. In their heads, it is said, everyone is the hero of their own story, but lots of

people seem content to be an extra in someone else's. Missions to track down invented figures or settings seem bound to end in disappointment—except for the entrepreneurs and marketeers who peddle Sherlock Holmes deerstalkers or guides to Jane Austen's Bath.

The elusiveness, however, may be the point: the true destination lies in the pilgrims' imagination. Influenced by post-structuralism, a school of criticism has from the 1960s analysed fiction in a related way, as a collaboration not a sermon. Authors, in this view, do not have godlike power to fix a work's meaning; readers are not passive recipients but partners in creation. Barbara Schaff, an expert on literary tourists at the University of Göttingen, sees them as collaborators in "The Death of the Author" (the title of a famous essay of 1967 by Roland Barthes). The Harry Potter luggage trolley embedded in the wall at King's Cross is, she says, "material testimony" to "the reader's power to create the text".

Perhaps. Another way to put it is that, for many, fiction can seem more vivid than life. Visiting the scene of a story is a means to revive its drama and resurrect its characters, freeing them from the dead, finite bounds of a book. It is a bid to expand the borders of the actual world to take in another one. It is a magic trick against reality.

In his travelogue of the Mani, Sir Patrick Leigh Fermor placed the portal to the underworld in a phosphorescent cavern along the coast from the headland. No matter. In the cove at Cape Tenaro, hidden by an eerie burst of foliage, is a cave with an overhanging lip that suggests a giant maw. Inside is a stagnant pool and, at the back, an icky-looking recess. In the murk it is hard to see how deep it goes. Maybe all the way.



Latvia is at a turning point in history – along with the rest of the Three Seas region

And it's an opportunity for investors

**JJ Energy independence.
Freedom in Europe.
Recession-proof future economy.**

This is a unique period in history where a third of Europe is on the verge of a major shift and has promising opportunities for business and investment based on the high economic potential and high geopolitical importance. The region in question? The Baltics and the north-south axis of Eastern Europe, also known as the Three Seas Region.



What is the Three Seas Region?

12 EU countries on the Baltic, Black, and Adriatic Seas.

Austria, Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia.

- Trade turnover of **€2.255tn** in 2021
- Population of 111m ~ **25% of EU**
- Territory 1.2m km² ~ **30% of EU**
- Total GDP €2.003tn ~ **14% of EU**
- Average GDP growth of 2.5% over the last 5 years (compared to EU - 1.2%)
- Infrastructure investment gap of more than €500bn
- GDP forecast for 2030 - €2.3tn
- GDP projected growth for 2022 - 3.2%

Three Seas Initiative is a politically inspired, commercially driven platform for improving connectivity between twelve states along the region. Its partners – the United States, Germany, and the European Commission – are closely involved in this process. Thus, the region grows, and so does EU cohesion, as well as transatlantic links.

"The Three Seas Initiative continues to scale up regional cooperation within the EU and strengthen transatlantic links with the United States. By collaboratively working together and strengthening future-fit investments, we aim to scale up the region's excellence EU-wide and globally, creating a strong backbone for cross-border and cross-sector infrastructures that will contribute to the economy and substantially benefit society and improve people's lives – for current and future generations."

Egils LEVITS, President of Latvia

"There is incredible potential for increasing cooperation and connectivity among this group that will enhance the security and prosperity of the region and quite frankly benefit the world. The United States will be your unfailing partner."

Joe BIDEN, President of the United States

The Three Seas Investment Fund was set up in 2019 to improve the region's connectivity and accelerate investments in infrastructure projects of the region. The US has already appreciated the investment opportunity, having expressed a commitment to contribute.

Unprecedented cut in ties – and opportunity for growth

The security of the Western world depends on countries' ability to interact, collaborate and work together to develop smart and sustainable solutions. Not only to strengthen national defense capabilities but also to address the economic challenges of the region's sustainability, innovation and economic viability as such.

Through historical events and geographical proximity, the Baltics have always been a forced participant in its ties with Russia. The past 30 years, however, have been spent distancing themselves – through rebuilding a market economy, embracing democracy and the rule of law.

The Baltic States have turned themselves into an attractive destination for investment, while simultaneously taking brave political energy security decisions – they have now fully renounced their eastern neighbour.

Latvia, Lithuania, Estonia being fully integrated members of all major economic and political structures, including the European Union, NATO, WTO and OECD, and by adherence to those standards – offer investors both opportunity and stability, and its potential is not exhausted.

Baltic resilience

Despite complicated geopolitical influences and coming out of a pandemic, the Baltic states have seen a growth in foreign investment, and are positioned to weather the upcoming economic difficulties well.

- 82 – FDI projects that have been realized in 2021

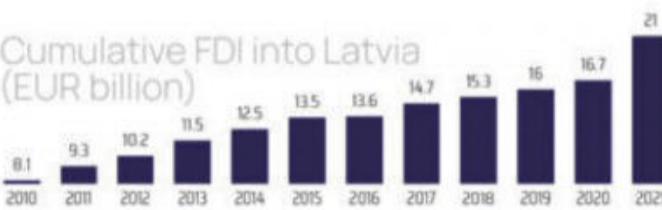
The Baltics can boast a variety of positives – political and administrative stability, developed e-governance, and the relative availability of human resources. What's more, the region is perceived as an emerging technology hub. A study of surveyed investors by EY found that "the general consensus is that the Baltic countries are directly in competition with some of the more established digital and technology hubs, including the Nordic countries as well as Israel and Singapore, in inviting attention from investors."

Latvia – on a mission to become the HQ for sustainable innovation

Latvia's rankings

- A+ S&P credit rating
- A3 Moody's rating
- #1 in the Baltics in Bloomberg Innovation Index
- OECD, NATO, EU, euro area country

Cumulative FDI into Latvia (EUR billion)



After a major economic recession in 2008, total financial system overhaul, a pandemic, war in Europe, and being among the first to fully renounce Russian gas, the country's GDP and export is growing at higher levels than the projected EU average. Experts are unanimous – this is a resilient country.

The country punches above its weight, doing what others have considered impossible:

- 1st country to successfully implement all 40 FATF recommendations in an aggressive fight against financial crime
- Among the first to fully renounce Russian gas, has spent ½ of its defense budget in supporting Ukraine
- Impressive economic convergence in GDP per capita terms (PPP) from just 30% of the EU average in mid-1990s to 70% of the EU average today

Small yet effective, a secret to Latvia's resilience is its focus on future-proof investment. Investing in high-added Smart Specialization sectors – in digitalisation, ICT, smart energy, and more. These projects are particularly welcomed, and their development is fast-tracked through the "green corridor" policy.

The small size has benefits in agility and flexibility – a "legal sandbox" makes it possible to test how existing legislation would impact new projects, to accelerate the implementation of innovations.

Investment climate

- 71 active investment projects
- 2-2.9% projected economic growth in Latvia in 2022

- 32 – new infrastructure projects launched in Latvia alone
- 0 – expected impact on unemployment

The highest value of the country lies in its people, fast adoption to changes, and their tight-knit community.

"Not only is Latvia among the most literate of all European countries, has excellent ICT infrastructure, is home to the most 5G test sites per capita, and has the most women in management positions, but the people are accessible to each other – we have a two-handshake principle, where you are only two handshakes away from any other citizen of Latvia. Therefore, you can get things moving very fast."

Kaspars ROZKALNS, Director General of the Investment and Development Agency of Latvia

Fun facts

- #1 most startup-friendly country in the world
- 1st 5G military test site in Europe

- 3rd in the world in mobile data usage
- Riga – #1 city globally for drone technology development

Dive into the Three Seas Business Forum

To discuss what is on the agenda for digitalisation, energy, and connectivity in the region, more than 600 like-minded politicians, including heads of state, international organizations and business leaders will gather in Riga, Latvia, in June 20-21 for the Three Seas Summit and Business Forum. The event will run for two days and offer a blend of industry-panel discussions, keynote presentations, and networking events.

In a changing geopolitical reality, this year's forum in Riga, Latvia is shaping up to be the most decisive yet. Those interested in joining, in person or online, are welcome to register at www.3seas.eu.



Sources: Eurostat, Bank of Latvia, Three Seas Initiative Investment Fund

Economic data

	Gross domestic product			Consumer prices		Unemployment rate		Current-account balance		Budget balance		Interest rates		Currency units	
	% change on year ago latest	quarter*	2022†	% change on year ago latest	2022†	%		% of GDP, 2022†		% of GDP, 2022†		10-yr gov't bonds latest,%	change on year ago, bp	per \$ Jun 8th	% change on year ago
United States	3.5	Q1	-1.5	2.3	8.3	Apr	7.7	3.6	May	-4.2	-5.8	3.0	150	-	-
China	4.8	Q1	5.3	5.0	2.1	Apr	2.2	6.1	Apr‡§	2.3	-6.2	2.6	§§	-38.0	6.68
Japan	0.4	Q1	-0.5	2.1	2.4	Apr	2.2	2.5	Apr	1.4	-6.1	nil	-8.0	134	-18.2
Britain	8.7	Q1	3.0	3.9	9.0	Apr	6.7	3.7	Feb††	-3.2	-5.3	2.2	136	0.80	-11.2
Canada	2.9	Q1	3.1	3.8	6.8	Apr	5.7	5.2	Apr	1.2	-3.6	3.3	182	1.25	-3.2
Euro area	5.4	Q1	2.5	3.2	8.1	May	6.8	6.8	Apr	2.3	-4.3	1.4	158	0.93	-11.8
Austria	9.5	Q1	10.0	2.6	8.0	May	6.5	4.4	Apr	-1.3	-4.4	1.9	187	0.93	-11.8
Belgium	4.9	Q1	2.2	2.0	9.0	May	9.2	5.7	Apr	-1.3	-3.8	1.9	187	0.93	-11.8
France	4.5	Q1	-0.8	2.7	5.2	May	5.4	7.2	Apr	-1.2	-5.7	1.8	168	0.93	-11.8
Germany	3.8	Q1	0.9	1.6	7.9	May	6.8	3.0	Apr	5.9	-2.9	1.4	158	0.93	-11.8
Greece	7.9	Q1	9.7	3.0	10.2	Apr	6.6	12.7	Apr	-5.1	-4.9	4.0	309	0.93	-11.8
Italy	6.2	Q1	0.5	2.0	6.9	May	6.3	8.4	Apr	1.5	-5.9	3.5	261	0.93	-11.8
Netherlands	7.0	Q1	0.1	2.4	9.6	Apr	10.4	3.2	Apr	8.5	-3.0	1.7	173	0.93	-11.8
Spain	5.5	Q4	1.3	4.0	8.7	May	7.2	13.3	Apr	0.8	-5.7	2.4	199	0.93	-11.8
Czech Republic	5.1	Q1	3.7	2.2	14.2	Apr	11.9	2.4	Apr‡	-2.5	-4.8	5.2	349	23.0	-9.1
Denmark	6.6	Q1	-0.4	2.1	6.7	Apr	6.9	2.4	Apr	8.2	1.0	1.7	161	6.93	-12.0
Norway	4.8	Q1	-3.8	3.2	5.4	Apr	4.8	2.9	Mar‡‡	16.4	8.7	1.4	76.0	9.45	-12.6
Poland	9.4	Q1	10.4	4.5	13.9	May	10.1	5.1	May§	-2.2	-3.7	6.8	488	4.28	-14.5
Russia	3.5	Q1	na	-10.0	17.1	May	18.0	4.0	Apr§	5.6	-4.5	9.1	168	60.5	19.7
Sweden	3.1	Q1	-3.2	2.4	6.4	Apr	5.1	8.2	Apr§	4.1	0.4	1.8	140	9.79	-15.5
Switzerland	4.4	Q1	1.9	2.4	2.9	May	2.5	2.2	May	6.3	nil	1.0	117	0.97	-7.2
Turkey	7.3	Q1	4.9	3.0	73.5	May	62.2	11.4	Mar§	-4.2	-3.6	24.2	622	17.1	-49.7
Australia	3.3	Q1	3.1	3.0	5.1	Q1	5.0	3.9	Apr	3.1	-3.2	3.6	202	1.39	-7.2
Hong Kong	-4.0	Q1	-11.4	0.8	1.3	Apr	4.1	5.4	Apr‡‡	0.3	-6.7	2.9	172	7.85	-1.1
India	4.1	Q1	1.9	6.9	7.8	Apr	7.3	7.1	May	-1.5	-6.6	7.5	148	77.7	-6.2
Indonesia	5.0	Q1	na	5.1	3.6	May	5.3	5.8	Q1§	0.2	-4.8	7.2	81.0	14,492	-1.7
Malaysia	5.0	Q1	na	5.0	2.3	Apr	3.0	4.1	Mar§	2.8	-6.2	4.2	91.0	4.39	-6.2
Pakistan	6.2	2022**	na	2.7	13.8	May	13.0	6.3	2021	-5.3	-7.0	12.8	†††	317	200
Philippines	8.3	Q1	7.8	7.1	5.4	May	4.7	6.4	Q1§	-3.0	-7.7	6.7	281	52.9	-9.9
Singapore	3.7	Q1	2.8	3.6	5.4	Apr	6.0	2.2	Q1	18.3	-0.9	2.9	140	1.37	-3.6
South Korea	3.0	Q1	2.6	2.7	5.4	May	4.4	3.0	Apr§	3.4	-2.3	3.5	135	1,254	-11.1
Taiwan	3.1	Q1	4.3	4.5	3.4	May	3.8	3.7	Apr	13.9	-1.2	1.3	86.0	29.5	-6.2
Thailand	2.2	Q1	4.7	2.9	7.1	May	5.0	1.5	Dec§	0.1	-4.8	2.9	130	34.5	-9.6
Argentina	8.6	Q4	6.3	4.2	58.0	Apr	60.1	7.0	Q4§	0.8	-4.3	na	na	121	-21.8
Brazil	1.7	Q1	4.0	1.3	12.1	Apr	10.4	10.5	Apr§‡‡	nil	-6.7	12.9	387	4.87	3.3
Chile	7.2	Q1	-3.0	2.1	11.5	May	10.2	7.7	Apr§‡‡	-4.5	-3.4	6.4	215	822	-12.6
Colombia	8.2	Q1	4.0	4.2	9.1	May	9.8	11.2	Apr§	-3.7	-4.8	11.4	454	3,781	-5.0
Mexico	1.8	Q1	4.1	1.9	7.7	Apr	7.5	3.1	Apr	-0.9	-3.5	8.9	245	19.6	0.8
Peru	3.8	Q1	8.1	2.5	8.1	May	7.1	7.4	Apr§	-3.3	-2.5	7.7	306	3.75	5.1
Egypt	8.3	Q4	na	5.2	13.1	Apr	12.7	7.2	Q1§	-5.8	-6.0	na	na	18.7	-16.3
Israel	9.6	Q1	-1.6	4.3	4.0	Apr	4.2	3.5	Apr	3.1	-2.1	3.0	171	3.33	-2.7
Saudi Arabia	3.2	2021	na	7.5	2.3	Apr	2.5	6.9	Q4	14.9	10.1	na	na	3.75	nil
South Africa	3.0	Q1	8.0	1.9	6.0	Apr	5.8	34.5	Q1§	-1.6	-6.1	9.9	123	15.3	-11.3

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. Source: Haver Analytics

Markets

In local currency	Index Jun 8th	% change on:			index Jun 8th	one week	Dec 31st 2021	% change on:			index Jun 8th	one week	Dec 31st 2021
		one week	Dec 31st 2021	Dec 31st 2021				one week	Dec 31st 2021	Dec 31st 2021			
United States S&P 500	4,115.8	0.4	-13.6		41,553.2	-2.8	-6.8						
United States NAScomp	12,086.3	0.8	-22.7		3,225.8	-0.6	3.3						
China Shanghai Comp	3,263.8	2.6	-10.3		2,626.2	-2.2	-11.8						
China Shenzhen Comp	2,083.4	3.5	-17.7		16,670.5	nil	-8.5						
Japan Nikkei 225	28,234.3	2.8	-1.9		1,636.9	-1.4	-1.3						
Japan Topix	1,970.0	1.6	-1.1		89,946.9	-1.6	7.7						
Britain FTSE 100	7,593.0	0.8	2.8		108,367.7	-2.7	3.4						
Canada S&P TSX	20,792.4	0.4	-2.0		49,819.3	-3.3	-6.5						
Euro area EURO STOXX 50	3,788.9	0.8	-11.9		10,236.1	1.5	-14.1						
France CAC 40	6,448.6	0.5	-9.8		1,964.9	-1.0	-5.2						
Germany DAX*													

Class revival

The grandchildren of the pre-revolutionary elite are doing well

“THE LAND ownership system of feudal exploitation by the landlord class shall be abolished.” So read China’s agrarian reform law of 1950. Land was seized from the better-off and given to poor farmers, whose share of farmland rose from 14% in 1947 to 47% in 1954. Liu Shaoqi, who was president during the Mao era, called it the “most thorough reform in thousands of years of Chinese history”.

Hundreds of thousands of landlords were murdered. Tens of millions of people died in a famine when farms were collectivised. Yet the surviving descendants of the old elite have prospered. By 2010 they were again richer and more educated than the Chinese average, according to data gathered by an international group of academics. Adding new evidence from cities to previous work, which looked at rural areas alone, the authors now find that the elite’s grandchildren have even out-earned Communist Party members.

To measure the initial impact of China’s reforms on inequality, the authors compiled data on land ownership in 1950 from archived records. Unsurprisingly, inequality of land holdings, measured by a Gini coefficient, fell sharply after land reform, from 0.5 to 0.1—close to perfect equality.

To measure what has happened since then, the authors used a survey of 36,000 Chinese residents from 2010. It recorded earnings and education, as well as social class. The party created hereditary class labels in 1950, in part to punish the old guard. These allowed the researchers to distinguish between old elites and everyone else.

The authors found that elites born before 1940 were 7% likelier than their contemporaries to have finished secondary school. Their stigmatised children were 3% less likely to have done so than others their age. By 2010 the children of old elites earned 5% less than other Chinese.

But things flipped back. Descendants of the old elite born between 1966 and 1990 were 6% more likely to finish high school than their contemporaries. In 2010 they earned 12% more than other Chinese. They even earned 2% more than party members.

The researchers found that the old elite’s grandchildren are more enterprising and work longer hours than the descendants of those who had lower social standing. Although the elite’s capital was destroyed 70 years ago, their social capital has endured. ■

→ Land redistribution in 1950s China dramatically reduced inequality

Inequality of Chinese land ownership within counties*



Before land reform



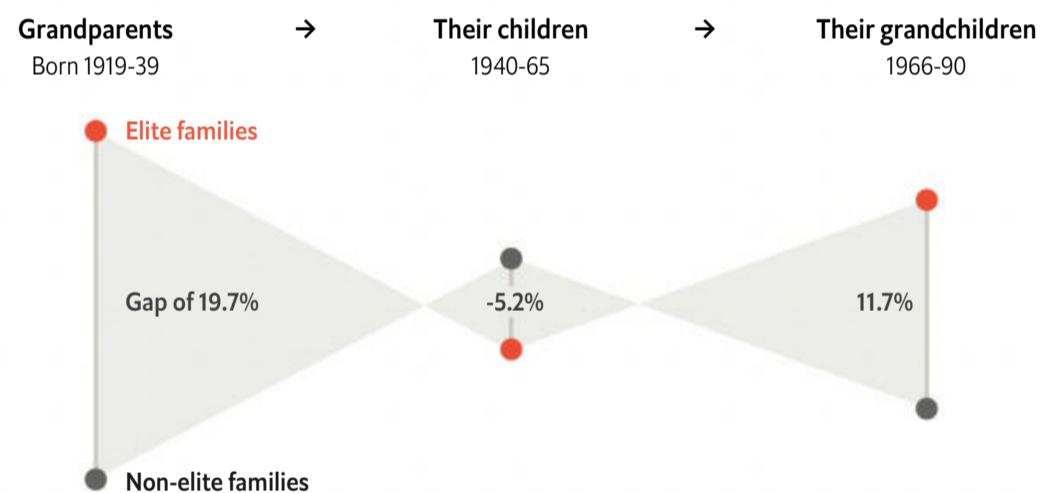
After land reform



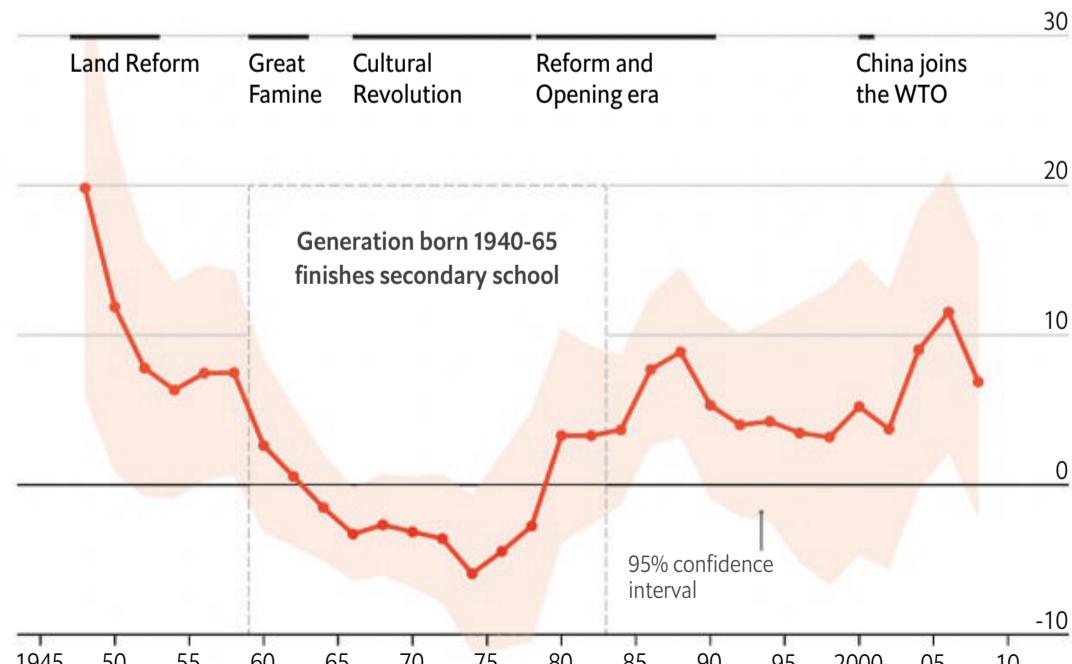
Land was very heavily redistributed in Shaanxi; 40% of peasant farmers owned 80% of land

→ After the Mao era ended, the pre-revolutionary elites’ grandchildren regained their social advantage

Difference in personal income, 2010



Difference in probability of completing secondary school between pre-revolutionary elite and non-elites, percentage points



*639 counties. Missing values are imputed with province-level average, unless province data are missing

Source: “Persistence despite revolutions”, by A. Alesina, M. Sacerdote, D. Yang, Y. You & W. Zeng, working paper, 2022



Have bike, will travel

Dervla Murphy, Ireland's best-loved travel writer, died on May 22nd, aged 90

THE MOMENT was unforgettable. Dervla Murphy was ten, struggling up a steep hill near Lismore in County Waterford on her second-hand bike, when she looked down at her thin legs slowly pumping and thought that if they just went on doing so, she could get to India. On the same birthday when she had got the bike she had also been given a second-hand atlas, so the route was in her head already. Nothing stood in her way at all except two little tiny stretches of water and a mountain range or three.

So began a dream of travelling that eventually led to a trek of 4,500 miles from Ireland to Delhi, a journey of 1,300 miles through the Peruvian Andes and trips to southern Africa, Madagascar, Cuba and the Middle East. She kept copious diaries, often written by oil-lamp or moonlight as she prepared to slide her sore bones into yet another flea-bag or a charpoy in the open air, and the diaries grew into 26 books which earned her the title, daft she thought, of an Irish national treasure.

Her preferred conveyance for most of these trips was an Armstrong Cadet man's bike, bought in 1961 and christened Roz, short for Don Quixote's steed Rocinante. Roz was fitted out with two pannier-bag-holders that could carry 28lb of kit, including the vital notebooks, a good deal of aspirin, William Blake's poems, a stock of American cigarettes and an emergency supply of Courvoisier. Her whole temperament was steady, reconciled to being pushed through deep sand, heaved up cliff faces and near-drowned in raging rivers, as her owner was. If Roz could not manage it had to be Dervla's poor feet, or a pony, or a mule (in Ethiopia), or the buses that bounced violently and sickeningly over one atrocious track after another. Once in the Himalayas she even boarded a small Dakota, but hated herself for making use of this noisy mechanised impertinence. It was an insult to the mountains.

Generally, too, she travelled alone. Why shouldn't a woman go where she pleased, embracing an unplanned life? She did not start

the long treks until she was 31, having to stay at home before then to care for her disabled mother and ageing father. By that time she certainly knew her own mind, batty and stubborn and fiercely independent. (Even her daughter Rachel, whom she sometimes took roaming with her later, had been conceived with no intention of ever marrying.) When Responsible Persons gave her Good Advice, such as telling her it was folly to cross Afghanistan on a bike, she was all the more perversely determined to go. Mind you, she carried a .25 pistol in the pocket of her slacks and used it too, dispatching a wolf that flung itself at her and seeing off a lecherous six-foot Kurd, to her great satisfaction and surprise.

Many who met her in the world's wilder and less visited places assumed, in fact, that she was a man. She was tall, deep-voiced and well-muscled, and *in extremis*, as when fording a river in Pakistan, could carry Roz round her neck. She could also drink like a man, beer being her staple, and preferred to do her research (though that was too solemn a name for it), in bars, pubs and teahouses or at village gatherings, where locals crowded curiously round her. Those were the people she wanted to mix with, ordinary folk, sharing their joy at bloodily fought polo matches or letting toddlers ride round on her back while she brayed like a donkey. To them she would patiently show, time after time, how a bicycle worked, and with them she would sit down fairly gratefully to meals of stewed clover, fly-blown bread and rancid ghee, amazed by how freely they shared the little they had.

The more remote the place, the more she was drawn there. To look out on thousands of miles of uninhabited land, from the top of a mountain she could possibly freewheel down, was sheer bliss. Her greatest happiness often lay in harshness, such as the vast ice of Siberia, the dazzlingly tinted ranges of the Hindu Kush—like light immobilised—or the crenellated peak in the Andes through which the sun woke her one morning as it rose. Yet human incursions also delighted her, in gardens full of roses and pomegranates, orchards misted with apricot and apple blossom and fields where women worked decked out in crimson and silver. Her special love was for Afghanistan, not then convulsed by war and not yet touched by the creeping blight of Modernity, Uniformity and so-called Progress. She felt she might have stayed for ever in the Hindu Kush, living in the sanity of backwardness.

Dislike of Western ways permeated "Full Tilt", her first and most famous book, which told of her dream-trip to India. But the exploits to which she subjected both Roz and her own unfortunate carcass disguised the true strength of her political feelings. Gradually she showed them more. For subsequent books she lived in squalid, disease-ridden camps among refugees from Tibet and Palestine, becoming a campaigner for them, and travelled among victims of AIDS and genocide in Africa. For "A Place Apart" she took Roz to Northern Ireland during the Troubles, talking to people on both sides in an effort to understand Irish nationalism, for which her father had been imprisoned. Her happiest spell of research was also close to home, for "Tales from Two Cities", a study of race relations on the outskirts of Birmingham and Bradford. Both trips were mostly pub-work, and reinforced the major conclusion she had reached already—that wherever you went in this fractious world, people were essentially the same and had to be treated with simple (socialist) fairness.

In old age, living in a chilly warren of stone buildings in Lismore surrounded by books, cats and forget-me-nots and subsisting mostly on beer, her regrets were few. But they were heartfelt. She wished she had visited Tibet before the Chinese took over, and she wished that remote places might be allowed to stay that way. Mass Tourism, Motor Roads, Expanding Markets, Capitalism itself, were all neat hell to her. Each mobile phone announced the end of a sealed and precious culture.

Travel was done now, and arthritis made it hard to write. But she was happy enough just to watch the leaves moving in the wind, excited, preparing to spin abroad. ■

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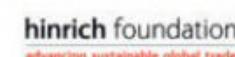
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