The Economist

China's changing debt diplomacy

Gene tweaking: a new era begins

How diversity training can backfire

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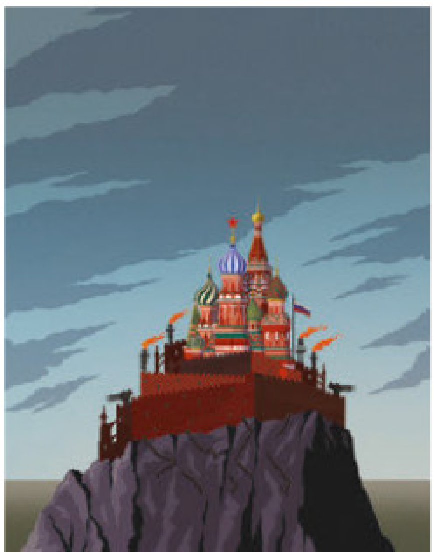

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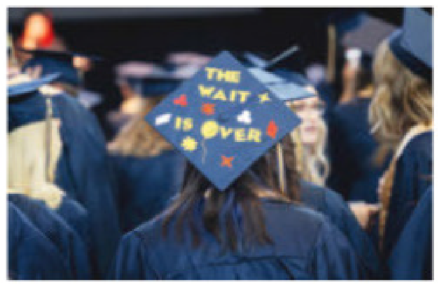

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to take part in *"a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."*

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Ukraine celebrated its independence day, coincidentally on the six-month anniversary of the Russian invasion. Kyiv put on a display of ruined Russian military equipment, to mock Vladimir Putin's reported plan to hold a victory parade there six months ago. Rumours that Russia would lob missiles at Kyiv this week proved unfounded, but a Russian strike on a train station in Ukraine's east killed 22 people. Volodymyr Zelensky, Ukraine's president, pledged to drive Russian forces entirely out of the country, and said that Ukraine had been "reborn" in the conflict.

Daria Dugina, a fiery nationalist pundit in **Russia**, was killed by a car bomb. Some speculated that the intended target was her father, Alexander Dugin, another nationalist commentator who is said to influence Mr Putin. Without evidence, Russia accused Ukraine of carrying out the killing. Pro-Kremlin mouthpieces cited it as a reason to escalate the war in Ukraine.

In **Pakistan** the government filed a case against Imran Khan, the rabble-rousing former prime minister, under anti-terrorism laws. Mr Khan is accused of threatening a judge and senior police officers. His supporters accused the state of persecuting him because he is popular. It is unclear whether he will actually be arrested.

Malaysia's highest court upheld a guilty verdict against Najib Razak, a former prime minister. He had been convicted of various crimes related to a colossal scam in which $4.5bn was looted from Malaysia's sovereign wealth fund. Some $700m was found in Mr Najib's personal account; he insisted it was a political donation from an unnamed Saudi royal. It was Mr Najib's last appeal; he was immediately sent to prison to start a 12-year sentence.

The Constitutional Court in **Thailand** suspended Prayuth Chan-ocha from his position as prime minister until a decision is reached as to whether he has breached the eight-year term limit codified in a constitution that was written by a committee favourable to him. Mr Prayuth, a former general, took power in a coup in 2014. His supporters argue that his term only started either in 2017, when the constitution took effect, or in 2019, when he became a civilian head of government.

Don't cut the cake just yet

Singapore's prime minister said his government would repeal Section 377A of its penal code, which criminalises sex between men. Gay-rights groups have long fought for the provision, which was rarely enforced, to be struck down. However, the government also said it would seek to amend the constitution to give Parliament the right to define marriage. Most Singaporeans oppose gay weddings.

Raila Odinga asked **Kenya's** Supreme Court to nullify the result of a presidential election on August 9th, which he narrowly lost to William Ruto. The court has two weeks in which to reach a verdict.

Mali's military government, which has promised to hold elections in 2024, replaced its ailing civilian prime minister with a colonel. Since both president and prime minister are now soldiers, the military's grip on power looks tighter.

Al-Shabab, a Somali jihadist group linked to al-Qaeda, stormed a hotel close to the presidential palace in Mogadishu, **Somalia**'s capital, and held it for 30 hours, leaving at least 20 people dead. The attack was a challenge to the new president, Hassan Sheikh Mohamud, who had recently appointed one of the founders of al-Shabab to his cabinet.

A humanitarian truce between **Ethiopia's** government and rebels in the northern region of Tigray, enabling food and other aid to reach thousands of famished civilians, appeared to break down. Fighting flared up in Tigray. A separate rebellion intensified in the south and west of the country.

Angola held what was expected to be its tightest ever presidential election. However, few expect the ruling People's Movement for the Liberation of Angola (MPLA) or the incumbent head of state, João Lourenço, to give the opposition National Union for the Total Independence of Angola (UNITA) a fair chance of winning.

Reports circulated that the nuclear deal between **Iran** and six major countries, which had been signed in 2015 but aborted by Donald Trump in 2018, might soon be revived. The EU has suggested revisions to the text. America and Iran were said to be demanding last-minute assurances.

The Democrats won a special election in a highly competitive congressional district in **New York state**. The Democratic candidate, who took 52% of the vote, talked about abortion during his campaign; his Republican candidate focused on inflation. These themes are likely to feature prominently in the run-up to November's mid-term elections.

Donald Trump said his constitutional rights had been breached by the FBI's search of his home in Florida, and sought legal protection. He asked a judge to appoint an independent legal officer to review the documents taken from Mar-a-Lago and to stop the Justice Department from assessing them.

Joe Biden announced a plan to wipe $10,000 from the **student debts** of Americans who earn up to $125,000, and an extra $10,000 for those who received federal aid to attend college. Economists decried the plan as costly and regressive. Yet it may be popular.

California readied new regulations that will ban the sale of new petrol-powered cars by 2035, giving force to an executive order signed by the governor, Gavin Newsom, in 2020. The state reckons that 16% of cars sold this year have been zero-emission vehicles, up from 8% in 2020.

Almost 1,300 illegal **migrants** tried to reach Britain in a day by crossing the Channel, a new record. Over 22,560 have been recorded traversing the busy shipping lane so far this year, compared with 12,500 at the same point in 2021.

Cristina Fernández de Kirchner, the vice-president of **Argentina**, faced further allegations of corruption. A federal prosecutor requested that Ms Fernández be jailed for 12 years and barred from holding public office. She is accused of giving public-works contracts to a friend. She denies all charges.

I'll respect the result, if I win

Jair Bolsonaro, the populist president of **Brazil**, appeared on television and repeated his claim that a presidential election in October, which he is expected to lose, might be rigged. He offered no plausible evidence. He said he would honour the results, but only if they were "clean and transparent".

A whistleblower claimed that **Twitter** had "egregious deficiencies" in data privacy and other sensitive areas, and had misled regulators over its cyber defences. Peiter Zatko was head of security at Twitter from late 2020 until his sacking earlier this year. The company said his allegations were full of "inconsistencies". Mr Zatko's claims about the handling of fake accounts parallel **Elon Musk's** reasons for wanting to ditch his takeover of Twitter. Mr Musk's lawyer said a subpoena had been issued to Mr Zatko. A subpoena has also been handed to Jack Dorsey, Twitter's former boss, ahead of a trial that will determine if the deal should go ahead.

Vodafone decided to sell its operations in Hungary to 4iG, a telecoms firm, and a state holding company. Concerns have been raised that the deal will tighten the grip of Viktor Orban, Hungary's autocratic prime minister, on the country's telecoms industry.

In Russia the government strengthened its hold over the internet when **VK**, the state-controlled social-media company, agreed to buy the news assets and homepage of **Yandex**, the country's biggest search engine. Yandex has been criticised for complying with the Kremlin's line on Ukraine on its news site. It now wants to focus on other aspects of its business.

Xiao Jianhua, a Chinese financier connected to China's political elite, was sentenced to 13 years in prison for several corruption crimes, including bribery. Mr Xiao was abducted by Chinese agents from the Four Seasons hotel in Hong Kong in 2017, sending a strong signal to China's business community at the time about the reach of the authorities.

China's benchmark mortgage lending rate was cut for the third time this year. Coming on top of other easing measures, the government is walking a fine line of trying to shore up demand, notably in the housing market, while not stoking inflation. It has also announced 300bn yuan ($44bn) of infrastructure stimulus.

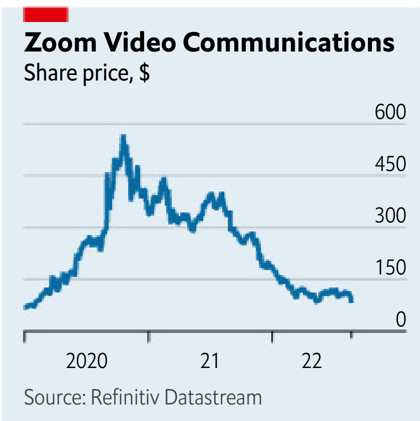
The **euro** fell below parity with the dollar again to its lowest level in two decades. The weaker euro increases the cost of imports, pushing up prices, notably for energy. These are factors that may help tip **Germany** into recession over the coming months, according to the country's Bundesbank.

I'll do it my way

Turkey's president, Recep Tayyip Erdogan, once again ruled out increasing interest rates, despite annual inflation running at 80%. He spoke after the central bank surprised markets by cutting its main rate by one percentage point, to 13%, the latest in a series of unorthodox moves. "Economics theories aren't valid everywhere", snorted Mr Erdogan.

Revised figures showed that the **British economy** shrank by 11% in 2020, the largest fall in GDP since 1709. The economy fared worse in the second quarter, the start of the pandemic, than had been thought; the recovery in subsequent months was also weaker.

A regulator gave **Warren Buffett's** Berkshire Hathaway permission to buy up to 50% of **Occidental Petroleum**. Mr Buffett backed Occidental's takeover of Anadarko in 2019. This year he has spent around $10bn buying Occidental's shares, giving his investment company a stake of 20%.



Zoom's earnings disappointed investors. Revenue at the videoconference company grew by just 8% in the three months to July 31st, year on year. That is down from 54% in the same period of 2021 and the first time it has reported single-digit growth. It has lowered its profit forecast.

Building on the momentum of the Chips Act, which subsidises American chipmakers, **Intel** secured investment from Brookfield Infrastructure Partners to develop a $30bn factory near Phoenix. Intel has also announced plans for a $20bn plant in Ohio and $30bn of investment in Europe as it tries to claw back market share from TSMC in Taiwan and Samsung.

The end of the rocky road

A federal judge denied a request from **Ben & Jerry's** to halt the sale of its business in Israel to a local distributor. Unilever, which owns Ben & Jerry's, decided to sell up when the ice-cream maker in effect boycotted Israel, believing that its policies in the West Bank are "inconsistent" with the brand's social values. The judge found that Ben & Jerry's had failed to prove it would be harmed by the deal.

Cineworld said it was considering bankruptcy protection. The world's second-biggest cinema chain, which owns the Regal brand in America, has accumulated a mountain of debt. A string of recent blockbusters, such as "Top Gun: Maverick", one of the highest grossing films of all time, has boosted the industry, though not even the return of Tom Cruise in his fighter-pilot uniform has put enough bums on seats. Box-office sales are still down by a third this year compared with 2019.

The Economist

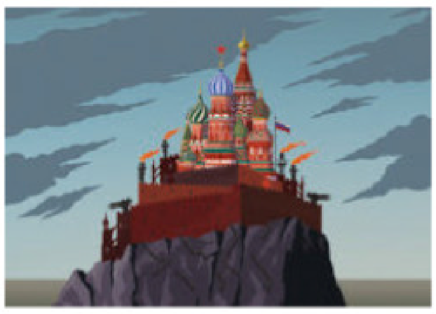
Are sanctions working?

The lessons from a new era of economic warfare

Six months ago Russia invaded Ukraine. On the battlefield a war of attrition is taking place along a thousand-kilometre front line of death and destruction. Beyond it another struggle is raging—an economic conflict of a ferocity and scope not seen since the 1940s, as Western countries try to cripple Russia's $1.8trn economy with a novel arsenal of sanctions (see Finance & economics section). The effectiveness of this embargo is key to the outcome of the Ukraine war. But it also reveals a great deal about liberal democracies' capacity to project power globally into the late 2020s and beyond, including against China. Worryingly, so far the sanctions war is not going as well as expected.

Since February America, Europe and their allies have unleashed an unprecedented barrage of prohibitions covering thousands of Russian firms and individuals. Half of Russia's $580bn of currency reserves lies frozen and most of its big banks are cut off from the global payments system. America no longer buys Russian oil, and a European embargo will come fully into effect in February. Russian firms are barred from buying inputs from engines to chips. Oligarchs and officials face travel bans and asset freezes. America's "KleptoCapture" task-force has seized a superyacht that may have had a Fabergé egg on board.

As well as satisfying Western public opinion, these measures have strategic objectives. The short-term goal, at least initially, was to trigger a liquidity and balance-of-payments crisis in Russia that would make it hard to finance the Ukraine war and thus alter the Kremlin's incentives. In the long run the intent is to impair Russia's productive capacity and technological sophistication so that, if Vladimir Putin aspires to invade another country, he would have fewer resources to hand. A final aim is to deter others from warmongering.



Behind such ambitious goals lies a new doctrine of Western power. The unipolar moment of the 1990s, when America's supremacy was uncontested, is long gone, and the West's appetite to use military force has waned since the wars in Iraq and Afghanistan. Sanctions seemed to offer an answer by allowing the West to exert power through its control of the financial and technological networks at the heart of the 21st-century economy. Over the past 20 years they have been deployed to punish human-rights abuses, isolate Iran and Venezuela and hobble firms such as Huawei. But the Russia embargo takes sanctions to a new level by aiming to cripple the world's 11th-biggest economy, one of the biggest exporters of energy, grain and other commodities.

What are the results? On a three- to five-year horizon isolation from Western markets will cause havoc in Russia. By 2025 a fifth of civil aircraft may be grounded for want of spares. Upgrades to telecoms networks are being delayed and consumers will miss Western brands. As the state and tycoons seize Western assets, from car plants to McDonald's outlets, more crony capitalism beckons. Russia is losing some of its most talented citizens, who recoil at the reality of dictatorship and the prospect of their country becoming a petrol station for China.

The trouble is that the knockout blow has not materialised. Russia's GDP will shrink by 6% in 2022, reckons the IMF, much less than the 15% drop many expected in March, or the slump in Venezuela. Energy sales will generate a current-account surplus of $265bn this year, the world's second-largest after China. After a crunch, Russia's financial system has stabilised and the country is finding new suppliers for some imports, including China. Meanwhile in Europe, an energy crisis may trigger a recession (see Free exchange). This week natural-gas prices rose by a further 20% as Russia squeezed supplies.

It turns out the sanctions weapon has flaws. One is the time lag. Blocking access to tech the West monopolises takes years to bite, and autocracies are good at absorbing the initial blow of an embargo because they can marshal resources. Then there is the blowback. Although the West's GDP dwarfs Russia's, there is no wishing away Mr Putin's chokehold on gas. The biggest flaw is that full or partial embargoes are not being enforced by over 100 countries with 40% of world GDP. Urals oil is flowing to Asia. Dubai is brimming with Russian cash and you can fly with Emirates and others to Moscow seven times a day. A globalised economy is good at adapting to shocks and opportunities, particularly as most countries have no desire to enforce Western policy.

You should therefore discard any illusions that sanctions offer the West a cheap and asymmetric way to confront China, an even bigger autocracy. In order to deter or punish an invasion of Taiwan, the West could seize China's $3trn of reserves and cut off its banks. But, as with Russia, China's economy would be unlikely to collapse. And the government in Beijing could retaliate by, say, starving the West of electronics, batteries and pharmaceuticals, leaving Walmart's shelves empty and triggering chaos. Given that more countries depend on China than America as their largest trading partner, enforcing a global embargo would be even harder than with Russia.

Instead the lesson from Ukraine and Russia is that confronting aggressive autocracies requires action on several fronts. Hard power is essential. Democracies must cut their exposure to adversaries' choke points. Sanctions play a vital role, but the West should not let them proliferate. The more that countries fear Western sanctions tomorrow, the less willing they will be to enforce embargoes on others today.

Beyond blockades

The good news is that, 180 days after the invasion, democracies are adapting to this reality. Heavy weapons are pouring into Ukraine (see Europe section), NATO is fortifying Europe's borders with Russia, and Europe is securing new sources of gas and speeding up the shift to clean energy. America is reducing its dependence on Chinese tech and urging Taiwan to improve its military defences. The catch is that every autocracy, not least Xi Jinping's China, is also studying the sanctions war with Russia and is busy learning the same lessons. Ukraine marks a new era of 21st-century conflict in which the military, technological and financial elements are intertwined. But it is not an era in which the West can assume it has pre-eminence. Nobody can counter aggression through dollars and semiconductors alone. ■

1MDB

Impunity at bay

A corrupt politician has gone to jail in Malaysia. He must stay there

IT WAS A case to make kleptocrats blush. Some $4.5bn of public funds were stolen—more than the entire annual revenue of almost half the world's governments. Much of the money was squandered on high living: a superyacht, gambling sprees, a $23m diamond necklace. Some was even spent making a film about financial fraud, "The Wolf of Wall Street", as if to taunt the investigators trying to track the stolen funds around the world.

In the end, however, the gumshoes got their man. Malaysia's highest court this week upheld the conviction of Najib Razak, the country's prime minister at the time of the theft, through whose personal accounts more than $700m of the stolen funds passed. He has been sentenced to 12 years in prison for his part in the scandal and ordered to pay a fine of $47m (see Asia section).

It is a gigantic victory for the rule of law, not just in Malaysia, but globally. America's Department of Justice was among the first to implicate Mr Najib, and it has since zealously hunted for the money extracted from 1MDB, a state investment fund. The investigation spanned at least six countries, including financial centres such as Singapore and Switzerland. Goldman Sachs, a big investment bank, paid the Malaysian government $3.9bn to settle lawsuits related to its role. Seldom, if ever, have so many governments co-operated to bring a sticky-fingered foreign potentate to book. Many a crooked leader must be reading the headlines with a shudder.

Within Malaysia, the reverberations are all the louder. Mr Najib, the son of a former prime minister, had for decades been a leading light of the United Malays National Organisation (UMNO), the party that ruled the country from independence in 1957 until 2018, when voters ejected it because of the scandal. Malaysians were so appalled by the scale of the theft that they repudiated the politics of ethnic and religious division, which UMNO had used to distract them from cronyism and corruption.

However, UMNO has since clawed its way back to power, owing to the fractiousness of the opposition. Although the prime minister, Ismail Sabri Yaakob, has distanced himself from Mr Najib and refrained from intervening in the judicial process, a big faction within the party has been militating for the rehabilitation of its former leader. The jailing should strengthen Mr Ismail Sabri's hand and avert a return to baseness-as-usual.

Unfortunately, the battle against impunity is not yet over. For one thing, many other high-profile corruption trials remain under way. A verdict is imminent in an influence-peddling case involving Rosmah Mansor, Mr Najib's wife. Ahmad Zahid Hamidi, the president of UMNO and an ally of Mr Najib, is the subject of two trials, facing a total of 87 charges of corruption. They deny the charges against them. And several other cases involving Mr Najib himself have yet to conclude. A thorough reckoning is required if Malaysia is really to shed its culture of graft.

There is also the question of whether Mr Najib might be able to wangle a royal pardon. Sultan Abdullah, Malaysia's king, has the power to expunge his conviction completely. The two are from the same state, Pahang, and appear friendly. Mr Najib has tried to depict himself as a pious ally of the little guy, persecuted by the elites—a claim that has, astonishingly, won him some sympathy among voters disillusioned by the political upheaval since his fall.

In short, a comeback is not impossible. That would be a horrifying turn of events. Not only would it set Malaysia back on a path to looting disguised as politics; it would also signal to kleptocrats everywhere that there is always a way out. A man whose guilt has been so clearly and meticulously established, and upheld by several courts, yet who has not shown any remorse or even admitted his crime, must not be allowed to walk free. It is hard to imagine a worse precedent for Malaysia and the world. The king, at the apogee of Malaysia's institutions, must stand by them, not by his felonious fellow dynast. ■

Chinese lending

Distressing debt

How China should handle its bad loans to poor countries

HOW BIG is China's Belt and Road Initiative? It is hard to pin down a number. The programme has been running for nearly a decade, during which time China has financed hundreds of infrastructure projects in dozens of countries. These include railways in Africa, ports in Asia and roads in Latin America. President Xi Jinping has called it the "project of the century". The lofty rhetoric and opaque numbers fuelled fears that China was trying to reshape the world, by putting itself at the centre.

In one sense, it succeeded. The developing world is suffering a sovereign-debt crisis and China is at the heart of it. Buffeted by the pandemic, inflation and the war in Ukraine, dozens of countries involved in the Belt and Road Initiative are struggling to pay back loans from China and other creditors. Ethiopia and Zambia are among those restructuring their debts; Sri Lanka needs China's co-operation to do the same; in time, Cambodia, Kenya and Laos may follow. China's ruthlessly self-interested lending policies share some of the blame (see China section). The country must work with other creditors to resolve the crisis.

Such teamwork does not come naturally to China. An early test is Sri Lanka, where it has provided cash for ambitious projects. Some of these endeavours, such as big roads and expressways, seem to be worthwhile. But others have been costly flops. ▸▸

A new international airport in Hambantota, in the south, built with a $190m loan from China, has at times struggled to keep the lights on. A Chinese-funded seaport nearby also looks like a dud. Struggling to service its debts, Sri Lanka's government handed control of the port, on a 99-year lease, to a state-backed Chinese firm in 2017.

White elephants alone did not cause the debt crisis. The blame lies mostly with Sri Lanka's government for slashing taxes in 2019 and with covid-19 for crushing tourism. But China provided a shovel to burrow deeper into debt. Early in the pandemic, as the island's debt woes mounted, some officials wanted to approach the IMF for a bail-out. But China stepped in, offering emergency loans to boost liquidity. That strategy failed spectacularly this year, when Sri Lanka ran out of dollars to pay for basic imports. By the time it approached the fund in April, its economy was in free-fall. Three months later big protests forced the president to flee.

The hope is that China learns the lesson Western creditors were taught in the 1980s and 1990s, when they repeatedly rescheduled loans, instead of writing them down, prolonging the economic pain in several developing countries. Better still if China learned to work with Western and other rich creditors, which are grouped together in the Paris Club and tend to co-ordinate sovereign-debt restructurings, often in tandem with the IMF. China has long resisted such efforts, resenting America's leading role in those organisations, as well as the club's commitment to consensus, transparency and "comparable treatment" for all creditors.

However, there are some reasons to be optimistic. China financed a splurge on infrastructure in Zambia similar to the one in Sri Lanka. And it frustrated debt-restructuring efforts after Zambia, too, ran into financial trouble. In 2020, though, it backed the "Common Framework" agreement between the G20 and the Paris Club to co-operate on debt treatments for poor countries. In July, after months of talks, China and other government creditors agreed to provide debt relief to Zambia in the first such deal under the framework. Now comes talk of China co-chairing a creditor committee with Japan and perhaps India to resolve Sri Lanka's debt.

China's stress test

That would be welcome, as more tests are coming. China has scaled back the Belt and Road Initiative. But it is still not clear if the crisis has prompted a serious rethink in Beijing. In the past China has claimed to offer a better model of development finance, free of the conditions that Western and multilateral lenders impose. It is true that those lenders need to improve their own practices. America, in particular, should not let geopolitical tensions hamper co-operation on debt relief. The onus, however, is now on China as the world's biggest official lender to take a more responsible approach to dispensing loans abroad—and to work with other creditors when things go bad. ■

Constitutional chicanery

A risky distraction

Voters should be sceptical of attempts to solve problems by fiddling with constitutions

A MAN WALKS into a library and asks for a copy of the French constitution. "I'm sorry," replies the librarian. "We don't stock periodicals." By one count, France has had 16 constitutions since its first in 1791. Its current version, which dates from 1958, has been amended dozens of times. But it is a beacon of stability compared with many other places. On September 4th Chileans will vote on a new charter. If it is approved, which it should not be, it would replace a document that has been amended 60 times since 1980. The rest of Latin America is equally keen on change. One calculation in 2009 put the average lifespan of a Latin American constitution at 16.5 years, compared with 77 in western Europe. A string of changes in the intervening years will have done little to close that discrepancy.

In Africa around a dozen countries have amended their constitutions since 2015, mostly to boost or prolong the powers of incumbent leaders. In July Tunisians voted to gut their country's democratic charter, which dates only from 2014. Kais Saied, Tunisia's president, can now rule by decree.

Constitutional change is not always bad. Many of the alterations to France's constitution have been to conform with rules of the European Union. Ireland's repeal in 2018 of its abortion ban was both democratic and wise. America's introduction of presidential term limits in 1947 was a sensible tweak. Even some of Chile's 60 amendments made sense.

But most fiddling is unhelpful. This week we examine two baleful trends (see International section). One is the tendency of autocrats—like Vladimir Putin in Russia, Recep Tayyip Erdogan in Turkey and Mr Saied in Tunisia—to amend charters to grant themselves more power. The second is the habit of Utopians to pack constitutions with growing numbers of highly specific "social rights". Both should be resisted.

The risks of making strongmen stronger are obvious. Constitutions embody the idea of rule by law, not rule by a fallible individual. It is dangerous to entrust any leader with untrammelled power, which is why leaders who seek it usually disguise their aim. Mr Putin, when asking voters in 2020 to rubber-stamp his increased powers and to extend his reign until 2036, bundled them with others to make pensions inflation-proof and bolster the minimum wage. Russians voted yes; it was a rotten bargain.

A constitution should establish basic rights, such as freedom of speech and fair trials. It should lay the ground rules for how a state works, such as: is it a presidential system or a parliamentary one? Then it should stop. The ever-shifting details of public policy—pensions, minimum wages and so forth—should be left to the government of the day. Policies must adjust to changing circumstances; budgets must add up. That is harder if lots of big items are set in stone.

Packing a constitution with inessential things weakens respect for it. If almost every law is the highest in the land, then none is. And the more "rights" are included, the greater the likelihood of a clash. Ecuador's constitution of 2008, for example, protects both the rights of landowners to oppose resource extraction, and the right of the government to develop the economy. When those conflicted, indigenous landowners' rights were trampled. Chile's new draft charter may not be a naked power grab like Russia's, but it is a confusing mess of micromanagement. It would require the state to enforce a right to sports, for children to be taught empathy for animals and for the joys of Chilean cooking to be promoted. It proclaims a right to housing, but also bans property speculation, making it hard for anyone except the government to invest in building homes.

Drafters of new charters and the voters who are consulted on them should bear two principles in mind. The first is simplicity. Constitutions are best when the rules are clear and short. The second is caution. The more a constitution is changed, the more prone it is to change in the future; once again, this tends to undermine its authority.

No real-life constitution is perfect. America's is admirably short but too hard to update, which is one reason the Supreme Court keeps reinterpreting it. Voters in many countries are unhappy with their governments, so the idea that a fresh constitution might reshape their societies for the better is appealing. But it is usually an illusion. A constitution is a starting-point; governments must still navigate the daily complexities of governing. A flawed or dated constitution can be incrementally improved, as Chile's old one should be. But unless a society has undergone a revolution, such as the end of communism or apartheid, it is rash to rewrite its basic law from scratch. ■

Genetic modification

Realising the revolution

Science has made a new genetic era possible. Now let it flourish

Thanks to great strides in fundamental research, biology is becoming ever more programmable. Two recent scientific advances show just how powerful the possibilities could be. The genetic modification of plants is allowing the mechanism of photosynthesis to be tinkered with, as research published in *Science* on August 18th sets out. This could lead to dramatic improvements in the productivity of plants, and eventually to a second green revolution. Tweaking the genes of people who suffer from fatal incurable diseases, meanwhile, has also had remarkable results. A series of genetic therapies has arrived, or is arriving, in clinics to treat blood cancers, spinal muscular atrophy, haemophilia and sickle-cell disease. The task now is to spread these gains far and wide.

The consequences of both advances could be momentous. The genetic modification of crops promises cheaper, more nutritious and more climate-resilient food for a hungry planet (see Science & technology section). Genetic therapies offer the hope of curing devastating diseases. They also allow for one-time treatments that can be transported to the four corners of the Earth, bringing years, decades or a lifetime of benefits to the seriously and incurably ill. Imagine a cure for AIDS or sickle-cell disease that could be taken to the continent of Africa or across the Middle East. The accompanying benefits would be similar to the eradication of smallpox.

This tantalising promise has been made possible by a prodigious investment in fundamental research over the years. Basic knowledge of genetics and the functions and structures of proteins has proved to be a motor for discovery across medicine and agriculture. The private sector, to be sure, plays an essential role in the cycle of innovation. But these advances are a reminder that investment by governments and charities is crucial in areas that offer little commercial benefit in the short term, but which in the long term promise to greatly advance well-being. Much of the success in treating rare diseases is a consequence of the efforts of charities, often thanks to fundraising by patients and their families. Research that benefits low-income countries frequently relies on philanthropic donors with deep pockets, such as the Gates Foundation. The investments made in fundamental science today yield the productivity gains of tomorrow.

Unfortunately, there is no guarantee that these gains will be realised. Gene therapies are a remarkable technical accomplishment. But their current enormous cost—often well over $1m to treat a single person—makes them hard for health-care systems to afford, even when they are reserved for fatal rare genetic diseases (see Briefing). The idea of using them to treat more prevalent conditions looks prohibitively pricey.

In the past, novel medicines that started out extremely costly have become cheaper. Monoclonal antibodies, useful laboratory-made proteins, were expensive when they first arrived, before a decade of advances brought them down in price 50-fold, according to Boston Consulting Group. If gene therapy is to live up to its promise, it will need to do even better than this. More efficient photosynthesis, too, will need further investment if it is to be commercialised.

The long-term manufacturing costs of a new green revolution will, thankfully, be low; plants make more plants in a way that treatments never can. Gene therapies, however, need innovation to reduce the cost of making them, whether this is in bioreactors or some completely novel way. If they are to become more affordable, new therapies also need to experiment with payment mechanisms, such as charging in instalments or by results. Pooling demand internationally to purchase therapies could help lower prices, too. Here governments, charities and the private sector could usefully work together.

Last, regulators also need to be quicker and more understanding of the gains to society from helping these technologies reach their potential. Innovations can languish without appropriate or timely rule-making. The regulation of genetically modified crops has been held back by misinformation campaigns, delaying benefits and raising costs. Likewise, although experimental drugs obviously need scrutiny, regulators should remember that the alternative in otherwise untreatable genetic diseases is often death. Science has made a genetic revolution possible. Now that revolution must flourish. ■

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Increase help to Ukraine

You laid out the case for America not risking escalation of the war in Ukraine to the point where Russia might use nuclear weapons ("The rungs of escalation", August 13th). But you did not address the consequences of Washington doing no more than seeing the war continue in Ukraine, which is bearing all the destruction and all the civilian casualties.

The declaration at the NATO summit in Bucharest in 2008 that Ukraine and Georgia will become members of the alliance was the actual moment of commitment. But behind closed doors in many allied capitals, questions are being asked about whether the United States would indeed act on Article 5 if a formal member of NATO were subject to Russian aggression. The required American and NATO reaction, especially in response to Russian aggression against the Baltic states and Finland, could only be vertical escalation of one form or another, including military action, with the risk of nuclear use. By providing military support to Ukraine in dribs and drabs America is reinforcing doubts about its strategic commitment to any of NATO's members in eastern Europe. If America is so risk-averse for a country to which it has consistently promised full NATO membership, what does that tell Vladimir Putin if he extends his aggression?

What America does now militarily for Ukraine has strategic and political implications for the alliance far beyond what happens in the Donbas region, implications which the Biden administration does not seem to understand. This is not an argument for direct NATO engagement or facilitating Ukrainian military attacks into Russia, but it is an argument for America doing far more to support Ukrainian armed forces than it is currently doing.

ROBERT HUNTER
Former American ambassador to NATO
Washington, DC

The assessments of Russian threat you cited appear to be obsolete. Russia's invasion of Ukraine this February was already a massive act of escalation that has not been exceeded by Moscow's response to Western military shipments or Ukrainian counter-attacks. The air strikes following the sinking of the *Moskva*, the flagship of Russia's Black Sea fleet, and the bombing of Kharkiv following the ammunition depot blasts in the Crimea still pale in comparison to the ferocity of Russia's initial assaults and to the horrors of Mariupol.

The clear indicator of Moscow's response to Western military aid for Ukraine is not Mr Putin's threat to use weapons never known in history but the recent shift of Russia's Black Sea fleet to a defensive posture and its retreat towards the Russian port of Novorossiysk. Moreover, the Kremlin's switch to the war-of-attrition strategy since withdrawing from most of Ukraine's north makes Russia's use of tactical nuclear weapons counterproductive. At the heart of this strategy is the expectation that Western support would wear out over time. Bringing Ukraine back into the spotlight under the looming mushroom cloud would achieve the opposite effect. In other words, the Kremlin has more to fear and to lose if it resorts to nukes than if it does not.

MIKHAIL ALEXSEEV
Professor of political science
San Diego State University

East west defence

Less than half of the 13 firms you highlighted in your article on defence technology operate from Silicon Valley ("Can tech reshape the Pentagon?", August 13th). New England is another innovation hub, home to numerous defence hardware and software startups, venture capital, prime subcontractors and labs. The Massachusetts Institute of Technology, not Stanford, has the only top MBA programme with a defence tech-focused club. At Harvard, Ash Carter teaches a course on tech competition between America and China.

This year students at MIT and Harvard hosted their first tech and security conference. You should come to the second next April to see that the American business community will help our soldiers and spies defend democracy, without San Francisco if we must.

AUSTIN GRAY
Co-president
MIT Sloan Global Security Tech Club
Cambridge, Massachusetts

Variable energy bills

Another interesting idea that could help households cope with rising energy costs comes from Gabriel Felbermayr, head of the Austrian institute of economics ("How to help with those bills", August 13th). He proposes setting a price ceiling for a standard amount of energy consumed. Every household would get the standard amount of gas or electricity cheaply; any additional consumption would be charged at the much higher market price. The idea is being considered by Austria's climate minister.

The proposal has two main advantages: immediate relief for the consumer and maintaining an incentive to save energy. That is in stark contrast to measures such as the German fuel-tax cuts. Of course it would need to be accompanied by additional financial help for the poorest, but that is better than undifferentiated subsidies to everybody.

STEFAN SCHULREICH
Department of cognitive psychology
University of Hamburg

A knowledge of font

I must raise an objection to Bartleby mentioning font selection as an example of excessive perfectionism (July 30th). Max Miedinger, the designer of Helvetica, the 20th century's most influential typestyle, once said to me: "We designers are sellers of details too small to be seen, and that is precisely what gives typography its power. The message is somehow warmer, more memorable. The average viewer does not see it, but they do feel it. The last little refinements are what make [the message] sing." Given how many thousands of blandly typeset lines we all consume each day, font selection could use more attention, not less.

DAVID CALVIN LAUFER
Consulting creative director
Computer Museum of America
Roswell, Georgia

Theory of the leisure class

There is no way of slicing the data to make Europe's biggest economies richer than America, you say (Free exchange, August 13th). Actually, one factor not mentioned is that Americans work much longer hours. For instance, the average German worked 1,349 hours in 2021, and the average American 1,791 hours, according to the OECD. If you then consider that leisure is a matter of choice and has value (specifically, the opportunity cost of not working those extra hours), the GDP of at least some European countries will exceed that of America.

MICHAEL WITT
Senior affiliate professor of strategy and international business
INSEAD
Singapore

Devaluing the pound

Adrian Fogarty scolded you for obsessive precision by converting the £1 that Sajid Javid's father had in his pocket after arriving from Pakistan to $1.20 (Letters, August 13th). Alas, it is worse than mere pedantry. When Mr Javid's father emigrated to Britain in the 1960s a pound was worth $2.80. Precision without accuracy, now that's prosody.

JOHN ASTELL
Holden, Massachusetts

Letters are welcome and should be addressed to the Editor at
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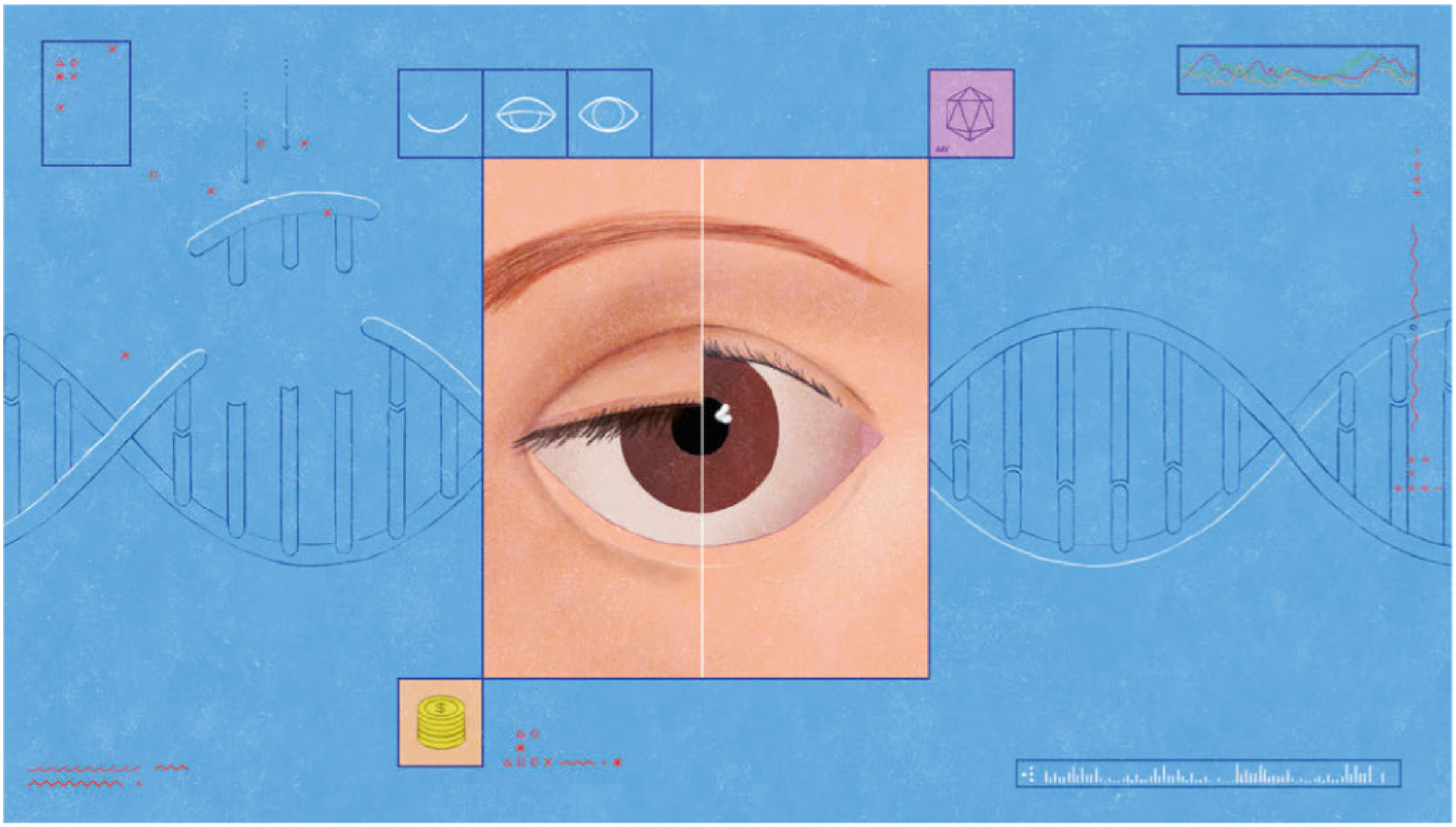


The trials of gene therapy

Changing people's genes promises cures for all sorts of diseases; but to keep those promises will require a lot more work

In 2018, when he was 13, Ethan Ralston's eyesight started to get blurry. The diagnosis was devastating. He had been born with Leber Hereditary Optic Neuropathy (LHON), a rare genetic disorder that eats away at the cells of the optic nerve until it causes blindness.

Given that America and Europe between them see just 800 cases of LHON a year young Mr Ralston was very unlucky. In another way, though, he could be counted fortunate. GenSight, a French biotech company, had for years been working on a gene therapy for LHON. The condition is caused by a mutation in a gene called ND4 which causes the body's cells to make a faulty protein. The therapy, called Lumevoq, sought to resolve the problem by adding the canonical version of ND4 to cells in the retina and optic nerve. By 2018 Lumevoq was in clinical trials. Shortly after his diagnosis Mr Ralston was treated with it.

Today his eyesight has almost returned to normal. He can work on a computer, drive a car, go bowling with his friends. He would seem to be cured.

Such stories are becoming increasingly common. In the 2010s a whole year might see only one new gene-therapy approval from regulators. This August alone saw two, one for beta thalassaemia and one for haemophilia a, both diseases of the blood. The Alliance for Regenerative Medicine, an international industry group for cell and gene therapies, says that 1,369 groups are developing such treatments and just over 2,000 clinical trials are under way. Most of those in their earliest stages and may well progress no further: many are cell therapies which do not require changes to the patient's genes. Still, according to scientists from the Centre for Biomedical Innovation in Cambridge, Massachusetts, there are enough trials under way that 40-50 new gene therapies could be approved for clinical use by 2030.

A lot of these will be used in the fight against cancer. Removing from the body some of the T-cells which the immune system uses to fight cancer, giving them a gene that lets them recognise a cancer-specific trait and putting them back is the basis of CAR-T therapies, one of the hottest approaches around (the CAR stands for "chimeric antigen receptor"). But there will also be lots that tackle inherited diseases. There are clear signs that this surge has begun. Janet Lambert, the boss of the Alliance for Regenerative Medicine, anticipates that Europe and America will see a record number of such gene therapies approved this year (see table on next page).

In a world where saying that something is in some person or other entity's DNA has become a shorthand for seeing it as part of their very essence, dealing with inherited diseases this way looks truly revolutionary. It is "one of the most compelling concepts in modern medicine" as a recent review paper put it. The ability to provide someone with a single treatment that will alleviate a terrible condition for a decade or more—perhaps even for life—is an intervention without any obvious parallel.

But it comes with a number of challenges. The techniques being used still carry risks. The therapies themselves are enormously expensive, not just because of the research required to develop them—that is expensive all across the biotech world—but because the cost of making them is particularly high. What is more, some may face stiff competition from other approaches, some of them equally novel. These may allow some of the conditions gene therapy seeks to fix to be treated in cheaper ways.

This raises the possibility that, impressive as they are, gene therapies might be relegated to a niche treating a small number of patients in rich countries. That ▸▸

would be a poor outlook for millions around the world who suffer from more common genetic diseases, such as sickle-cell disease, and other conditions. It could also scupper the chances of gene therapy moving beyond the realm of single-gene disorders to tackle more complex conditions. For many more people to experience the sort of benefits that have changed Mr Ralston's prospects, the ability to produce miracles will not be enough. They have to be produced affordably in ways that can be adapted to conditions far removed from the elite hospitals where trials typically take place today.

Vector displays

To design a gene therapy, you need a gene you want to add to the patient's cells and a way of getting it into them. Finding the first is, in principle, easy: thousands of diseases, most of the worst thankfully rare, come about because of a garbled copy of a single gene. That means they might in principle be alleviated by the addition of the normal version. The second is normally the job of a modified virus that can no longer reproduce but that can get a new gene into its target cells: a viral "vector".

Sometimes cells are taken out of the body, transformed by a vector and put back in, as they are in CAR-T cancer therapies. Zynteglo, a gene therapy for beta thalassaemia made by bluebird bio, a startup with an aversion to capital letters, works this way. On August 17th it became the third gene therapy for an inherited disease to be approved by America's Food and Drug Administration (FDA). In other cases the vector does its work inside the body. Lumevoq—approved by the European Medicines Agency (EMA) in 2021, but not yet by the FDA—was injected directly into Mr Ralston's eyes.

The first gene-therapy trial, which treated a single child with a specific and severe immunodeficiency called ADA-SCID, got under way in 1990. It did not lead quickly to a commercial product (a different gene therapy for ADA-SCID, Strimvelis, was eventually approved in 2016) but it paved the way for a number of successors. Unfortunately in 1999 the nascent field was rocked by the death of Jesse Gelsinger, an 18-year-old, four days after he had been given a gene intended to fix his inherited inability to metabolise ammonia.

His death was caused by his immune system's response to the adenovirus used as a vector. That knowledge drove the hunt for safer vectors; James Wilson, a gene-therapy pioneer at the University of Pennsylvania, where the trial during which Mr Gelsinger died was based, uncovered the potential of adeno-associated viruses (AAV). These are widespread in humans and are not known to cause any sort of disease; they provoke little or no immune response. That is one of the reasons that they have also been taken up by vaccine-makers. The Oxford AstraZeneca covid-19 vaccine works in this way, using an AAV to put DNA describing a telltale viral protein into the body's cells.

Rare birds

Key gene therapies for rare diseases in development or approved ● Medicines approved in any jurisdiction

Company	Name	Disease	Description
BioMarin	● Roctavian	Haemophilia a	Blood-clotting disorder
bluebird bio	eli-cel	Cerebral adrenoleukodystrophy	Rapid loss of neurological function. Often fatal
bluebird bio	lovo-cel	Sickle-cell disease	Atypical haemoglobin molecules lead to painful condition with wide damage to body and organs
bluebird bio	● Zynteglo*	Beta thalassaemia	Blood disorder with reduced levels of working haemoglobin
CRISPR Therapeutics and Vertex Pharmaceuticals	CTX001	Sickle-cell disease	Atypical haemoglobin molecules lead to painful condition with wide damage to body and organs
Gensight Biologics	Lumevoq	Leber hereditary optic neuropathy	Mitochondrial genetic disease that causes irreversible and severe vision loss, leading to blindness mostly in teens and young adults
Novartis	● Zolgensma	Spinal muscular atrophy	Causes weakening muscles and can be fatal
Orchard Therapeutics	● Libmeldy	Metachromatic leukodystrophy	A disorder which degrades the nervous system
Orchard Therapeutics	● Strimvelis	ADA-SCID	Inability to fight infections due to lack of white blood cells
PTC Therapeutics	● Upstaza	AADC deficiency	Rare genetic disorder of nervous system, interferes with way nerve cells talk to each other
Roche	● Luxturna	Inherited retinal disease	Eye disorder that causes vision loss or blindness
uniQure	EtranaDez†	Haemophilia b	Blood-clotting disorder
uniQure	● Glybera*	Lipoprotein lipase deficiency	Inability to digest fats

Source: *The Economist* *Withdrawn from Europe †Approval expected in 2022

For gene therapies, AAVs have the big advantage of coming in more than 100 different flavours, or serotypes, each of which has different preferences when it comes to which sorts of cell to infect. Vectors derived from AAVs are able to home in on specific tissues such as the optic nerve, or the central nervous system, or the muscles.

However, AAV-based vectors are not without problems. A recent analysis of almost 150 gene-therapy trials using them found that 35% had seen "serious adverse events", including brain-imaging findings of "uncertain significance". Large doses of the vector have also been linked to safety concerns. In 2018 Dr Wilson warned that high doses of AAV caused life-threatening toxicity in piglets and monkeys. At the same time he resigned from the scientific advisory board of Solid Biosciences, a gene-therapy firm focused on muscular dystrophy, citing emerging concerns about the possible risks of too much AAV. The firm says his resignation was due to findings in experiments that were unrelated to its work. Nonetheless its regulatory filings acknowledge that the high dosing requirements for the therapy it is developing may increase the risk of side-effects.

In August Novartis, a Swiss drug company, reported two liver-related deaths in children who were treated with its gene therapy for spinal muscular atrophy (SMA). Trials of a therapy being developed by Astellas, a Japanese drug company, for a rare muscle disease called x-linked myotubular myopathy produced some spectacular results, but also saw three children die with sepsis and gastrointestinal bleeding as a consequence of liver failure and a fourth from other liver-related complications.

Hard choices

Bernhardt Zeiher, who is about to retire as Astellas's head of development, recently told *Endpoints*, an online publication, that the company thinks the deaths were caused by a combination of a reaction to the AAV vector used and an underlying risk of liver disease. The transformational nature of the therapy itself, he added, means that the firm is committed to finding a way forward in the field.

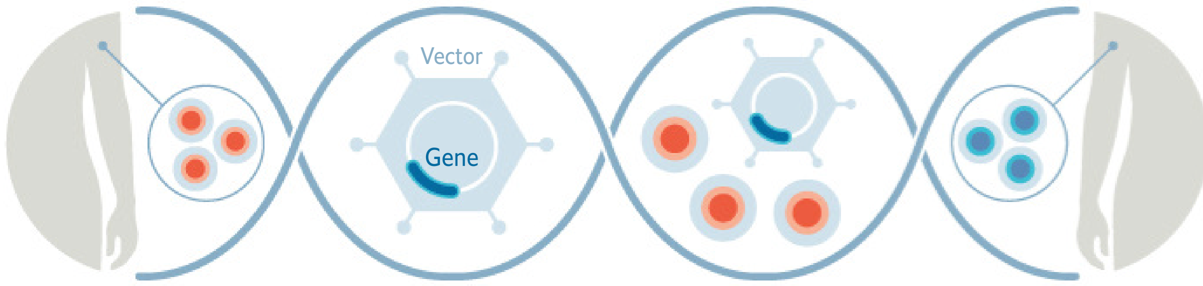
There have also been concerns over the potential for some vectors to trigger cancers in the long term. "You are giving [patients] quadrillions of vector particles," says David Lillicrap, a professor at Queen's University in Kingston, Ontario, who works on haemophilia. "A very, very small percentage are going to get into the host genome [in] susceptible areas." In 2020 a patient who was being treated for ADA-SCID with Strimvelis, which uses an RNA-based retrovirus as a vector, developed leukaemia. Orchard Therapeutics, the company marketing Strimvelis, has said it "may be attributable" to the way the gene integrated itself into the genome.

Nicole Paulk of the University of California, San Francisco, says that despite some worrying headlines the AAV vector is "extraordinarily safe". She says it has been or is being used in over 250 clinical trials with tens of thousands of patients, and that, compared with cancer drugs, it has been remarkably well tolerated.

Given that patients can have terrible experiences with cancer drugs that might not seem reassuring. But there are two other factors to bear in mind. One is that the patients in gene-therapy trials are often very unwell to begin with, and may come into them on other quite arduous treatment regimes. Adverse events are to be expected. More importantly, they may have little if anything by way of other options.

Out-of-body experience

Putting good genes into bone marrow



Patient's cells are collected and the stem cells isolated

The therapeutic gene is packaged into a deactivated virus which acts as a vector

Vectors deliver the therapeutic gene to the patient's cells, restoring the healthy genotype

The genetically modified cells are reintroduced into the patient

Source: *The Economist*

Breaking barriers

Karen Pignet-Aiach is the founder and boss of Lysogene, a French gene-therapy firm which concentrates on errors in the central nervous system. Firms like hers, she says, have to battle to make sure that regulatory agencies stick to the principle that the risks attached to a treatment have to be balanced against the benefits that a therapy for something lethal and untreatable could bring. In 2020 Lysogene had to deal with the difficult death of a child during a trial, putting a temporary halt to its clinical work. Ms Pignet-Aiach says the death may have been caused by medication given outside the trial but that there was no link with the treatment that was actually being investigated. As to the possible benefits, when she says "Our patients have nothing [else] available" she knows what she is talking about: she lost a daughter to Sanfilippo syndrome, one of the disorders the company is tackling.

Hold-ups when patients die are understandable, but they increase the cost, and risk, of developing these medicines. And there are other hurdles. Because no one yet knows how many years of duty can be expected from gene therapies, long-term studies are needed; regulators will often insist on them continuing after approval. Because the conditions involved are often progressive and untreatable by other means there are real ethical concerns about randomising trials, something often seen as the best way to clear-cut results.

These problems go some way to explaining the remarkable price of the therapies which make it to market—and which, because of those prices, sometimes leave it soon afterwards. When Glybera, a therapy developed by uniQure, a Dutch company, to address an error in the way fat is processed in a particularly rare condition, got the nod from the EMA in 2012 it became the first gene therapy to be approved by a stringent regulator. It also became the first medical treatment with a price tag of $1m. The first approval by the FDA, in 2017, was for Luxturna, a gene therapy to prevent another form of progressive vision loss. Roche, a big-pharma company, priced it at $425,000. Per eye. In 2019 Zolgensma, Novatis's treatment for SMA, went on sale at $2.1m. Last year the mother of a baby being treated with Zolgensma remarked that everyone who touched the drug, or was around it, had to be trained to handle it: it was "like carrying gold". Libmeldy, approved by the EMA in 2020 to treat a disorder which degrades the nervous system, costs £2.8m ($3.3m) a dose.

Pharmaceutical companies do not discuss the basis of drugs' prices. In America the approach is typically taken to be an assessment of what the market will bear, which has led to an environment accustomed to high prices. The problem with gene therapies is that the price being charged seems in some cases well beyond what the market will bear.

Take Glybera, the first-approved therapy. Only a single dose was ever sold. It has been withdrawn from the European market. According to *Stat*, another online publication, after the EMA approved Zynteglo in 2019 bluebird bio offered it in Germany for $1.8m a treatment; Germany offered to pay $950,000 in cases where it worked, $790,000 when it didn't. The firm subsequently withdrew it from the European market; it has done the same with eli-cell, which treats an irreversible nerve disease. The price it has set for Zynteglo in America is $2.8m.

Some companies are getting out of the market altogether, suggesting they see no way forward. Amicus Therapeutics, a biotech firm which had been working on a number of gene therapies at one point, got out of the field completely earlier this year. Within two years of having put the ADA-SCID therapy Strimvelis on the market in Europe, GSK, a big drug company, offloaded the treatment to Orchard.

If the makers are worried, so are the buyers. Health systems and insurance firms can cope with one or two such therapies at the far end of the price spectrum. Britain's NHS, quite capable of ruling out therapies on the basis of cost, has bought both Zolgensma and Libmeldy (it negotiated a significant discount). But as the number of approved treatments grows the economics are looking more challenging.

Million-dollar Mom and Pop shops

A study published this February by the Aspen Institute, a think-tank, and the Blue Cross Blue Shield Association, an association of American insurance companies, looked at the expected arrival of 90 gene therapies and cell therapies. By 2031 the annual acquisition cost for 550,000 patients would be $30bn. With the country's total prescription-drug bill currently at $577bn, that is relatively small; but it is still significant. Virtually all the buyers for health care in America have warned about the cost burden they expect as the numbers of these products grow.

"I think everyone agrees that the pricing of gene therapies is a crisis," says Dr Paulk. The crisis has two main drivers: the amount of work needed to develop and make the therapies and the lack of good models for pricing one-off interventions which could obviate the need for lifelong treatment.

The costs of gene therapies are not just down to arduous research and development and long-drawn-out trials. Making the material which gets put into the patient is "not for the faint of heart" says Jay Bradner, president of the Novartis Institutes for BioMedical Research. Gene therapies are "like snowflakes", says Dr Paulk. "Every AAV program and every lot is completely unique". Bespoke, though, does not mean small scale. She says that for diseases where you need to get the vector into a particularly large number of cells, such as Duchenne muscular dystrophy, "It is not uncommon that we need to use at least a 50 litre, if not a 200 litre, bioreactor to make a single dose for a single patient."

Analysts at the Boston Consulting Group recently estimated that the cost of manufacturing gene therapies ranges from $100,000 to $500,000 per dose. A lot of this manufacturing is done by third parties, and the difficulties of the process can be seen in the limited capacity they offer. Biotech firms that want to get into gene therapy can have to wait up to three years for manufacturing capacity to become available, according to insiders.

Look out behind you

On the other side of the coin is the difficulty of calculating benefits. If a $2m treatment really does provide decades of life then the cost per year is down in the tens of thousands of dollars—hardly out of line with many other modern therapies. This has led some to suggest that payment might be in annual instalments. In the long term that could make the total larger, but it would spread it out. Another possible innovation is to couple such an approach with the option of stopping paying if the therapy stops working.

The question as to whether the therapy is worth the price has to be answered in the context of what if anything the competition can offer. Take SMA, which is caused by a faulty version of a gene called SMN1. Zolgensma treats this problem by providing cells with an extra copy of SMN1 which works. A treatment called Spinraza uses a method that increases the amount of protein made from a very similar but normally much less productive gene, SMN2: its active agent is a molecule called an "antisense oligonucleotide".

Antisense treatments are being tried against various conditions which look as if they can be alleviated by getting an existing gene expressed more or less. They are not permanent; Spinraza needs to be administered every four months. Moreover, although the cost of manufacture is far lower than for gene therapies, they are still not cheap. Biogen, the biotech company that makes Spinraza, charges up to $125,000 per dose. But such treatments may well be easier to scale up, and thus see their costs reduced.

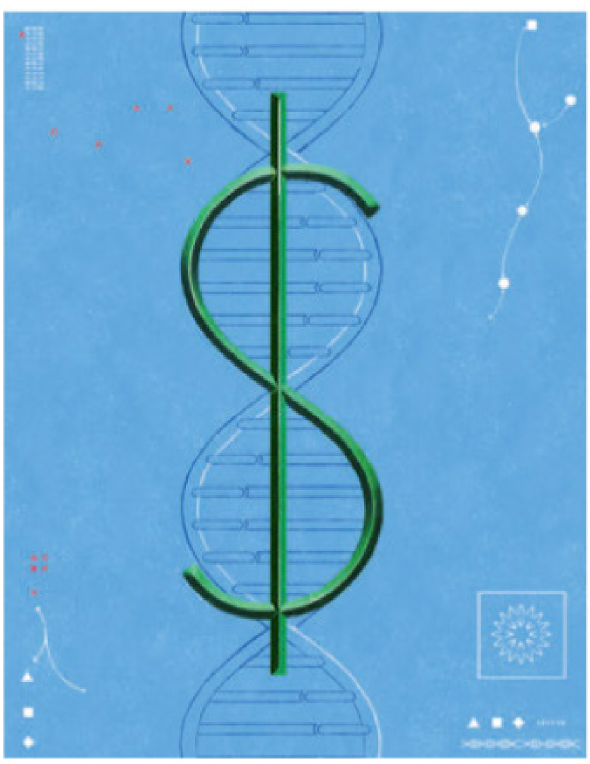
Haemophilia, for a form of which Roctavian, made by Biomarin, a biotech company, received EMA approval on August 24th, is another condition where alternative approaches have made huge strides, according to Dr Lillicrap. One of the newest antibodies used in its treatment needs to be given only every two to four weeks, rather than every few days, as used to be the case. Artificial versions of the clotting factors haemophiliacs cannot make have been engineered so as to last longer in the blood. There are also clever new ways of lowering the expression of proteins which suppress coagulation.

It is not just what the competition can offer now that matters. It is what it might offer in five or ten years' time. Spending a lot on a gene therapy today may prove a good investment if it provides many years of reasonably healthy life. But at the same time it is a bet against the real possibility that a cheaper and possibly better treatment is on the way.

The answer to that conundrum is to make sure that gene therapies get better and cheaper, too. Various companies are looking at ways to improve manufacturing. 64x Bio, based in San Francisco, is testing millions of possible cell lines to try and find those that will grow vectors like AAV most efficiently. Others are looking at the vectors themselves, trying to make them less arousing to the immune system, better targeted and more likely to actually carry the gene of interest. Current procedures leave a lot of the vectors empty; increasing the proportion that is filled would reduce dose size and costs.

Ideas for making better things to put in the vectors abound. The field started with basic tools; would-be therapists could put a gene into the genome but had little control over where it went and thus how it might be controlled and what collateral damage it might cause. In the past decade, though, great advances have been made in gene editing, a set of techniques which allow the message in an existing gene to be rewritten. As Fyodor Urnov, a professor at the University of California, Berkeley, puts it, gene therapy is like adding a fifth wheel to a car with a flat tyre; gene editing is repairing the flat.

At present, gene editing is a particularly promising route for therapies in which blood-cell-making stem cells are removed, fiddled with and reinserted into the patient's bone marrow. Two clinical trials in which this sort of editing is used against sickle-cell disease, which is brought about by mutations in haemoglobin which make red blood cells deformed and defective, are already well under way. One is for a treatment from Vertex Pharmaceuticals, based in Massachusetts and CRISPR Therapeutics, the other is by bluebird bio.



More than a dozen patients are reported to have been cured, and it is possible that one of the treatments could be ready for approval next year. There are other gene therapies for the condition at earlier stages. There is also, again, competition from other approaches. On August 8th Pfizer, another big drug company, announced its intention to acquire Global Blood Therapies, a biotech company, for $5.4bn. For that it gets Oxbryta, a drug that stops the mutant haemoglobins from sticking together, and some other therapies.

Cured eyes on the prize

A similar gene-therapy approach is being used to tackle AIDS by editing into cells traits that make them immune to HIV. But here the price issue, already confounding, becomes all but lethal. Most people with AIDS, like most people with sickle-cell disease, live in low- and middle-income countries. According to Mike McCune of the Bill & Melinda Gates Foundation, in countries where antiretroviral therapy for AIDS costs between $70 and $200 a year an all-out cure for the disease, even if it were possible, would need to come in at $2,000 or less.

If this sounds staggeringly unlikely, it is worth considering that there is a partial precedent. The cost of making target-specific "monoclonal" antibodies was enormous when they were first developed. But between 1998 and 2009 manufacturing improvements brought about a 50-fold reduction in the cost of goods. Matching that would allow gene therapies to move into middle-income countries, if not low-income ones.

As Mr Ralston can testify, gene therapies border on the miraculous. But they remain miracles of science, their creation "incredibly time-intensive [and] people-intensive," as Dr Paulk puts it. Now they must become routinely applicable miracles of medicine. That requires extending the range of conditions they address, learning how long they last and expanding the number of patients they help. In many ways that effort will be more demanding than the work to date. It will have to go well beyond the labs currently tinkering, the charities currently raising funds for rare diseases and the companies desperately trying to find a way to sell the remarkable things they have created. But their remarkable work has made it possible for that second miracle-making effort to begin. ■

Education policy

The Inflation Acceleration Action

WASHINGTON, DC

With a stroke of his pen, Joe Biden spends hundreds of billions on reducing student-loan debt

REFORMING THE costly financing of higher education in America would require Congress to agree on a redesign, which would be an arduous and tiresome process. Joe Biden has instead decided to go it alone. On August 24th the president announced a sweeping debt-forgiveness plan through executive order. The federal government will remove up to $10,000 from the balances of individuals earning less than $125,000 a year (as 95% of Americans do), and $20,000 for those who received Pell grants, which are mostly awarded to university students from poor families. Yet despite Mr Biden's effort to cut the Gordian knot of student debt, America will be tangled up in it again soon enough.

Assuming the inevitable legal challenges fail, there will be many happy immediate beneficiaries. Progressives in the Democratic Party, who had been campaigning for years for either complete cancellation of $1.6trn held in student debt or wiping out as much as $50,000 per borrower, can cheer their victory after months of watching Senator Joe Manchin slowly asphyxiate their dreams. Even Mr Biden's Solomonic compromise, which he had committed to as a presidential candidate, will completely wipe out existing debt for perhaps half of today's borrowers.

But all that good will come at a dear price. Calculations are preliminary, but Marc Goldwein of the Committee for a Responsible Federal Budget (CRFB), a think-tank, reckons Mr Biden's pen stroke will cost between $400bn and $600bn. Having just dubbed its recently enacted climate-change and tax plan the Inflation Reduction Act—because it would reduce net federal expenditures by $300bn over the next decade—the White House might as well call this effort the Inflation Acceleration Action. Whereas most pandemic-relief programmes lapsed months ago, everyone holding student loans, rich or poor, has not had to make payments since March 2020. That has cost the federal government an estimated $60bn a year, making it twice as expensive as the mortgage-interest deduction afforded to homeowners (which now costs $30bn annually).

The analogy to the mortgage-interest deduction is apt in another way. It is hardly progressive. Owners of houses have higher incomes and wealth. Those with college and graduate degrees may start their working careers in greater debt, but command significantly higher wages later in life. According to the Bureau of Labour Statistics, the wage premium for a worker with some college education relative to one with just a high-school diploma is 11%; for a completed bachelor's degree it is 65%; for a professional degree it is 138%.

When researchers at the Penn Wharton Budget Model, an academic costing outfit, evaluated the impact of a blanket forgiveness of $10,000 (even with a qualifying income cap of $125,000), they found that 69% of benefits accrued to those in the top 60% of the income distribution. The extra boost to Pell-grant recipients, which was a surprise, will make the move a bit less regressive. But the final verdict is unlikely to be a coup for the proletariat.

The deeper difficulty, however, is that partial debt cancellation is an expensive kludge atop a broken financing scheme that will not be repaired. Many European welfare states generously fund higher education for all. But in America, pairing universal financing with little cost discipline has created a moral hazard for colleges to increase prices. Despite the largesse displayed, the CRFB estimates that aggregate debt loads will return to their present levels in five years.

"The problem is that the laws that have allowed this crisis to occur—this disaster to unfold—are still on the books," says ▸▸

Adam Looney, a senior tax-policy adviser in Barack Obama's administration and a professor at the University of Utah. "Every year, American students borrow $100bn in additional student loans. And they have the same terrible outcomes as borrowers who took out a loan ten years ago."

Both parties think the political consequences are in their favour. Progressives hope that the policy will boost enthusiasm among disaffected youths. When Mr Biden, in remarks at the White House, said "this means people can start finally [to] climb out from under that mountain of debt," he probably hoped that they would also make their way to the polls. (The pause on all student-debt payments was extended again until December, one month after the mid-term elections.) Mitch McConnell, the Republican leader in the Senate, prefers to term it "student-loan socialism"—a large redistribution from the working class to elites, and an inflationary one, to boot.

It will not be the last fight. One less-noticed change proposed by Mr Biden would reduce the amount directly paid by future borrowers—with the federal government picking up the rest of the tab. The problem's ugly head will rear again shortly. ■

State finances

The great rebate

WASHINGTON, DC

States are awash with cash. Some are using it more carefully than others

A QUIRKY LAW calls on Massachusetts to send back billions of tax dollars this year. Passed in 1986, it orders the state to refund taxpayers when revenue growth outpaces wage growth. For the first time since 1987 it has been triggered. Massachusetts must return up to $3bn, 7% of tax revenue.

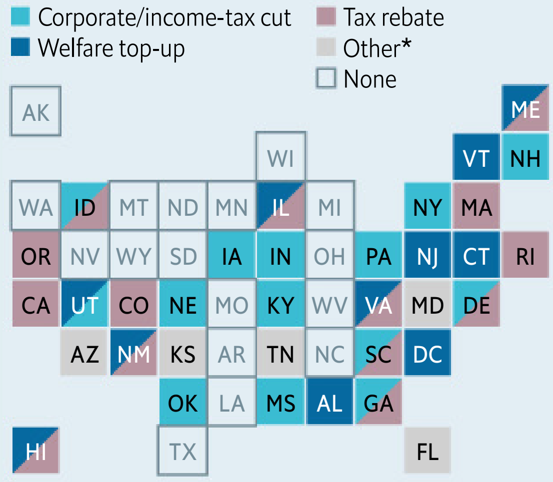
Massachusetts is not alone in raking in a surplus. States across the country have smashed revenue records in the past fiscal year. According to the Pew Charitable Trusts, a non-profit outfit, state governments saved $217.1bn in 2021, exceeding the 2019 record by nearly $100bn.

Why the bonanza? An influx of federal dollars during the pandemic spared states from spending savings. Sales-tax revenues soared as federal stimulus cheques, tax credits and unemployment benefits gave people money to spend. Inflation helped, too. Not only did it boost the price of goods, which increased sales-tax revenues; it also raised salaries, in nominal terms, moving people into higher tax brackets.

Although the average state carries a debt of $3,641 per resident, none seems to be using its excess revenue to pay off what it owes. Instead, after replenishing rainy-day funds, states are playing with taxes (see map). Thirty-three states and Washington, DC, have passed some sort of tax relief. Many plan to send out rebates. A few have suspended taxes on food or petrol to counter rising prices. Others are seizing the moment to realise long-standing political goals. Democrat-run states are topping up tax credits for those on low incomes and families with young children. Republican ones are cutting taxes.

Local largesse

United States, tax reforms, Jan 1st-Aug 24th 2022



*Includes reforms of taxes on food, petrol, property, retirement, sales and utilities. Not shown where these are part of a wider mix
Source: Tax Policy Centre

Ten states have slashed income-tax rates this year and six have cut taxes for firms. Proponents of these cuts argue that this will attract businesses. One-off rebates, argues Timothy Vermeer of the Tax Foundation, a think-tank, could spur inflation just as federal stimulus cheques did.

But changes to tax codes are permanent and risky. The rewards are uncertain; the loss of revenue is immediate. "In theory there is a sweet spot of cutting taxes and increasing growth," said Justin Theal of Pew, "but in practice the examples are few and far between." In an election year politicians may be keener to please constituents than to make careful decisions. In South Carolina, where legislators collapsed six tax brackets into three and lowered rates, cutting taxes came after ensuring the state had adequate reserves. Gary Simrill, a champion of the policy, said the cuts were a "calculated risk".

Forecasters fear a recession, which will make savings more precious and spending more necessary. Early evidence from the first quarter of 2022 shows state-revenue growth declining as federal stimulus dried up. Summoning the will to raise tax rates if things go wrong could be hard. Some states, like Kentucky, plan gradual rate cuts only if revenues meet a certain threshold. But states that forged ahead with cuts might come to envy Massachusetts's trigger law: bonuses given only in good times may prove to be more prudent. ■

Teachers

A touch of class

WASHINGTON, DC

The new "national teacher shortage" is neither new nor national

THE NARRATIVE goes as follows. America is suffering from a nationwide teacher shortage. Stresses from the pandemic and the culture war have brought the profession to a tipping point. Teachers are leaving in droves. Some districts are offering five-figure bonuses in an effort to recruit. Florida is allowing military veterans without the usually required qualification of a bachelor's degree to teach while taking college classes. Some rural schools are resorting to four-day weeks.

These stories are true. Some schools and subjects are facing desperate shortages. But the problem is hardly national and certainly not new.

National data on teacher vacancies are hard to come by, but researchers from Kansas State University and the University of Illinois at Urbana Champaign gathered information from state education departments and news media. Among the 18 states with vacancy information for the past school year, only three (Alabama, Mississippi and West Virginia) needed to fill 5% or more of teaching positions. A shortage of teachers exists, but not nationwide.

States that have historically invested in public education face fewer labour problems. New Jersey ranks high on many measures—test scores, per-pupil spending, graduation rates—and was fully staffed last year. Alabama ranks low on achievement (it comes 49th on national maths scores, for example). It needed to fill over 3,000 vacancies last year, about 7% of its teaching positions. Its troubles have continued into the current school year.

Typically hard-to-staff areas and subjects continue to experience short supply. A government survey in June found that 47% of schools needed to fill a vacancy in special education, compared with only 11% in physical education. Non-white schools and those in areas of high poverty face more pressure to hire than whiter and richer schools, and they have struggled with teacher shortages for decades.

This problem is not new. But for some states it is getting worse. In 2021-22, Mississippi needed to fill 3,036 of its posts (nearly 10% of its staff). Three years before, it needed 1,063 teachers.

As usual, the shortage is largely confined to certain areas and subjects. Yet recently it has been perceived as a broader problem. America faces a "catastrophic" teacher shortage, according to the *Wash-* ▸▸

ington Post; schools "across the US" are facing shortages, declared a Fox News banner; it's "like dog-eat-dog" when scrambling to hire teachers, claimed a headline in the *Wall Street Journal*.

Some of the hysteria may stem from teacher surveys: 74% of educators were dissatisfied with their jobs in June, according to a survey by the American Federation of Teachers, the country's second-largest teachers' union. In February, a survey by the National Education Association, America's largest labour union, estimated that 55% of teachers were considering leaving. But there is a difference between intending to leave and actually doing so.

No national consensus exists on how to define a teacher shortage. A school may have enough teachers for each pupil, but is it experiencing a teacher shortage if it cannot find one for a new music course? If an administrator is teaching one class, does that indicate a shortage or is the administrator simply doing her job? Is a district in trouble if it is unable to staff 3% of its positions? How about 1%?

The narrative of shortage is politically expedient for education activists on both sides. Democrats, whose supporters favour spending more on public schools than Republicans, point to massive teaching shortages as proof that public schools are underfunded. "The problem is that we don't invest in our workforce," says Cecily Myart-Cruz, the president of United Teachers Los Angeles, a labour union. "You have the most educated workforce in the nation. Educators have the most advanced degree, but they cannot have a liveable wage." This week teachers in Columbus, Ohio, went on strike for better working conditions. School workers in Philadelphia may strike next week.

But conservatives use the nationwide narrative for their own purposes, too. They point to the supposed shortage as proof that the entire state-school system is failing. They push for lowering teaching-certification standards and removing teachers' unions. And they say privatisation provides an answer. "We need to stop throwing good money after bad and rethink K-12 education," say Keri Ingraham and Christos Makridis of the Manhattan Institute, a conservative think-tank, in a commentary for the *Washington Times*. "With the teacher-shortage crisis at hand, there is a timely opportunity to adjust the system."

In truth, the schools that are currently struggling to hire teachers are the usual suspects. Nationwide, public schools are doing quite well: most pupils will have a teacher, and overall family satisfaction with their child's school will probably stay high this year as in past years. The problems remain where the problems tend to exist—in the underfunded schools serving the neediest pupils. ■

Homemade food

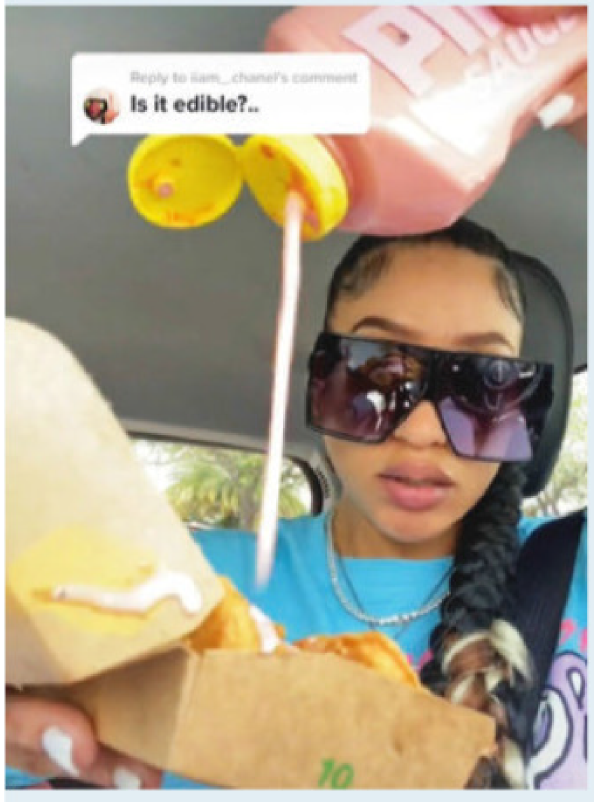
Secret sauce

It has become easier to sell food from home. But the rules can be confusing

"PINK SAUCE" with that? A flamingo-coloured condiment has recently caused a stir on TikTok, a video-sharing app. The sauce's creator, "Chef Pii", as she is known on the platform, captured the attention of millions of viewers after she began uploading clips of herself eating the home-made sauce, which lists dragon fruit and chilli among its ingredients. "If you wanna taste it, buy it," she said in one video. When she announced that she would be shipping orders from her home kitchen in Miami, her intrigued followers bought the lot. Your correspondent missed the chance to sample a $20 bottle.

That was probably a good thing. To the alarm of her customers, the sauce's signature shade altered with each batch. Concerns about safety were raised following allegations that the sauce, which contains dairy ingredients, lacked proper preservatives and was exploding in the post. Pictures of misprinted food labels on the bottles started going viral. What went wrong?

It was once forbidden to sell home-made food for profit in America. That has changed, with the gradual adoption of "cottage food" laws. Permitted products and delivery methods (whether food can be sold online, at farmer's markets or shipped to other states) differ between states. Most producers are now allowed at least to sell "non-potentially hazardous" food products, such as baked goods and jams, within their state and without a permit, if they follow local regulations, though some states require inspections before the launch. Unfortunately for Pink Sauce, condiments are not permitted under Florida's law. Chef Pii has paused sales and clarified that she will be complying with Food and Drug Administration guidelines to relaunch her business in partnership with Dave's Gourmet, a commercial sauce producer.



The like of Pii

For those not in the business of selling luminous sauce, the rules have broadened since the pandemic. Last year a record 51 new bills were introduced to expand exemptions across America, according to Harvard Law School's Food Law and Policy Clinic (FLPC). In October New Jersey became the final state to introduce cottage-food laws, and Oklahoma is among those that have recently allowed interstate delivery in some circumstances. Looser rules have encouraged more people to start a cottage-food operation—particularly women, who the FLPC reckon make up 83% of the industry. New York state reported that 1,538 new home-producers registered in 2020, up from 986 in 2019.

Offshoot businesses are sprouting, too. "The Baking Notification Project", a subscription service based in Tennessee, alerts customers by text to the surplus goods of home bakers in their neighbourhoods. If they want to take part, bakers must agree to follow their local cottage-food laws.

As the Pink Sauce saga shows, getting to grips with all of these rules can be confusing. And although going viral on social media can boost a startup's sales, it also puts pressure on the seller to meet demand more rapidly than they may be prepared for, given their resources at home. Chloe Sexton says she had to learn how to scale up her cookie business, BluffCakes, to operate outside her state "extremely quickly" after her creations went viral on TikTok.

Ms Sexton, who now has nearly 2m followers on the platform, believes states could be doing more to educate small-business owners, especially when it comes to food. But she also thinks that the transparency of social media can help small businesses, even when things go wrong: "What sells is the appeal of watching you succeed" and overcoming obstacles. Pink Sauce may not have revealed its true colours just yet.

Housing policy

Too damned high

More cities are passing rent-control laws. Is that wise?

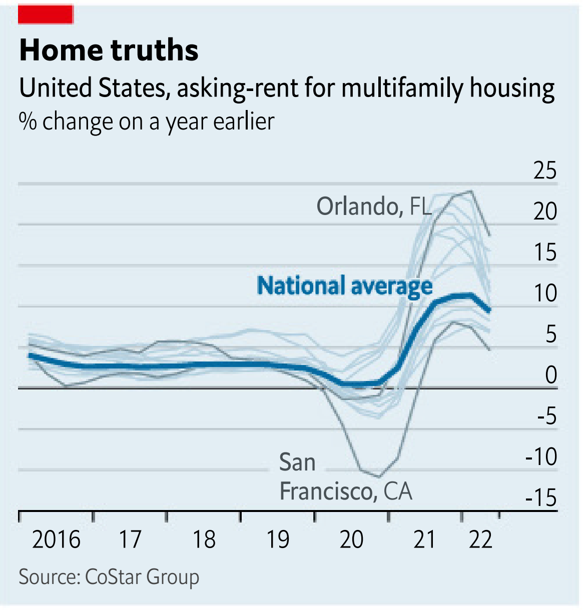
When asked about rising rents in St Petersburg, Florida, Karla Correa, a local activist, is resigned. "The crisis keeps getting worse." Ms Correa speaks from experience. In October the 22-year-old was told that the rent for her two-bedroom apartment in the city's Historic Old Northeast neighbourhood would be going up by $250, or 23%. Such double-digit increases have become common in St Petersburg and across the Sunshine State, Ms Correa says.

Now some local residents are fighting back with an idea that was banned by the state in 1977: rent control. "We started pushing it here and then other cities in Florida started pushing it too," Ms Correa says. On August 10th officials in Orange County, Florida, which includes the city of Orlando, voted to put a rent-control measure on the ballot in November limiting rent increases to the change in the consumer-price index.

As rents soar across the country (see chart), more local governments are turning to rent-control measures to help contain housing costs and keep low-income renters in their homes. In June lawmakers in South Portland, Maine, a city of about 26,000, voted to limit annual rent increases to 10%. In July Kingston, some 100 miles (160km) north of Manhattan, became the first city in upstate New York to adopt rent controls. On August 1st lawmakers in Pomona, California, 30 miles east of Los Angeles, voted to cap rent increases at 4%. Several Californian cities, including Pasadena, Richmond and Santa Monica, have put measures on their November ballots tightening existing rent-control laws.

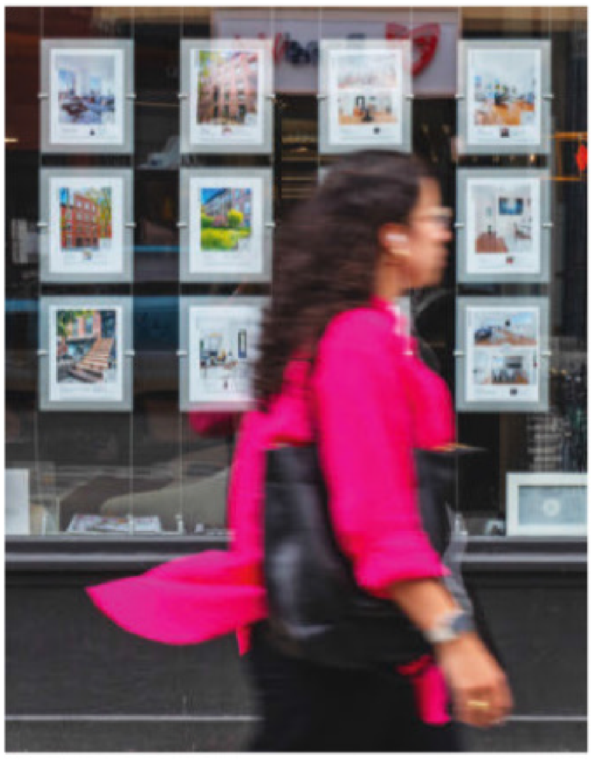
Enthusiasm for such policies is less partisan today than it was in the past. For years rent-control regulations existed in just five Democratic strongholds: California, Maryland, New Jersey, New York and Washington, DC. In the 1980s and 90s more than 30 states passed laws to prevent local governments from adopting their own rent-control rules.

However, since 2019 rent-control laws have been enacted in three additional states—Maine, Minnesota and Oregon—and they are being considered in half a dozen more, according to the National Multifamily Housing Council (NMHC), a trade group for landlords and developers. "We're seeing it pop up in some places where you wouldn't normally see it," says Jim Lapides, a vice-president at the NMHC.



"There's a lot more conversation about it than we've ever seen before."

It is easy to see the appeal. Advocates argue that, by keeping rents below market rates, rent controls allow low-income tenants to stay in their homes, even in rapidly gentrifying areas. "One of the main purposes of rent regulation is to promote housing stability," says Sophie House of the Furman Centre, a housing-research group at New York University. "Rent regulation does have those stabilising effects." A paper published in 2019 by economists at Stanford University found that, between 1995 and 2012, tenants of rent-controlled flats in San Francisco were 10-20% more likely than others to remain at their addresses in the medium to long term.



Sticker shock in Brooklyn

But economists say such regulations have too many unintended consequences to make them worthwhile. When rents are set artificially low, builders and owners have less incentive to invest in new properties, and greater incentive to convert existing ones to pricey condominiums. This reduces the supply of rental housing and pushes up rents for properties that are not subject to controls. Rent control also tends to benefit rich tenants more than poor ones. "The targeting of the benefits of rent control is completely backwards," says Rebecca Diamond, one of the authors of the Stanford study. She notes that rent-controlled tenants in San Francisco have higher incomes, on average, than those living in unregulated properties.

For richer, not for poorer

A working paper by Kenneth Ahern and Marco Giacoletti of the University of Southern California finds that a new rent-control measure in St Paul, Minnesota, has had similarly undesirable results. Using a sample of 150,000 transactions made between January 2018 and January 2022, Messrs Ahern and Giacoletti estimate that the ordinance, which was passed by St Paul voters in November, caused property values in the city to fall by 6-7%. What is more, though the law was intended to help lower-income renters, the benefits went mainly to the rich.

Why are local lawmakers so keen on rent control? Despite its flaws, experts say, cities have few other tools at their disposal. "Local governments don't really have control over housing subsidies, they don't build new public housing, they don't administer vouchers," says Ms House of the Furman Centre. Meanwhile the policy tools that they do have, such as zoning laws, are politically unpopular. It is little wonder, then, that rent control is so appealing. "They see something like rent control that doesn't cost the city anything, and they can say that they've done something and helped address the problem, and then that helps them get re-elected," says Mr Lapides of the NMHC.

Ms Correa says voters in St Petersburg should have a chance to pass their own law. "You can talk to anyone, any worker, any tenant, and they will support rent control," she says. "Everyone supports rent control except landlords and developers." For now, local lawmakers remain unconvinced. Earlier this month the St Petersburg city council agreed to draft a resolution declaring a "housing emergency", the first step towards putting rent control to voters in November. But on August 11th, following a "sleep in" protest on the steps of City Hall, the resolution was withdrawn. A motion to draft an ordinance to put to voters in 2023 failed by three votes to five. ■

Lexington | A bused people

A cruel ploy makes a fair point: America's border crisis demands national attention

Nothing quite captures the idealism and indifference of Americans, or the cleverness and shortsightedness of their politicians, like the madness that has overtaken the country's approach to immigration. How else to explain the scene at the Port Authority bus terminal in Manhattan on a recent Friday morning?

Dozens of migrants from Central and South America clustered behind yellow steel barriers, watched over by New York police. Some picked through plastic bins of new clothes or tried on shoes provided by volunteers. Two children knelt by a metal chair, colouring a blank notebook with yellow and pink pens. A baby slumped on one woman's shoulder, peacefully asleep, while paramedics wheeled another woman on a stretcher through the barriers and towards Eighth Avenue. With irony or in earnest—take your pick—a backlit glass artwork depicting the Statue of Liberty looked down from one wall on the new arrivals.

They were the latest asylum-seekers dispatched from Texas by its governor, Greg Abbott, who has taken to loading border-crossers onto buses and, with no co-ordination, sending them off on one-way trips, first to Washington, DC, and now to New York as well. The governor of Arizona, Doug Ducey, has got in on the act. The Arizona buses are better equipped, including with medical staff, but immigrants say they have no food or water on the two-day ride from Texas.

Before contending with the politics of this, consider a more uplifting dimension: the response of volunteers. Ilze Thielmann, the leader of the New York affiliate of a group called Grannies Respond, got word from a "confidential source" that Mr Abbot's first bus to New York was to arrive at 5:30am on August 5th. That day and since, she has helped co-ordinate a loose network of groups that greet the arrivals with food and coffee, with menstrual products for the women and toys for the children, and then get them transport to a shelter or to family and friends in the area. "We're calling Abbott's bluff," Ms Thielmann says. "We'll do what we need to do. We're New Yorkers. New Yorkers don't blink."

Not everyone is so generous. One commuter who paused to survey the scene that recent Friday morning wondered aloud what diseases the immigrants might be carrying. "And who's paying for this?" she asked. "We are."

As the buses kept arriving, every other day or so, the city government began playing a bigger role. But if the mayor, Eric Adams, isn't blinking, he is complaining. New York, which earlier this year expanded welfare benefits for non-citizens, by law promises shelter on demand, and the shelters were already straining to accommodate the homeless. The city has rented 1,300 hotel rooms for migrant families and is looking for thousands more rooms. Mr Adams is pressing the Biden administration for help; in Washington, Mayor Muriel Bowser has twice asked the Defence Department for help from the National Guard and been turned down.

Mr Abbott is running for a third term, and he has been gleeful at the mayors' howls of protest. "Listen, New York is a sanctuary city," he recently told Fox News. "Mayor Adams said they welcome in illegal immigrants. And now, once they have to deal with the reality of it, they are flummoxed, and they cannot handle it. They are now getting a taste of what we have to deal with." When Mr Adams threatened to send a busload of New Yorkers to Texas to campaign against Mr Abbott, he was tickled. "There could hardly be anything better to aid my campaign," he said.

Just because Mr Abbott's methods are cruel does not mean he is entirely wrong. Americans should not so easily look away from the border, where existing practice is neither wise nor humane. The governors have bused more than 7,000 migrants since April, enough to cause what Ms Bowser calls a "humanitarian crisis". But more than 6,000 people cross the border illegally every day. They represent a sliver of the 1.82m apprehensions at the border so far this fiscal year, beginning in October, more than the record 1.66m last year. The strength of the American economy, fear and despair south of the border and mixed signals from the Biden administration about the leniency of its policy are all playing a role.

The White House has been striking deals with other countries to step up their own border enforcement, and it is piloting a programme to speed the processing of asylum cases. But mostly it seems to hope the problem will go away. As president, Mr Biden has not visited the border. The border states are bearing the brunt of the influx. Talking tough on immigration is good politics in Texas. But in New York, it is equally facile to talk tough about those who talk tough about immigration, while basking in one's own compassion for those trying to enter Texas.

Movement of the people

In a different political reality, the Democratic mayors urging the federal government to do more might team up with the Republican governors who say the same thing, to put pressure on their congressional delegations to act. But Mr Abbott's approach seems less likely to promote co-operation than to compound division, and with it suffering and chaos. "I understand that Texas is overwhelmed—I really do," Ms Thielmann says. "But there are better ways to handle this than sending people off in such brutal conditions." In any event, Mr Abbott probably cannot muster enough buses to create such a crisis that it would break the political deadlock. Many migrants move on quickly, to the homes of relatives or to the city where their asylum hearing is to be held. Others will vanish into a shelter system that somehow muddles through.

With some 11m jobs unfilled in America, this is a good moment for a long-deferred compromise on immigration, one that would combine stern enforcement of the law with a streamlined asylum process and a path to citizenship. But that outcome would antagonise extremists on both sides, and solve a problem that national politicians would rather campaign on. ■

Brazilian politics (1)

Far behind, but gaining

SÃO PAULO

President Jair Bolsonaro, lagging in the polls, turns to God and cash

FRANCISCO TEIXEIRA, a 47-year-old former construction worker in a favela in São Paulo, has fond memories of the presidency of Luiz Inácio Lula da Silva, Brazil's leftist leader from 2003 to 2010. He earned a salary and benefits and his relatives in the poor, north-eastern state of Piauí received enough government help that they didn't have to migrate to São Paulo. Then came a corruption scandal, a recession and the impeachment of Lula's successor, Dilma Rousseff. Mr Teixeira got laid off and started driving a taxi. In 2018 he voted for a former army captain, Jair Bolsonaro.

Now the fedora-wearing father-of-three has changed his mind again. Disappointed by the right-wing president's mismanagement of the pandemic and fed up with high inflation and unemployment, he's planning to vote for Lula, as the ex-president is known, in Brazil's general election on October 2nd. "No one is a saint, but Lula was a better president," he explains. With just over a month left in the campaign Lula is polling at 47% while Mr Bolsonaro is at 32%, according to DataFolha, a pollster (see chart on next page). If no candidate receives more than 50% of valid votes, a second round will take place on October 30th. Lula is counting on the support of hard-up Brazilians like Mr Teixera. Mr Bolsonaro wants to win them over.

The president faces an uphill battle. Among the 52% of Brazilian voters who have a household income less than twice the minimum wage (2,424 reais, or $480 a month) Lula is ahead: polling at 55% compared with 23% for Mr Bolsonaro. To woo more votes, the government is spending 41bn reais on fuel subsidies, handouts for lorry drivers and cabbies, and a boost to monthly cash transfers for 20m of the poorest Brazilians. But while the gap between Lula and Mr Bolsonaro has shrunk from 21 points in May to 15 points now, Mr Bolsonaro has failed to gain much ground among poor people.

Many think fondly of Lula's presidency. Boosted by a commodities boom in the early 2000s, Lula launched dozens of social programmes, including highly popular monthly cash transfers known as *Bolsa Família* (Family Fund). Mr Bolsonaro revamped the programme last year and renamed it *Auxílio Brasil* (Brazil Aid). "Bolsonaro changed the name and tried to sell it as if it were his idea," scoffs Mr Teixeira. The poor have no reason to fear that Lula would cut the 600-reais benefit after it expires in December, says Maria Hermínia Tavares of the University of São Paulo. They may think him more likely to extend it. "People don't vote out of gratitude, they vote thinking about the future," she says.

The election in 2018 was dominated by anger about graft. This time the economy matters most. Mr Bolsonaro's efforts to reform pensions and slash bureaucracy were overshadowed by his delay in procuring vaccines during covid-19 and his decision to cut aid to the poor as unemployment and inflation soared. But his stimulus spending, along with an upswing spurred by a record harvest and high commodity ▸▸

prices, might translate into last-minute support. After months of rising inflation, prices fell by 0.7% in July. In August the IMF increased its forecast for GDP growth this year to 1.7%, from 0.8% in April.

The polls are expected to tighten as the candidates start flooding Brazilian television with adverts and social media campaigns ramp up. During the campaign Lula has played up the rosier aspects of his time in office. "I like to talk about the past because the past was much better than the present," Lula told a room of businessmen on August 9th, describing his presidency as "a state of collective joy because the country was growing". Mr Bolsonaro, by contrast, wants to remind voters of the events of 2014 to 2016, when Lula's Workers' Party was rocked by a corruption scandal and a recession. One thing Mr Bolsonaro is likely to mention often in the coming weeks is Lula's time in prison, on convictions for corruption which were later annulled by the Supreme Court.

Indeed the president has already sought to exploit the fact that nearly as many voters say they are afraid of another Lula government as one led by Mr Bolsonaro. "Each morning I pray that Brazil never has to experience the horrors of communism," he told a rapt crowd at a "March for Jesus" parade in Rio de Janeiro on August 13th, as his wife, Michelle, who is evangelical, danced enthusiastically to gospel music. "And I pray that all of you make the right decisions." Mr Bolsonaro has increased his advantage among evangelicals (who make up nearly a third of Brazilians) from three to 17 percentage points in three months; 49% of them say they intend to vote for him, versus 32% for Lula.

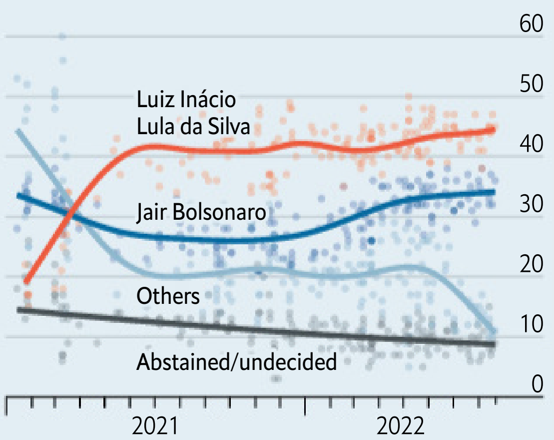
Mr Bolsonaro also retains a lead among rich Brazilians. Lula has attempted to calm nerves by toning down his left-wing rhetoric and recruiting the centre-right former governor of São Paulo, Geraldo Alckmin, as his running-mate. But many are put off by his plans, such as taxing wealth and renegotiating a pro-business labour reform.

Even so, Mr Bolsonaro's time to catch up is running out. In 2018 an unprecedented number of voters were undecided in the months before the election; 13% still hadn't decided three days before the vote. But this year the number of undecided voters is historically low, according to a poll aggregator run by Jota, a news site. Since Brazil's return to democracy in 1985, the candidate who leads polls two months before the election has gone on to win.

Mr Bolsonaro's supporters shrug this off. In the face of unfavourable numbers from DataFolha, they post videos of the president's packed rallies and tag them "DataPovo", or "the People's Data." At a mention of poll numbers, a government official crinkles his nose. "Our polls say something different," he says. The rhetoric recalls that of Donald Trump, who often denounced polls during his unsuccessful re-election campaign in 2020 and then falsely claimed that the ballot was fraudulent. Mr Bolsonaro, too, has hinted that if he loses, he may not accept the result. ■

Lula's to lose

Brazil, voting intention in presidential election, %



Sources: National polls; *The Economist*

Argentina

Kirchner karma

BUENOS AIRES

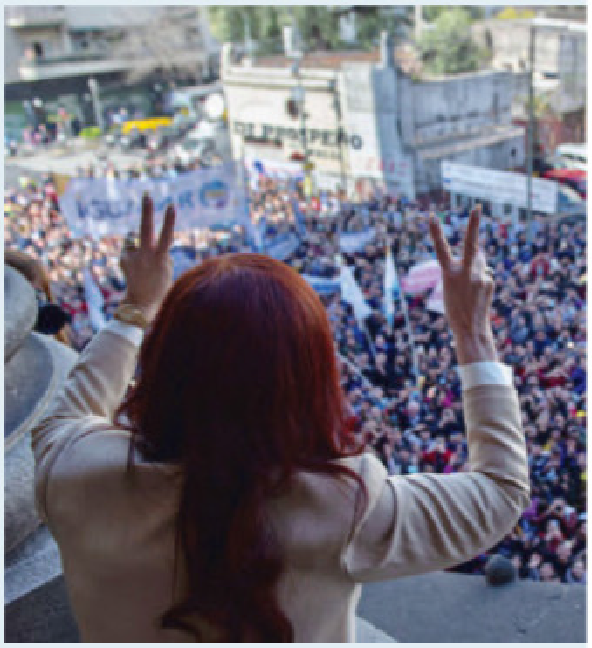
Cristina Fernández de Kirchner could face 12 years in prison

"REMEMBER THAT judges are just judges—they are not God," Cristina Fernández de Kirchner, then the president of Argentina, told her underlings in 2012. "You only have to fear God. And me a little bit, too." Back then, a judge she disliked was accused of giving his family public-works contracts in a Supreme Court case, and she revelled in his fall.

A decade on, the tables have turned. On August 22nd a federal prosecutor requested that Ms Fernández, now vice-president, should be jailed for 12 years and barred from holding public office. She is accused of abusing her authority to steer inflated public-works contracts to a friend during her presidency (a scheme thought to have begun under her late husband, Néstor Kirchner, also a former president). Prosecutors allege that the loss to the state is around $1bn. Diego Luciani, the prosecutor, called it "probably the biggest corruption scheme the country has ever seen".

The friend at the heart of the trial is Lázaro Báez. A bank clerk in Santa Cruz, the remote rural province in Patagonia where both of the Kirchners' political careers began, Mr Báez became a construction mogul under their successive administrations. Between 2003, when Mr Kirchner assumed office, and 2015, when Ms Fernández stepped down after losing a presidential election, Mr Báez's companies won 51 public-works contracts in Santa Cruz, almost 80% of all contracts relating to roads in the province over that period. Only 27 were finished; the other 24 were abandoned. Along with Ms Fernández and Mr Báez, another 11 people have been indicted.

Ms Fernández denies all allegations. But this is not the first time she has been investigated. Along with this probe, she has been named in 11 cases of suspected corruption, bribery or money laundering, of which four cases remain active.



Paying homage to Vice

But this case is the first to move to trial.

As a result, it has ruffled her feathers. She recently attempted to get Mr Luciani and two other judges on the case removed, but failed. The day after Mr Luciani's announcement she delivered a live broadcast on YouTube for an hour and a half in which she accused the courts and the country's biggest newspapers of acting like a "firing squad". "They are not coming after me, they are coming after the salaries and rights of workers," she claimed.

A verdict in the trial is expected within the next few months. If convicted, Ms Fernández will probably appeal. That, and a possible further appeal to the Supreme Court, could take several more years. In the meantime she is free to run in next year's legislative elections, in which she will hope to retain her current seat in the Senate (Argentine politicians can hold multiple elected offices at once). That, in turn, gives her congressional immunity. She may be free for now, but Ms Fernández may end up having more to fear than God.

Brazilian politics (2)

Federal offence

SÃO PAULO

State governors have been emboldened under Jair Bolsonaro

João Doria, who until April was the governor of São Paulo, Brazil's richest state, is a colourful character. He hosted a Brazilian version of "The Apprentice", while a sex tape featuring someone who looks like him went viral. But during the primaries last year to become a centre-right party's presidential candidate, he opted for tameness. "João Doria is boring, but competent," his campaign video declared. His team hoped it would distinguish him from the two, divisive frontrunners for the election in October: Luiz Inácio Lula da Silva, a leftist former president, and Jair Bolsonaro, the populist incumbent. It did not work. Mr Doria (pictured) secured the nomination, but struggled to attract broader support. When he dropped out of the race in May he was polling at 2%.

Brazil's 27 governors have less power than their American counterparts. They have the profile of a CEO, but the responsibilities of a middle manager. Municipalities are in charge of doctors' surgeries, primary schools and collecting the rubbish; it is their logos that adorn buses and welfare payslips. Governors are limited to doling out funds for road-building, prisons and hospitals. They have little tax-raising power, relying on the federal government for transfers (at least some of which are discretionary). As a result, their work is often overlooked. When voters are asked to rank levels of government by their importance, state politics comes last.

Since Mr Bolsonaro came to power in 2019, however, governors have become more prominent. They often clash with the president, over both mundane matters such as state funding, but also bigger ones such as covid-19 and the environment.

Such conflict is "a novelty", notes Oscar Vilhena, the dean of the law school at Fundação Getúlio Vargas. In recent decades, presidents have usually worked in harmony with the states. But from the start of his presidency, Mr Bolsonaro blamed state governors for high fuel prices and unemployment. When he downplayed the danger of covid-19—he once called the virus, which has killed at least 680,000 Brazilians, a "little flu"—governors stepped in to impose lockdowns and mask mandates and to write to the authorities in the United States to ask for vaccines.

In 2020 the Supreme Court ruled that governors have a power to impose their own policies, such as lockdowns, in response to an emergency like a pandemic. The ruling "re-defined Brazilian federalism", says Mr Vilhena. Currently 12 governors are fighting to be compensated over a federal cap on fuel taxes, which has cut into their revenues.

Mr Bolsonaro's beef is not only with governors. He has railed against mayors and lambasted the judiciary, in particular the Supreme Court. But he appears to have felt most threatened by state autonomy. Governors were "true dictators during the pandemic", the president declared in May. He accused the state of São Paulo of doing "everything but declar[ing] independence from Brazil". In 2019, when Mr Doria was its governor, it had opened an office in Shanghai to promote trade, despite Mr Bolsonaro's frosty relationship with China. In 2020 Mr Doria contracted Sinovac, a Chinese drug company, to make vaccines in his state. Signs on São Paulo's ring roads welcome visitors to Brazil's "vaccine capital".

Governors have also spoken up about other issues, such as deforestation, which has accelerated under Mr Bolsonaro. At COP26, the UN climate conference last year, which the president did not attend, 22 Brazilian states launched a green consortium and presented their own goals. Eduardo Leite, the former governor of Rio Grande do Sul, says that they were concerned about "how much the image of Brazil was being harmed". Last year the governors of three Amazonian states met Jake Sullivan, America's national security adviser, to discuss climate change. The meeting took place in Brasília, the capital, but no one from the federal government was there.

Not all state politicians have taken the same approach. Romeu Zema, governor of Minas Gerais, Brazil's second-most populous state, rebukes his fellow governors for, as he puts it, "antagonising" Mr Bolsonaro. "My job is to govern the state, not to criticise the president," he tuts. He supported the fuel-tax cap, even though his state finance minister said it will cost Minas 12bn reais ($2.3bn), or 15% of its total tax revenue, unless the federal government compensates it. (He is, however, a member of the green consortium.)

Going easy on Mr Bolsonaro seems to have paid off. Mr Zema is the most popular governor among the big states, with an approval rating of 47%. The cohort of governors up for re-election this year seems markedly less prone to attack the president than the rest of them.

Governors who have tried to make the leap to national politics, meanwhile, have seen their stars fade. When Mr Doria left office, more *paulistas* disapproved than approved of him. His exchange of barbs with the president, who frequently made fun of the governor's tight trousers, do not seem to have done him much good. Mr Leite, who last year came out as the first openly gay governor, also resigned to run for president, only to lose to Mr Doria.

And although governors are speaking out more, their power remains limited; much of their time over the past few years has been spent mitigating federal policies, rather than implementing them. This could change. Lula, as the ex-president is known, has vowed to be less combative than Mr Bolsonaro. If elected, "the first thing I want to do is bring together the governors-elect," he wrote on Twitter in August. He is leading the polls. If he wins, the new climate of hostility between the states and the federal government may dissipate as fast as it sprang up. ■

São Paulo state of mind

Malaysian politics

Goodbye to Mr $700m

KUALA LUMPUR

Najib Razak, the mind-bogglingly corrupt former prime minister, is going to prison at last

THE CASE before Malaysia's highest court on August 23rd was not just about the fate of one man. It was also about the kind of country Malaysia wants to be. A five-member bench ruled decisively—and unanimously. Despite threats against judges, the court upheld the conviction of Najib Razak, a former prime minister, for abuse of power, criminal breach of trust and money laundering.

Mr Najib started his 12-year prison sentence immediately. He must also cough up a 210m-ringgit ($47m) fine. The verdict ejects him from the national parliament and bars him from returning for a time. It at last delivers the justice that millions of Malaysians voted for when they kicked Mr Najib out of office in 2018, ending the six-decade rule of his party, the United Malays National Organisation (UMNO).

The party's fall from grace came after revelations of Mr Najib's involvement in a megascandal surrounding 1MDB, a state investment fund. Some $4.5bn went missing from its coffers between 2009 and 2015; it was spent on famous artwork and diamond jewellery, among many other things.

More than $700m of the $4.5bn, the court heard, passed through a personal account of Mr Najib's. The scandal eventually led to investigations in at least six countries. In 2020 Goldman Sachs, a bank, settled with Malaysia for $3.9bn for its role. But Mr Najib has long insisted that he believed the money in his account was a gift from the Saudi royal family. Failing to declare such gifts is not contrary to Malaysian law, he noted.

Faced with the task of convicting a suspect hitherto considered untouchable, prosecutors crafted a deliberately modest case. They accused Mr Najib of laundering a mere 42m ringgit in two accounts in 2014 and 2015. That sum had been pilfered from a loan from the state-workers' pension fund to a unit of 1MDB, which went through only after Mr Najib had persuaded the cabinet to guarantee it.

Mr Najib was found guilty in 2020. He has been appealing the decision ever since, with little success. Last year an appeals court dismissed his claim of a Saudi gift as "a concoction that is completely bereft of any credibility". Rather, it said, Mr Najib displayed a "wilful blindness" as to the origins of the money while using it for "his personal benefit" and "political purposes".

None of which stopped Mr Najib from seeking political redemption. Many wrote him off when he was defeated electorally and then charged in 2018. But his victorious critics made a mess of governing, with two successive coalitions falling apart in just over three years. UMNO returned to power at the head of a third coalition last year. Bossku ("my boss"), as Mr Najib is known among his supporters, has made a point of heading out on the campaign trail and pressing the flesh, a tactic that has helped deliver impressive results for UMNO in recent state elections.

That has created a rivalry in UMNO between the prime minister, Ismail Sabri Yaakob, who runs the government and manages its spoils, and Mr Najib and his old gang, which includes the party president, Ahmad Zahid Hamidi. Mr Najib's faction has spent months lobbying for an early election, which must be held by Septem- ▸

→ Also in this section

ber 2023, apparently hoping to stretch out his appeal until after it was concluded.

A delayed trial, combined with a new, handpicked attorney-general, might have delivered for Mr Najib a more favourable verdict. That helps explain why the courtroom to the very end saw all manner of procrastination. Mr Najib sacked then later unsacked his legal team so as to request time for his lawyers to catch up with proceedings. The team accused the chief justice of the Federal Court, Maimun Tuan Mat, of unconscious bias and asked her to recuse herself, on the basis that her husband had expressed elation at Mr Najib's election loss back in 2018. Judges dismissed all this time-wasting.

Mr Najib has not been acting like a man whose political career is over. Online, he has rebranded himself as a humble man of the people about to lose everything except his faith. Recent Facebook posts show him sitting on a tree stump washing his feet before prayer, and taking the *sumpah laknat*, an Islamic oath of innocence. Many among Malaysia's increasingly devout Muslim population care more about what is said before the Almighty than what is decided in court, notes a political operator. Mr Najib would like to make his martyrdom an article of faith among party members, says Bridget Welsh of the University of Nottingham Malaysia.

Some had expected a bigger showdown. Pressure, including death threats, had been piling up on judges. Some UMNO apparatchiks had urged the government to intervene. But the prime minister, Mr Ismail Sabri, sat back and let events unfold. He may have been happy to watch the fall of a rival. Or perhaps he was mindful of a backlash against meddling with the judiciary. In any case, his inaction helped notch up a victory for the rule of law.

Mr Ismail Sabri may calculate he can ride out whatever fuss Mr Najib's allies now make. Time is on his side. More corruption cases are in the works against his factional enemies. Mr Najib has another four still to come. Verdicts may soon be reached in a corruption case against his wife, Rosmah Mansor, and in one of Mr Zahid's trials, where he faces 47 graft charges. (Both of them deny the charges.) Mr Ismail Sabri is said to favour an election early next year. By then he hopes to have vanquished an earlier, dirtier generation of UMNO leaders. If he does, he will have a chance to shape the party as he sees fit.

After Mr Najib's conviction Mr Ismail Sabri took to Twitter—to welcome the country's monarch back from a trip to Turkey. The niceties were not just a diversion. The monarch is Mr Najib's last hope: he could in theory issue a royal pardon and expunge his conviction. The king, too, will have to decide what kind of country he wants Malaysia to be. ■

Australian culture

Mullet spring

DUBBO

The resurgence of a controversial hairstyle divides the country

CONSIDER THE mullet, a hairstyle that has a good claim to being Australia's national do. It comes in various shapes and sizes. The mullet can be "extreme"—shaved bare on top. Or it can be spiked up like a mohawk. It is sometimes "grubby" and dreadlocked. And then there is the "ranga" mullet, meaning red-headed (it's an abbreviation of "orangutan"), which is always a crowd-pleaser.

Since 2018, fans have convened every year for Mulletfest, a competition to find the most outrageous examples. "A lot of people wear this hairstyle and have a dirtbag lifestyle," muses Timmy Pinger, a mustachioed coalminer whose long, straight mullet carried him to victory in Mulletfest's heats in Dubbo, a small city in New South Wales, on August 20th. But Australia is full of "sophisticated, hard-working, honest-living" mullet-wearers too, he says.

The reviled style is a hallmark of small towns down under. To some fans, it is seen as a badge of country culture. "It's a unique Australian invention—one we should be selling to the world," Mark McGowan, the self-professed "pro-mullet" premier of the vast and sparsely populated state of Western Australia, claimed last year. (In fact, mullets probably predate modern Australia.)

Recently, however, the style has staged a wider resurgence, invading hipster hangouts in urban centres and re-entering the mainstream through the medium of sports. Aussie rules football and rugby league pitches are overrun with them. Cameron Smith, a golfer, sports a lengthy specimen, occasionally with the letters "AUS" shaved into the sides. He is celebrated as a "very cashed-up bogan" (a term which loosely translates as "wealthy redneck") by his coach.

"The mullet was seen as so bogan, but it has reached a point of acceptance," says Laura Johnson, Mulletfest's founder. This "has got everything to do with our Aussie larrikin sense of humour", argues Mr Pinger, referring to Australia's favourite national myth: that it is a country of good-at-heart mischief-makers. Think Shane Warne (a cricketer who made his international debut sporting a mullet).

Not everyone appreciates the joke. Mullets have become so trendy with teenagers that several private schools have banned them. They are "untidy, non-conventional and not acceptable", griped the masters of Trinity College, a boy's school in Perth, last year. Some snooty pubs and bars in Western Australia have caused a ruckus by turning away mulleted men, ostensibly for failing to adhere to dress codes.

This debate has reached the country's top brass. "Taking the shears to freedom of expression" is "a snip too far", said Bill Shorten, a former leader of the Labor Party, last year. Oppressing mullet-wearers might lead to an uprising or "mullet spring", he suggested. "I think you should be free to have a mullet and go to the pub," Mr McGowan has proclaimed. Mullet-wearers, he says, should "rise up and rebel against these extreme rules".

Thai politics

Uncertain terms

KUALA LUMPUR

The prime minister has ruled for eight years. Or is it five? Maybe three?

No one could accuse Thailand's constitutional court of shying away from the big calls. In the past two decades it has binned the results of two elections, disbanded three opposition political parties and declared homosexuality to be "against the natural order". These decisions have tended to serve the political establishment and helped ensure the army's grip on power. So eyebrows twitched on August 24th when a decision by the court went firmly against a member of the establishment.

Prayuth Chan-ocha, a 68-year-old former general who took power in a military coup in 2014, has been suspended as prime minister while the court hears an opposition-party petition against his rule. The constitution decrees that the prime minister "shall not hold office for more than eight years in total". Mr Prayuth (pictured, in cut-out) has held the post since August 24th 2014. But he would prefer to start the timer from 2017, when the new constitution was enacted, or 2019, when parliament first nominated him to the post.

The court will now consider which of those dates makes the most sense. But no immediate crisis beckons. Mr Prayuth, who will stay on as defence minister, accepted the ruling graciously. Had he stayed in office, an eventual decision against him may have cast doubt on the legitimacy—and legality—of government business in the interim. Prawit Wongsuwan, another ageing general and the top-ranking of six deputies, will act as prime minister.

The ruling may make Thai politics more stable rather than less, reckons Korn Chatikavanij, a former finance minister who now heads Kla, an opposition party. It appears to be a decent advertisement for the separation of executive and judicial power. And it might dissipate public disillusionment at the continued rule of Mr Prayuth, who survived four no-confidence votes in parliament in his eight-year stint. Dissipate, but not eliminate.

It will take more than the replacement by the courts of one ex-general with another to get democracy activists popping corks. Elections in 2019 were beset by restrictive rules and irregularities in the vote-count, and in any case a senate appointed by the army holds a veto over elected lawmakers. The government has cracked down on protesters and since the start of the pandemic has locked up more than 200 people under lèse-majesté laws, which forbid criticism of the all-powerful king. Despite a firm hand when it comes to stifling dissent, the generals are "on autopilot" when statecraft is needed, says Pavin Chachavalpongpun of Kyoto University. Household debt is spiralling and the cost of living is getting steeper.

The government will hope to have its house in order well before November, when the summit of the Asia-Pacific Economic Co-operation, a big forum, rolls into Bangkok. The army's party, Palang Pracharath, must in any case pick a prime ministerial candidate before the next election, scheduled for early next year. The opposition will have its tail up, even if it fears that the vote will be just as flawed as the last one. It dreams that Thai voters, not the court or the army, might for once be allowed to make a big call all on their own. ■

Getting carried away

Pakistani politics

Imran on the back foot

ISLAMABAD

Pakistan's government wields anti-terror laws against Imran Khan

It looked, for a brief period earlier this year, as though Imran Khan, Pakistan's former prime minister, was history. Ousted in a vote of no confidence in April after falling out with the country's powerful army, Mr Khan took to rabble-rousing in the streets. But he has been regaling his supporters with fantastical conspiracy theories, which seems to have worked. The rallies have allowed him to stage a remarkable comeback, winning a slew of important by-elections—including in Punjab, Pakistan's most populous province—and eclipsing Shehbaz Sharif, his successor as prime minister, in popularity.

That success may now cost him. Mr Sharif's government, seemingly spooked by Mr Khan's resurgence, appears intent on halting it by any means necessary. This week it opened a police case against Mr Khan under an anti-terrorism law, potentially leading to a long spell in prison. Mr Khan's alleged crime is to have threatened a magistrate and senior police officials. (He has yet to be formally charged)

The case against Mr Khan is the latest salvo in a three-way struggle for power. It pits Mr Khan and his Pakistan Tehreek-e-Insaf party against Mr Sharif's Pakistan Muslim League-Nawaz and also General Qamar Javed Bajwa, the chief of the army, which is the ultimate arbiter in Pakistani politics. Mr Khan alleges that General Bajwa engineered his removal from power (which is plausible) by plotting with America (which is not). Mr Khan has presented no evidence for this conspiracy (America and the army both deny it). But the claims have left the general embattled and widely unpopular, including inside the army.

On August 8th Shahbaz Gill, an aide to Mr Khan, took advantage of the army's struggles during an appearance on a popular television channel, calling on officers to disobey unlawful commands by their superiors. The army immediately denounced Mr Gill's suggestion as tantamount to inciting mutiny.

The government jumped at the opportunity to ingratiate itself with the brass and strike at Mr Khan. Mr Gill was arrested the next day. The news channel was taken off the air in much of the country. Then Mr Khan got involved. After Mr Gill was arrested and, his party alleges, tortured in the custody of the federal police, Mr Khan issued an ominous warning while addressing a rally in Islamabad, the capital. The ▸▸

magistrate and police officers responsible for Mr Gill's ordeal would not, he declared, go unpunished. The government says that amounts to threatening the police and judiciary with unlawful retribution, justifying the terrorism charges. Mr Khan has since repeated his statements.

It is unclear whether the government actually plans to prosecute Mr Khan with a view to barring him from contesting elections. Deploying anti-terrorism laws is a sign of the government's desperation, reckons Faisal Fareed, Mr Khan's lawyer. "Imran Khan is winning by miles; that's what the government is afraid of," he says. "They can't beat him in elections, so they're going to try dirty tricks."

The anti-terror machinations are not the only threat to Mr Khan. He faces contempt proceedings for his remarks against the magistrate. The Election Commission ruled earlier this month that his party received illegal campaign contributions from abroad a decade ago, which the government could use to disqualify Mr Khan and his party. And Mr Sharif's ministers regularly vow to start new investigations into Mr Khan's time in government.

Respite is unlikely. A series of by-elections are scheduled, including one in late September in which Mr Khan himself will simultaneously contest an unprecedented nine seats to the National Assembly. A general election must be held by autumn next year, after parliament completes its five-year term. In November the government must choose between offering General Bajwa a third term and appointing a new army chief. Mr Sharif may calculate that keeping his political nemesis at war with a weakened army chief is the best way to remain in power himself. ■

Banyan Panic button

What South Korea's president must learn

Speaking to the press on his 100th day in office, on August 17th, Yoon Suk-yeol could hardly have been less charismatic had he tried. Rattling at breakneck speed through obvious policy ambitions (denuclearising North Korea, mending ties with Japan) and minor accomplishments (attending a NATO meeting in Spain), South Korea's president at least upheld his campaign promise not to "put on a show".

That is in keeping with the anti-politician schtick that he deployed to win office in March. His predecessor, Moon Jae-in, was a smooth operator with a long political career. Mr Yoon is a gruff prosecutor who entered politics less than a year before he was elected. Yet as president, the schtick has been exposed as reality: his lack of political skill has become a liability.

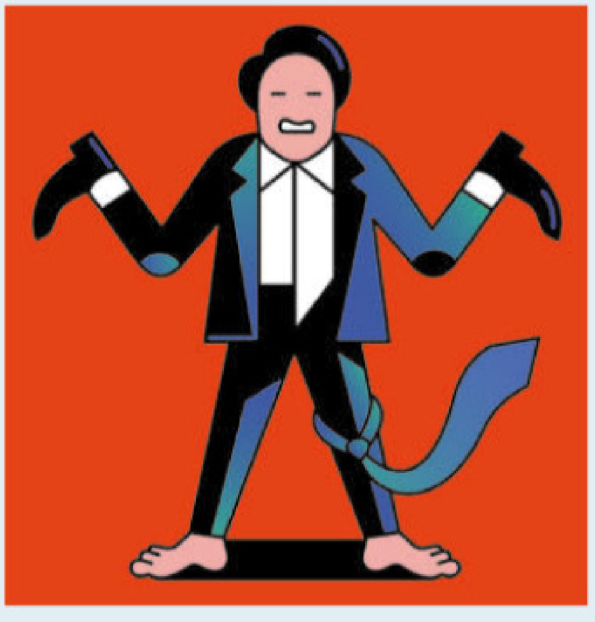
Less than a third of South Koreans view him favourably. Though many dislike his policies, especially on education and the economy, they loathe the imperious way he presents them. His attempts to look open by allowing journalists to fire questions at him as he comes to work have instead made him look unprepared. Mr Yoon is, to mangle a handy Korean phrase, getting his clothes soaked in a drizzle of unforced errors.

This unpopularity could undermine his agenda. A perception of incompetence and arrogance makes the people—and the press—predisposed to think the worst of him. Another Korean expression may apply: Mr Yoon has begun doing up his shirt with the wrong button.

What Mr Yoon needs is someone like Tak Hyun-min, the previous president's spin doctor. Mr Tak controlled every aspect of Mr Moon's public persona, ensuring every photo-op sent the right message and that his words and actions always met the moment. Mr Yoon has belatedly recognised this. On August 21st he hired as his senior public-relations secretary Kim Eun-hye, a politician who used to be a news anchor. Banyan wonders what advice Ms Kim might give Mr Yoon to get his presidency back on track.

One tip is obvious. Politicians are judged not just on what they do, but how they do it. Several of Mr Yoon's appointments to his cabinet and personal staff have had a whiff of impropriety about them. A fair share of them came from the prosecutor's office, his previous fief. Four of his cabinet nominees withdrew from the process over accusations of nepotism, graft or sexual harassment. On many occasions Mr Yoon has skipped conventional vetting procedures. His defence is that the appointments are perfectly legal. That is a prosecutor's answer. A politician knows that the appearance of propriety counts just as much as the thing itself.

Since his dip in the polls, Mr Yoon has repeated his victory promise to "follow the people's will". A second thing Ms Kim could impress upon him is that presidents should lead, not follow. His job is to make hard choices and explain his decisions clearly, something he failed to do when moving his office across the capital at great cost to the taxpayer. Mr Yoon has yet to learn even the basic political trick of presenting every popular policy as his own idea, let alone master the much harder task of selling unpopular ones.



Ms Kim might also tell South Korea's president that, while rushing in headlong looks unprofessional and backtracking appears inept, to do both is the hallmark of an amateur. Mr Yoon could have explained away not meeting Nancy Pelosi, the speaker of America's House of Representatives, when she visited Seoul after a trip to Taiwan earlier this month. Instead he dealt with criticism by making a last-minute phone call to her. Similarly, an announcement in July that children would start school a year earlier was so unpopular that the minister responsible, Park Soon-ae, was forced to resign. The briefest of consultations would have predicted the backlash.

Mr Yoon has had a bad start. He is not just unpopular. He also faces an opposition-controlled parliament and does not completely control his own party. He has already reshuffled his personal office, and still needs to fill the important positions of health and education ministers. He would do well to bring in not just competent and scandal-free people, but those from beyond his immediate circle, which would help widen his support. And he will need to act fast to win over the public. With just a single five-year term allowed by the constitution, South Korean presidents have little time to build a legacy. Hence the last and most important bit of advice, which takes in all the previous ones: learn the rules before you break them.

China and the developing world

Party's over

COLOMBO

Faced with an overseas debt crisis, will China change its ways?

Few moments better encapsulate the hope and hubris of China's Belt and Road Initiative, a global infrastructure binge, than the inauguration of Sri Lanka's Colombo Port City in 2014. Xi Jinping, China's president, attended in person, nodding approvingly as a project manager introduced the $15bn plan to build a high-tech offshore financial centre with a marina, hotels and luxury homes on 665 acres (269 hectares) of land reclaimed from the sea off Sri Lanka's capital. Local officials likened the project to Dubai and Singapore. Mr Xi (pictured on his visit to Sri Lanka) called it a "major hub" of the 21st Century Maritime Silk Road—the part of Belt and Road that aimed to reshape ocean trade by financing ports and related infrastructure without the pesky conditions that Western and multilateral lenders demand.

Flash forward to August 2022 and the future of Sri Lanka—let alone Colombo Port City—hangs in the balance. Crippled by fuel and food shortages, the country is seeking a bail-out from the International Monetary Fund after defaulting on its debt in May. Pakistan, another big borrower, is also in the midst of an IMF bail-out and dozens more Belt and Road countries are facing debt distress. The extent to which China, the world's biggest official creditor, bears responsibility is hotly debated. But what matters now is how it responds. Sri Lanka will be a critical test of Chinese willingness to co-ordinate with other lenders, potentially at the expense of Mr Xi's original geostrategic goals.

Central to the issue is China's relationship with the Paris Club of 22 mostly Western creditor countries. It is an "ad hoc participant" in the group but has refused invitations to join. One reason is the club's close connection to the IMF and World Bank, which America dominates. Another is its commitment to consensus, information-sharing (China likes to keep loan terms secret) and "comparable treatment" for all creditors. China wants to be prioritised and favours negotiating debt relief bilaterally: many of its loan contracts include clauses to that effect. Besides, adopting the group's standards would undermine Mr Xi's talk of a superior alternative to Western development finance.

Yet there are signs that China is slowly, if reluctantly, adjusting that position, as covid-19, inflation and the war in Ukraine amplify the debt problems many poorer countries faced before 2020. In May that year the G20, which includes China, established the Debt Service Suspension Initiative (DSSI), under which official bilateral creditors temporarily suspended interest and principal payments from any of the world's 73 poorest countries that requested such relief. China said in late 2020 that it had deferred at least $2.1bn in payments from DSSI countries.

In November 2020 China also backed the "Common Framework" agreement between the G20 and the Paris Club to co-operate on debt treatments for poor countries. The first deal under that framework came in July 2022 when, after months of testy negotiations, official creditors agreed to provide relief to Zambia, unlocking a $1.4bn IMF bail-out—although details are ▸▸

still to be finalised. China, Zambia's biggest official creditor, initially resisted co-ordinating with other lenders but in May agreed to co-chair a creditor committee with France. The two countries also co-chair a creditor committee for Ethiopia.

China's shift appears to be driven, in part, by the size of the problem and increasing international scrutiny of its lending. Chinese data are murky, but the World Bank provides debt statistics for 68 countries eligible for the DSSI, some 60% of which are at high risk of, or already in, debt distress. In 2020 those countries owed $110bn to China—more than all other official bilateral creditors combined, according to researchers at Fudan University in Shanghai. They say that in 2022 China is due to receive 26% of debt-service payments from those 68 countries. Eight, such as Angola and Laos, will spend more than 2% of gross national income making those payments to China (see chart 1).

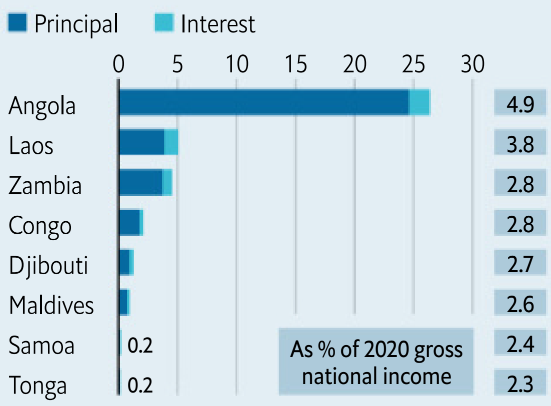
There may also be many more "hidden" problems linked to China. Economists at the World Bank, Harvard University and the Kiel Institute, a German think-tank, estimate that half of China's lending abroad is unreported, and that between 2008 and 2021 the country quietly arranged 71 distressed-debt restructurings—more than the Paris Club—often following a long spell of default. Restructuring almost always involved lengthening maturities or grace periods, rather than reducing principal. Some countries, including Venezuela and Zimbabwe, restructured Chinese loans five times or more (see chart 2).

Some detect echoes of emerging-market debt crises in the 1980s and 1990s, when Paris Club members obscured lending details and repeatedly rescheduled loans, leading to a lost decade of low growth. The shift towards writing down debt came only after America's Brady Plan in 1989 and the Heavily Indebted Poor Countries initiative in 1996. In a recent paper Ye Yu and Zhou Yuyuan of the Shanghai Institutes for International Studies (SIIS) called for a "new version" of the Brady Plan, urging China to

Can they afford it? 1

Projected debt service to China, 2022, $bn

Selected countries

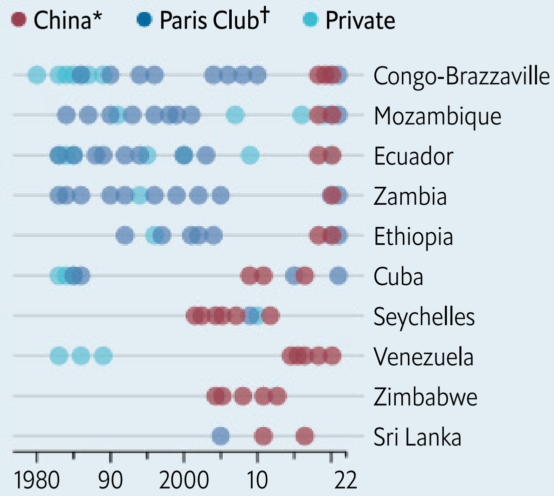


Sources: Green Finance & Development Centre; World Bank

Again and again 2

Completed debt restructurings, by creditor

Selected countries



Source: "Hidden Defaults", by S. Horn, C.M. Reinhart and C. Trebesch, 2022

*Data start in 2000 †Group of traditional creditor countries

be more transparent about its lending and to co-ordinate more with America and other Paris Club members to ensure "equitable and fair burden-sharing among all categories of creditors".

China's evolving position may also be linked to its recent efforts to provide emergency lending as some borrowers have struggled to service its infrastructure loans. State-owned Chinese banks made nearly $24bn in balance-of-payments loans to Pakistan and Sri Lanka in the past four years, according to AidData, a research lab at William and Mary, an American university. "China has dabbled with this idea that they could be an alternative to the IMF," says Bradley Parks of AidData. "What we're watching now is a period of real-time learning and adaptation, where I think they're having second thoughts."

In Sri Lanka alarm over Chinese infrastructure loans first flared in 2017, when the government, struggling to service its debts, granted a Chinese state company a 99-year lease on a port that China helped to finance and build. As other Chinese projects faltered, China's state banks pivoted towards emergency lending, providing $3.8bn between October 2018 and March 2022, according to AidData. Most observers agree that China's lending did not cause the crisis: they blame Sri Lanka's government for slashing taxes in 2019 and covid for crushing tourism in 2020. But Sri Lankan former officials say China's liquidity injections persuaded them to reject advice to approach the IMF much earlier.

The hope now for Sri Lanka is that Zambia's deal has set a precedent for China to co-ordinate with other creditors, even though the island's middle-income status excludes it from the Common Framework. Ranil Wickremesinghe, Sri Lanka's new president, declined to discuss details in an interview with *The Economist* but appeared confident of a deal. One proposal under discussion is for China, as Sri Lanka's biggest bilateral creditor, to co-chair a creditor committee with Japan, the second-biggest (and a Paris Club member). India could join, too. The aim, says one adviser, is "ad hoc" Common Framework treatment.

The geopolitical landscape, however, is even trickier than it was for Zambia. China's relations with Japan and India are at a low: in August China fired missiles into waters near Japan during drills around Taiwan, and its forces have clashed with Indian troops over a disputed border since 2020. America continues to accuse China of "debt-trap diplomacy", citing Sri Lanka as evidence. China denies that, noting (correctly) that most developing countries, including Sri Lanka, borrow more from multilateral and private lenders. It also points to its bilateral debt relief, including a pledge on August 18th to forgive 23 interest-free loans to African countries (it didn't state their value, but China's interest-free loans are typically small).

Sri Lanka is also confronting many of the same issues that delayed the Zambia deal. America and China both worry that restructuring will favour the other. The Paris Club wants more transparency from China, and more Chinese bank loans treated as official debt. China wants multilateral and Western commercial lenders to take a bigger haircut. It is also wary of setting a precedent for other borrowers—and stirring public anger at home. "China's money doesn't fall from the sky: it's earned by the Chinese people's hard work," Liu Zongyi of SIIS told a nationalist Chinese news website on August 15th.

To avoid the delays that Zambia faced, some advisers are urging Sri Lanka to begin debt-restructuring talks with China at an earlier stage, and before the Paris Club. The IMF has called for such talks, but it is unclear if they have started at a high enough level. Zambia is "a warning and a lesson", says Shanta Devarajan, a former World Bank official advising Sri Lanka. "We're still applying the same principles and trying to reach this intercreditor equity. But the sequence in which you discuss it might be important." He predicts an IMF bail-out by year's end. Others expect a longer wait.

The IMF says its staff are visiting Sri Lanka from August 24th to 31st to discuss reforms needed for the next step—a staff-level agreement on a bail-out. But the fund also stressed that final approval for the bail-out will require "adequate assurances" from creditors on restoring debt sustainability. Even the staff-level agreement will require painful reforms, possibly including adjustments to Colombo Port City, such as scrapping investor tax breaks. That may confound Mr Xi's vision of a maritime Silk Road metropolis. But it would arguably offer more hope for Sri Lanka—and dozens more debt-ridden countries. ■

Petitioners

Complain at your own risk

The party says it welcomes the airing of grievances. Just don't go too far

"GRIM" IS A word often used these days by officials responsible for handling petitions submitted by aggrieved citizens. They apply it to the task they face as the Communist Party prepares to convene a five-yearly congress later this year. The last thing they want is embittered people making a fuss as the party gets ready to re-anoint its leader, Xi Jinping.

Imperial China had a tradition of allowing citizens to petition officials about injustices. The party has adopted it. The National Public Complaints and Proposals Administration—and numerous other offices—annually handle millions of letters, visits, calls and online submissions from people seeking redress for everything from unpaid wages to eviction from their homes. Mr Xi, though a ruthless suppressor of dissent, has called the petition system a "beneficial supplement to socialist democracy with Chinese characteristics".

The advantages, officials say, include providing the party with a "window" onto public opinion and a means to "unite the hearts of the people". But they clearly see drawbacks, too. In the build-up to the congress, local governments are under strict instructions to ensure public order. They have been told to step up efforts to resolve petitioners' complaints, as well as to keep potential troublemakers under control. As usual, officials often seize petitioners from the provinces who turn up in Beijing and escort them home. Some are jailed.

Official hagiographies of Mr Xi describe how, as party chief of the city of Fuzhou in the 1990s, he and colleagues met more than 700 petitioners in two days. As one account put it, the officials solved many of the complainants' problems "on the spot". Since Mr Xi took over as general secretary in 2012, the public complaints office has been sending him select letters. He "reads them every time and writes comments on them," said the office's chief in 2015.

But Mr Xi has stepped up efforts to ensure that petitions are handled locally and that complainants do not gather in public. In recent years party-led committees have been set up at lower levels to co-ordinate efforts to handle grievances and ensure the police are aware of potential unrest. Under Mr Xi, the national public complaints office has been led by law-and-order types. The current chief was previously a spy.

Officials have also made it clearer that petitioners who travel to higher-level jurisdictions to submit their complaints could face punishment. In June fury erupted over allegations that officials in Henan province had changed the health codes on hundreds of people's covid-19 apps so they were quarantined and could not converge on the provincial capital to protest about a banking scandal. Five officials were punished. The authorities later crushed the unrest using thugs.

The pandemic has added to the burden of complaints-handlers. People have been petitioning about being forced into quarantine without cause and loss of income caused by lockdowns. This month more than 200 tourists submitted petitions in the province of Hainan, grumbling about not being allowed to return to their homes during a local covid outbreak. Officials have called for a "sense of urgency" this year among bureaucrats who handle petitions. They dare not complain. ■

Covid-19 and air travel

No-fly zone

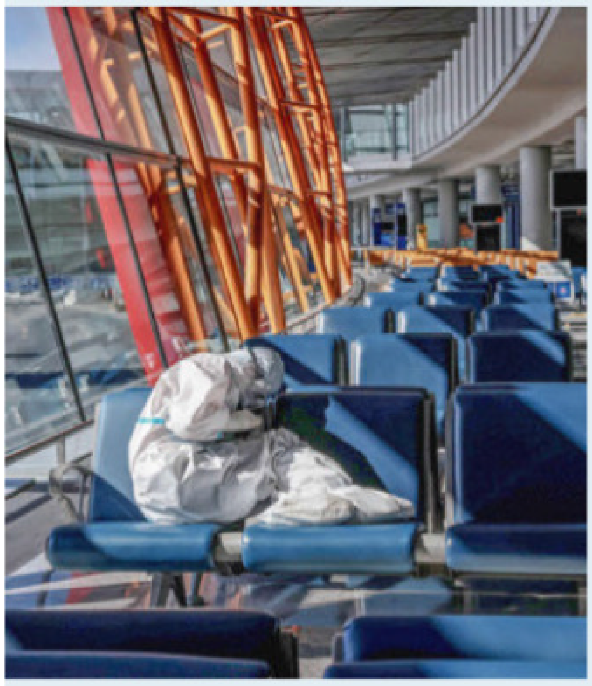
BEIJING

Most flights into and out of China remain grounded

THE SCENE on one side of Beijing's Capital International Airport is normal. Countless passengers sit under its vast curved roof waiting for their domestic flights. Shops cater to anyone in need of high-end sunglasses or perfume. But on the international side, things are eerily quiet. Staff in full-body suits deal with the passengers on flights into and out of China. They have little to do.

Before the covid-19 pandemic, the airport ranked as the world's second-busiest. Today, not so much. Domestic air travel is humming. But the number of international air passengers across all of China's airports has fallen from 74m in 2019 to 1.5m last year. In Beijing, until recently, there were hardly any international arrivals at all under what one foreign-airline executive called the "forbidden-city policy".

Most of the world has chosen to live with covid, allowing international travellers to take flight again. The number of people whizzing around the globe is expected to reach 69% of its pre-pandemic level in 2022. But China has a "zero-covid" policy that makes it wary of travellers from abroad. That has come at a huge cost to multinational firms, people with relatives abroad and so on. Also, the company that operates the airport in Beijing has lost nearly 4.7bn yuan ($685m) since 2020.



Ready to check your passport

Anyone hoping to fly into China from, say, America faces challenges. First, find an open seat on the tiny number of flights still operating. Then pay an exorbitant fare. A recent search for direct flights from San Francisco to Shanghai (one-way, economy class) found prices ranging from $7,000 to $9,000. One can find cheaper, indirect routes—but good luck fulfilling China's requirement of getting covid-test results at each stop.

That all assumes the traveller has received a visa. The number granted by China plummeted during the pandemic, so most inbound passengers are returning Chinese citizens. Until July they and other travellers were mostly barred from transferring through a third country if their country of residence offered direct flights to China. That led some desperate Chinese students in Germany to transfer their visas to Austria, where seats on flights home were more readily available. In order to pull off the switch, they reportedly had to enrol in a new study programme and rent a flat in Austria.

China has loosened up in some ways. It now allows more transfers and is issuing more visas. It has reduced the amount of time international travellers must stay in a quarantine hotel to seven days, from 14 or more. But airline executives are sceptical, not least because China wants to prevent new outbreaks ahead of a Communist Party congress later in the year. Cautious regulators change the rules without warning, says an aviation attaché at a foreign embassy in Beijing: it amounts to a "de facto suspension of every bilateral aviation agreement with every country in the world".

Palestine

The long goodbye

RAMALLAH

Someone, some day, will have to replace Mahmoud Abbas. But don't expect someone very different

ONCE A YEAR or so, the Palestinian president puts out something that resembles a proof-of-life video in which he is both kidnapper and captive. Mahmoud Abbas disappeared from public view for almost a week in early June. Social media were rife with rumours about his health. He surfaced on June 8th, delivering a speech by telephone and releasing photos of himself giving it: perhaps not hale and hearty, but at least alive.

This is almost an annual routine for Mr Abbas, who at 86 has a history of heart problems and has had prostate cancer. In 2014, after reports of a stroke, he dragged photographers along as he browsed for baguettes in a bakery by the presidential compound.

Yet rumours of his death always prove exaggerated. He is the world's fourth-oldest head of state and in the 18th year of a four-year term, in office almost as long as most Palestinians have been alive. Of the four Israelis and Palestinians who stood on the White House lawn in 1993 to announce the Oslo peace accords, he is the lone survivor. An official from Islamic Jihad, a militant Islamist group, jokes that Mr Abbas has induced a crisis of faith. "I thought God decides when it is your time," he says. "But the president decides for himself."

Mr Abbas has never named a successor, and the topic preoccupies both Israelis and Palestinians, albeit in different ways. For Israel the question of succession raises fears of instability in the West Bank. For Palestinians it offers the long overdue possibility of change—or perhaps not, because the president may want to ensure that his replacement is a carbon copy of himself.

Some Palestinians wonder why Mr Abbas persists in a job he does not seem to be enjoying. He has delegated many of his responsibilities to aides. On his watch the Palestinian national movement has gone flaccid: there have been no direct negotiations with Israel since 2014, and few efforts to challenge the Israeli occupation through protest or diplomacy. He avoids the press-the-flesh part of politics, too. There is little need to meet your constituents when you are president for life.

He spends a good chunk of time abroad, at his home in Jordan or visiting foreign leaders. This summer he made official visits to France, Romania and Jordan. Most recently he was in Germany, where he was scolded for claiming that Israel had committed "50 Holocausts" against the Palestinians. "They welcome him as an equal," quips a businessman in Ramallah, the Palestinians' administrative capital, "even if he controls zero outside his compound."

Another motivation lies closer to home. His sons, Tareq and Yasser, run an array of businesses in the occupied West Bank, with interests in everything from tobacco to insurance. They are loathed by most Palestinians. The Palestinian Authority, over which Mr Abbas presides, is widely seen as corrupt. "When a new leader comes, the previous regime is completely erased," says Mkhaimar Abusada, a Palestinian academic. "He's trying very much to safeguard the interests of the family."

In theory, the next president will have to be elected (Mr Abbas's term technically ended in 2009). Fatah, his nationalist party, will have to settle on a candidate. Plenty of names have been floated over the years, among them Jibril Rajoub, a former security boss; Mahmoud al-Aloul, an ex-governor of Nablus; and Mohammed Shtayyeh, the prime minister. If Palestinians had a free vote, they would probably plump for Marwan Barghouti, a charismatic leader of ▸▸

→ Also in this section

Fatah's military wing, but he is languishing in an Israeli jail, serving five life sentences. Mr Abbas has managed to outlive another putative replacement, Saeb Erekat, the Palestinians' longtime chief negotiator, who died in 2020.

Over the past few months a new front-runner has emerged. In May Mr Abbas appointed Hussein al-Sheikh to the number-two job in the Palestine Liberation Organisation. He accompanies the president at many of his meetings with foreign leaders, and his politics mirror those of his boss: a preference for talking with Israel rather than confronting it. The president seems to be grooming him for the top job.

Since 2007 Mr Sheikh has run an office that co-ordinates with the Israeli army, processing work permits and the like for Palestinians. That has made him a trusted figure among Israeli officials. American diplomats, too, describe him as someone they know and like.

The one group that would be unhappy with Mr Sheikh is the one that ought to matter most: his Palestinian constituents. A June poll found that just 3% of them want him as their next president. His work with the Israeli army seems, to many Palestinians, like working with the enemy.

Palestinians have not had the chance to vote in national elections since 2006. A growing number of them want not only a new president but a radically different approach to the conflict. Some 47% of them support dissolving the Palestinian Authority (PA), the government Mr Abbas heads. Support for such a drastic step is always higher in Gaza, where the ruling Islamists of Hamas allow the PA no writ at all, than in the West Bank, where the PA is in charge under Israel's watchful eye. But even in the West Bank 45% of Palestinians support the idea, according to the Palestinian Centre for Policy and Survey Research, a respected pollster in Ramallah.

Getting rid of the PA would deprive Israel of security co-ordination with the Palestinian police and force it to provide services to Palestinians in the West Bank. It would also put 150,000 people out of a job, since the PA is easily the largest employer in the occupied territories.

That the idea has gained support shows just how unpopular the PA has become under Mr Abbas: to many Palestinians it is less a government than a vehicle for corruption and collaboration. "There are still Palestinians who benefit from the PA, but they're a small minority," says Mr Abusada.

Therein lies a paradox. Even if Palestinians wanted to abolish the PA, neither Mr Sheikh nor the other men vying to replace Mr Abbas would be likely to decree themselves out of a job. One day the rumours will prove true and Mr Abbas's tenure will end. But his replacement may just be a slightly newer model. ■

The Eastern Mediterranean

Fire hazard

JERUSALEM

Gas under the sea sends sparks flying between Lebanon and Israel

IN A REGION with no lack of eternal battlefields, the Mediterranean waters off the shores of Israel and Lebanon could become a new one. A row between the two countries over energy-exploration rights in a disputed triangle of the sea risks spiralling into war. Hassan Nasrallah, leader of Hizbullah, the Iranian-backed Shia movement based in southern Lebanon, warned on August 9th that "any arm" reaching out to rob Lebanon of its wealth "will be cut off".

Mr Nasrallah has no official role in Lebanon's government but is arguably the most powerful man in the country. Hizbullah's military force is more powerful and sophisticated than the Lebanese army, with a punchy rocket arsenal and drones supplied mainly by Iran. In early July three of those drones were launched towards a gasfield known as Karish (Hebrew for shark), about 90km off Israel's coast, partially inside the disputed area. A Greek-owned company, Energean, operating on an Israeli licence, is on the verge of tapping the field. Israeli missiles intercepted and dished the drones, but Mr Nasrallah's message was clear. He is insisting that Israel must not begin extracting gas in September, as it had planned.

Although Israel has been carrying out air strikes against Hizbullah's weapons depots and convoys in Syria for over a decade, it has refrained from fighting on Lebanese territory since the end of a ferocious campaign against the militants there in 2006. Neither side wants to repeat that confrontation. Hizbullah managed to withstand Israel's month-long onslaught and continued to fire missiles at Israeli towns, even though Israel's air force clobbered Lebanon's civilian infrastructure.

Exclusive Economic Zones (EEZ)

Source: *Petroleum Economist*

Lately, however, Hizbullah has been seeking to boost its credentials as a "resistance" organisation. "Hizbullah has lost a lot of its popularity in Lebanon and needs to regain legitimacy as an armed group," says Tamir Hayman, a former commander of Israeli military intelligence who now runs the Institute for National Security Studies in Tel Aviv. Iran, Hizbullah's patron, also wants to keep Israel distracted from the latest negotiations to revive the nuclear agreement with America and five other world powers. Aware of this, America has been trying to broker a demarcation of the two countries' exclusive economic zones in the sea.

Lebanon's caretaker government under Najib Mikati has called on Hizbullah to keep out of the dispute. But Israeli officials are worried that Hizbullah will be tempted to attack the gas-production platforms again. That could spark a wider conflagration. "Picking a fight with Israel over offshore exploration rights is a convenient way to claim that there is an 'Israeli occupation' of the sea and that Hizbullah's rocket arsenals are justified. It doesn't mean Hizbullah wants a war, but it could escalate into one," says Mr Hayman. Both Israel and Egypt have been expanding their navies to defend their gasfields.

The natural gas under the eastern Mediterranean could also help prop up the floundering economies of Lebanon and Egypt. Offshore gas could fund much-needed infrastructure projects for the Palestinians in Gaza. It has already served to bolster alliances between Israel, Egypt and Jordan, which now have a joint gas pipeline system. Saudi Arabia may be another beneficiary, since its futuristic city, Neom, is being built near the border with Jordan.

Weaving Lebanon into the energy network in the eastern Mediterranean makes sense, but cannot happen as long as Lebanon has no official ties with Israel. The untapped reservoir of natural gas under the sea could also provide a fine alternative for European countries facing energy crises, as they struggle to wean themselves off Russian supplies. But few oil companies would risk conducting exploration work, building production platforms and laying down pipelines if the very process threatened to spark a conflagration. ■

Kuwait

Eighty and waity

An emirate without vim

It has arguably the Arabian peninsula's fastest-growing economy and a sovereign wealth fund worth $750bn to share among its 1.8m citizens. Parliament is freely elected—and boisterous. Prime ministers, appointed by the emir, are routinely ejected. Yet a crucial element of Kuwaiti society is sedate bordering on comatose.

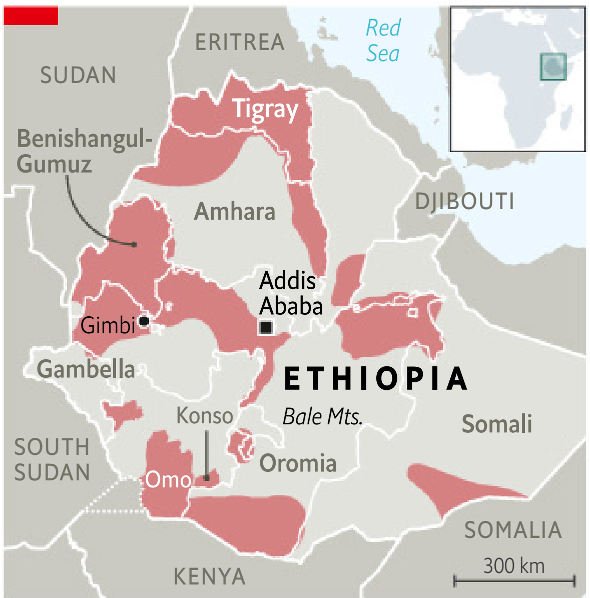
The emir, Nawaf al-Sabah, is 85 and in severe decline. Other Gulf states have chucked the baton to a younger generation. But the al-Sabah still pass it tremulously along from one octogenarian brother to another. The last time the emir was seen in public, in June, he stumbled through a brief speech, struggling for breath. His designated successor and half-brother, Mishal, is 81. Other rival princes sue each other in European courts. "Each sheikh has his own gang," laments a Kuwaiti academic.

Alone in the Gulf, Kuwaitis can publicly criticise their rulers. Parliament can veto laws, grill ministers and topple governments with votes of confidence. But the emir can dissolve parliament and rule by decree. The system is a volatile mix of monarchy and democracy. The result is indecision and paralysis. Since the previous emir died two years ago, Kuwait has had four changes of government. A new one took office this month. An election looms.

Some young Kuwaitis look enviously at Saudi Arabia's dynamic, if ruthless, crown prince. Kuwait's frail counterpart threatens "forceful measures", a euphemism for martial law, if the elections fail to buck up the state.

This is taking a toll. Half a century ago Kuwait was the Gulf's front-runner. It had skyscrapers when Dubai was just desert. Its emir mediated between Gulf monarchs. But in diplomacy and business it now lags. It is a dull place. In the vacuum, princes and bankers plunder pensions and other funds. Mega-projects suffocate in red tape. "The government is a grave for all projects," says Ghanim al-Najjar, who runs a think-tank. Blackouts are common.

It is also losing its reputation for relative modernity. Islamists hold back social progress. Graduates are still guaranteed cushy government jobs, requiring minimal work. "We're animals at the trough," says Hadeel Buqrais, a playwright. "Fatted and sedated, we have lost our will."



Organised political violence, April 2018-August 2022
Conflict areas
Source: Ethiopia Peace Observatory

Ethiopia

Falling apart

NAIROBI

The war in Tigray is far from over—and the state is unravelling elsewhere

After a brief stalemate, the civil war in Ethiopia may be poised to get even bloodier. A humanitarian truce to let food be brought to the besieged region of Tigray was broken on August 24th, raising fears of a return to all-out war in the north (see map). At the same time, rebellions around the western and southern edges of Ethiopia threaten to fragment the entire country. In particular, the Oromo Liberation Army (OLA), a rebel group which says it is fighting for the self-determination of Ethiopia's largest ethnic group, has been weakening the grip of the federal government which sits in Addis Ababa, the capital.

Last year on December 1st 14 traditional leaders were taken to the woods in south-eastern Ethiopia and shot in the head. The government blamed the OLA. In fact, says the state-appointed Ethiopian Human Rights Commission, the perpetrators were almost certainly state security forces. The killings may have been in retribution for those of 11 policemen the day before.

In the months afterwards, local cattle-herders known as the *Karrayyu* were subjected to a reign of terror by the security forces, who arrested and beat residents, vandalising their homes. Villagers fled in panic, abandoning their livestock. Young men and even children were shot dead. Bulga Boru was killed as he was putting up fences for his cattle. "The government forces announced they had killed members of the OLA," says a cousin of his. "But he was married and had a family."

Such tales have become routine in Ethiopia. The Armed Conflict Location & Event Data Project (ACLED), a body founded in America that collects information worldwide, recorded ten attacks against civilians by government forces in just one region, Oromia, in the last week of July. Since Abiy Ahmed became Ethiopia's prime minister in 2018, ACLED has identified more than 3,000 incidents of "organised violence" and more than 8,000 civilian deaths across the country. The true figure is probably several times higher.

Nobody knows how many have died through murder, ethnic cleansing and famine in the dreadful war in Tigray since it broke out in 2020. Some researchers reckon the death toll could be half a million. The Internal Displacement Monitoring Centre, founded by the Norwegian Refugee Council, thinks that more than 5m Ethiopians were forcibly displaced by the end of last year, one of the highest figures for a single country. Plainly unrest is rife across Ethiopia, far beyond Tigray.

When Abiy came to power he was a young reformer from Oromia, the largest of Ethiopia's 11 ethnically based regions by area. Years of protests had weakened local government and left a security vacuum. But after Abiy had ousted the unpopular and authoritarian Tigrayan People's Liberation Front (TPLF) from the helm of the coalition that had ruled Ethiopia for three decades, he pledged a new era of national unity, democracy and stability. Ethiopia, he argued, did not have to choose between liberty and order. "The only way to hold the country together," he wrote in *The Economist* in September 2020, a year after winning the Nobel peace prize, was to build an "inclusive, multinational, democratic and prosperous Ethiopia".

Two months later, however, he went to war with the TPLF. He accused it of defying the federal constitution and inciting the ethnic violence that had swept across the country after 2018. The TPLF, he alleged, had been arming and training opposition groups, including the OLA.

Abiy assured sceptics that the war would be quick. The aim was simply to arrest the TPLF's leaders and bring the renegade region to heel. Because the TPLF had attacked federal military bases in the region, albeit claiming self-defence, many Ethiopians backed Abiy. They believed that a defeat for the TPLF, a well-armed ethnic-based movement, would bolster the central state and stop Africa's second-most-populous country, which has about 120m people, from fragmenting.

Yet, while the TPLF is still undefeated, fighting elsewhere has expanded, especially in Oromia, Abiy's home region. "The country appears to be fracturing," says an Ethiopian diplomat. Early this year, just as it agreed to the recently broken truce with the TPLF, the government launched a new offensive against the OLA, with which the ▸▸

Tigrayan rebel front had signed an alliance a year ago. Thousands of federal troops were supported from the air by drone strikes. They were also backed by militias and volunteers known as the *Fano* from the neighbouring Amhara region, home to the second-largest ethnic group.

By May, large-scale fighting, including numerous atrocities, had reached within 100km of Addis Ababa. The Oromia Support Group, an NGO, says it has identified 695 Oromo civilians killed by government forces or *Fano* militiamen since January. "They don't even ask questions," says a farmer in Gimbi, 430km west of Addis Ababa. He says his father was shot in the neck by government troops. "They answer any kind of query with a bullet." The UN reports that half a million people may have fled. Schools have closed, health clinics have been looted. Roads in the far west are too dangerous to travel along.

In June the OLA hit back with a string of attacks on towns in western Oromia, including Gimbi. It was soon routed, but only after it had overrun government offices, grabbed arms and freed hundreds of prisoners. It also mounted a surprise raid, together with local rebels, on the capital of Gambella region next door. "[We] did those operations to falsify the government's claims of victory," says an OLA leader. The state human-rights commission reported that the security forces had then summarily executed many Oromo residents.

Sharing blame for bloodshed

The OLA has itself been accused of atrocities. The Amhara Association of America, another rights group, counted more than 1,600 Amhara civilians murdered and wounded last year by the OLA. This year in June the government blamed the OLA for killing more than 200 Amhara civilians in a village near Gimbi; the OLA says the government framed it.

The prospect of peace talks with the OLA, as well as the TPLF, has diminished. The government calls both groups "terrorists". It also accuses the OLA of conniving with al-Shabab, a jihadist group linked to al-Qaeda that ravages neighbouring Somalia. On July 23rd Ethiopian intelligence claimed to have foiled attacks in Addis Ababa by al-Shabab and the OLA.

Collaboration between the OLA and al-Shabab is unproven. But the jihadists would certainly wish to exploit the Ethiopian government's distraction in Oromia and elsewhere. In July several hundred al-Shabab fighters crossed into Ethiopia, apparently heading for the Bale mountains. It was al-Shabab's biggest incursion since it was formed 15 years ago. The Ethiopians say they annihilated the invaders.

Even so, the attack suggests that Ethiopia is vulnerable on its fringes. "There was no [federal] army anywhere near," admits Mohammed Gurey, a local security chief. Local rebellions have also erupted in the south and south-west, for instance in Konso and South Omo.

Faced with growing disorder in its borderlands, the government has arrested more than 4,000 people allegedly linked to rebel groups or jihadists in the past two months. A crackdown on the *Fano* in the Amhara region has forced most of them to give up their guns or go into hiding. In Benishangul-Gumuz, a lawless region near Sudan, the government says it has chased out local rebels. But little has been done to tackle the root causes of conflict, such as disputes over land and the representation of minorities.

Abiy plays down fears of Ethiopia's fragmentation. Historically the central government often had little control of the country's periphery, he recently told some of his top brass. In days of yore there were no social media to criticise the government, he added. Moreover, predictions of Ethiopia's break-up had always proved false.

But the latest wave of rebellion, in the west and deep south as well as the north, is fraying the country. "It may seem patriotic to window-dress the general situation," a retired Ethiopian official warns. "But the longer we keep on engaging in self-deception, the more serious it becomes." ■

Nigeria

Pupils with begging bowls

ABUJA

Why vulnerable children get swept into dodgy religious orders

SHOPPERS HEADING for the posh malls of Abuja, Nigeria's capital, are often accosted in car parks by boys in ripped kaftans with begging bowls. The kids sing mellifluous laments in Hausa, the main language of northern Nigeria. Auwal Musa begs for food and cash to pay for his weekly religious studies. He is only eight, has never been to a state school and hasn't seen his parents since he was five. He is one of an estimated 13m unschooled children in Nigeria.

Auwal, like 10m of them, is an *almuhajir*, Arabic for an emigrant, implying a searcher for religious knowledge or freedom. Yet the boys' lack of formal education limits their life chances. When riots break out for political or religious reasons, Nigerians often accuse such boys of being thugs for hire.

The wages of piety

Many of them have been handed over as small children to a travelling teacher in handsome robes who has prayer beads in one hand and a whip in the other. He is meant to train them to memorise all 114 chapters of the Koran. The boys sleep on floor mats, learn their lessons from wooden slates and when they are not studying are sent into the streets to beg.

Governments have long pondered what to do with them. Suggestions that they should be inducted into formal education have been swatted aside by the religious orders. The imams consider the *almajirai* to be beneficiaries of an honoured way of life dating back centuries. In 2014 the government allocated 15bn naira ($35m) to build 157 modern schools that would integrate the young Koran-memorisers into the modern education system. This would also keep the begging boys off the streets. But many of the religious teachers in charge of them refused to co-operate and the new schools are barely functioning.

When covid-19 broke out in 2020, Nigeria's state governments herded thousands of the boys onto buses and lorries, which criss-crossed the country to take the boys back home, if they could remember where they came from. After the lockdown was lifted most of them found their way back to their old streets. On paper the *almajirai* practice has been abolished. Yet boys proffering bowls still swarm the streets of northern Nigeria.

"It is what my parents have chosen for me," says Auwal, tucking a 100-naira note gleefully into his pocket. It may keep the pangs of hunger or the lashes of his teacher at bay for a day. But it is hardly likely to help him fulfil his dream of becoming a doctor.

Six months of war in Ukraine

The manpower race

KENT

Russia and Ukraine need more soldiers. Who can train them faster?

THE SETTING, a sleepy village. Three smoke grenades go off in rapid succession. As the smoke settles, a round from an assault rifle cuts through the grey sky. Men in military fatigues rush to clear a building. Cars lie overturned. A wounded soldier on a stretcher groans in agony. These are not scenes from Ukraine but from Kent, the usually tranquil "Garden of England". Britain is helping Ukraine train its soldiers.

After six months of war, the Russian and Ukrainian armies are both bruised and battered. Perhaps 15,000 Russians have been killed and 45,000 have been wounded, said Bill Burns, the head of the CIA, last month. Ukrainian casualties were only "a little less", he estimated. These depleted forces are stretched along a front that is over 1,000km long; its contours have barely changed in weeks. The war will depend, in part, on which side can replenish and expand its army more quickly.

Ukraine aspires to launch a large-scale offensive in the coming weeks. That would require it to establish around half a dozen new mechanised and tank brigades, says Franz-Stefan Gady of the International Institute for Strategic Studies, a think-tank in London (a brigade has around 4,000 men). Oleksii Reznikov, Ukraine's defence minister, says the army has 700,000 personnel in hand, with police, border guards and gendarmerie bringing the total to a million. The catch is that only a small proportion of this force has the skills and experience for serious fighting.

That is where the training comes in. Britain has pledged to train 10,000 Ukrainian recruits in 120 days, in the relative safety of several camps across Britain. Canadian troops could be seen milling around the facility in Kent. Denmark, Estonia, Finland, Norway, New Zealand and Sweden have said they will send trainers, too. Over 2,000 soldiers have already been trained and sent back to Ukraine. The vast majority of the recruits have no previous military experience. They are taught the rudiments of infantry tactics from early in the morning to late at night. The training is slow and deliberate, says Major Craig Hutton, one of the British trainers, with an emphasis on the basics such as marksmanship and treating injuries.

Ukraine does at least have an ample supply of willing men. Russia is in a trickier spot. Western officials say that more than half of its brigades and regiments in Ukraine are now at less than 60% of their original manpower and equipment, making them technically "combat ineffective" for their intended missions. Vladimir Putin, Russia's president, is unwilling to declare a formal war, which would allow him to conscript young men and send them into combat and also call up reservists. Instead, he is scraping together volunteers, which requires offering large pay packets.

Around half of Russia's provinces are generating battalions in this way, some of them manipulating local pride to cobble together units. Many of the new battalions are being grouped under the 3rd Army Corps, a new formation based in Mulino, a town in Nizhny Novgorod. Yet names can be misleading. A corps typically has 15,000-20,000 men. The new one looks threadbare. "Even the name 'volunteer battalion' is a misnomer," says Tom Bullock of Jane's, a defence-intelligence firm. He ▸▸

→ Also in this section

points to the "Tigr" battalion from Primorsky Krai. It had just 65 men who had completed training before being sent to Rostov, near the Ukrainian border, where another 130 or so green recruits were added.

These new units are better trained and equipped than many of those that Mr Putin threw into battle in April and May, often with only a few days of training, says Rob Lee of King's College London. But they are far from being crack soldiers. In theory, the 3rd Army Corps' new battalions are supposed to get several weeks of training. Grumbling on social media suggests some of them get as little as a week.

Standards have dropped precipitously. "A lot of the guys they are getting in are old, broke and out of shape," says Mr Bullock. In contrast, Ukrainian recruits in Britain are in their 20s, on average, and are currently getting several weeks of basic training. That is far short of the two to three months that American and European soldiers—and, before the war, Russian ones—would get; but the quality of instruction is likely to be higher than in Mulino.

The British training is focused on urban warfare of the sort that the soldiers might encounter in Kherson, the presumed target of a future counter-offensive, or in the eastern Donbas region, where Russia's army is approaching the city of Bakhmut. Urban warfare tends to be highly destructive; the training considers how soldiers might fight without leaving infrastructure in ruins. "We're not demonstrating the same firepower and destruction that you've seen in Mariupol," insists Brigadier Justin Stenhouse, the commander of the brigade in charge of the training. "This is the Ukrainian homeland, they want to maintain their houses." British tactics are blended with Ukrainian ones, and the instruction is adapted according to intelligence coming back from the front lines.

The balance shifts

Some of these freshly minted soldiers will fill out Ukraine's new reserve brigades; others will be quickly thrown into battle as replacements for casualties. There is a danger that these very keen, under-trained soldiers will be injured or killed because they have not had enough training or seasoning, warns a British general familiar with the training programme. Nor are soldiers enough. There could be bottlenecks in the supply of armoured vehicles, ammunition and officers. Even the most enthusiastic infantry need protection, firepower and leadership.

But Ukraine's manpower position is, at least, steadily improving—on August 29th EU defence ministers will discuss the possibility of setting up another big training mission. Russia's may be plateauing. Its mobilisation of volunteers has generated enough men to sustain its slow gains in Donbas and to hold the line in the south. One Western official warns that a sizeable proportion of wounded Russian soldiers, potentially running into the tens of thousands, will be fed back into units in due course. But it is storing up longer-term problems, says Mr Lee. The most desperate or enthusiastic men have already signed up. Moreover, this year's new conscripts are being starved of training, because the best officers are in Ukraine. Fewer than usual are likely to sign professional contracts when their term ends.

The longer the conflict drags on, the worse these issues will get. In Alchevsk in Russian-occupied Luhansk province, where men have been plucked from the streets and even from hospital wards, there are signs of mutiny: one militia has refused to be sent to fight in neighbouring Donetsk province, and a coking plant has tried to halt the conscription drive among its staff. Even if Mr Putin were to mobilise Russia for war, it would take several months, and probably closer to a year, for that to make a big difference, adds Dara Massicot of RAND, another think-tank, given shortages of officers and equipment.

Nor do the numbers tell the whole story. Soldiers fighting for national survival tend to be highly motivated. Major Hutton, who has been training soldiers for three decades, says he is impressed by their work ethic. "What I've found is that the Ukrainians lap it up, they love it, they want to practise more and more and more, and that enthuses our instructors to take it to the next level." The key, he says, is to get the basics right. "As long as they keep to those core principles of moving together, communicating well, shooting straight, and then being able to look after one another, then they will win the day." ■

Six months of war: Feb 24th–Mar 23rd. Russia invades

On February 24th Russia attacked Ukraine from the north, east and south. Its assaults on Kyiv and Kharkiv failed. It made significant gains elsewhere, but the only city of any size it captured was Kherson.

1,000

The estimated number of strikes on Kyiv by March 23rd Source: Osprey Flight Solutions

Mar 24th–Apr 23rd: Ukraine pushes back

After encountering stiff resistance, Russia called off its attack on the capital and other northern areas on March 29th. As it withdrew, evidence emerged of atrocities in Kyiv's suburbs. Ukraine sank Russia's Black Sea flagship, the *Moskva*.

Independence day in Kyiv

Forging a nation

KYIV

Ukraine marks its 31st anniversary under the threat of Russian attack

MILITARY PARADES are a complicated affair in Ukraine, long tainted by association with Soviet pomp and oppression. Holding one for independence day on August 24th this year, while Ukrainian troops fight real, bloody battles in the south, east and north, would have been a particularly tricky sell. Instead, President Volodymyr Zelensky's office served up a twist, presenting an open-air exhibition of destroyed Russian military hardware on Khreschatyk, the wide street that runs through central Kyiv, the capital. Chewed, broken up and spat out by the Ukrainian army, the exhibits mock Vladimir Putin, who reportedly planned to stage his own victory parade there. Macabre and irreverent, the show mirrors life in a nation that is somehow surviving.

The show draws different reactions from locals. Some people chant the lyrics of "Ukraine Will Win", a cheesy patriotic number made famous on YouTube: "Burn, burn and keep on burning." But most people just stare aimlessly at the rows of scorched tanks, artillery pieces, armoured personnel carriers, air-defence systems and rocket-launchers. Some visitors leave messages, white paint on rusted steel. "Shame they couldn't say *palianytsia*," reads one, a reference to the code word used to distinguish Ukrainians from Russians in the early days of war. Other scrawls list the battles that have already earned their place in Ukraine's history books: Kyiv, Mariupol, Kharkiv, Severodonetsk, Snake Island, Bucha.

Natalka Osmak, 80, inspects the weaponry methodically. A pensioner now, she spent her working life as a civil engineer, designing some of Kyiv's main infrastructure. She says she is impressed by the effort that had been put into designing the machines. "Huge monsters to kill little men." The Russian invasion was personal, she says. Her father, Kyrylo Osmak, a hero of the Ukrainian resistance, died in a Russian prison in 1960, 16 years after being jailed by Soviet authorities. "History shows even little men can defeat evil. Little men can win. Eventually."

Fear had hung over Ukraine's approaching 31st anniversary for days. Many people predicted that Russia would lob cruise missiles at Kyiv to spoil it. Mr Zelensky said intelligence suggested the enemy was planning "something especially cruel", without giving any more details. Government workers in Kyiv were told to vacate the government quarter. America advised its citizens to leave the country immediately, language last used in the frightening early days of the invasion.

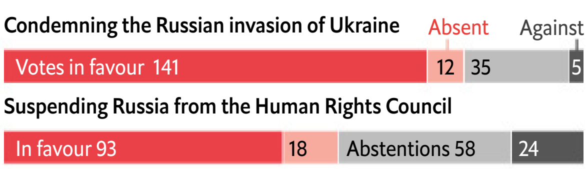
A murky assassination in Moscow added to the sense of foreboding. Much about the killing of Daria Dugina, a nationalist pundit, remains unclear. But Mr Putin's propagandists have already used her death to call for escalation in Ukraine. On August 23rd Dmitry Kiselev, a TV anchorman known as "Putin's mouthpiece", called for "the uncompromising denazification and demilitarisation of Ukraine", whatever that meant. But on August 24th the feared Russian barrage never hit Kyiv, though targets elsewhere in the country were pounded.

Far from breaking Ukraine, as Mr Putin had hoped, his brutality has done a lot to unite it. Serhiy Leshchenko, a presidential adviser, says the nation has bonded in a way he never expected. The glue is not so much shared woe as a shared desire to survive, he said. "War has touched every Ukrainian. That mobilisation has helped us become self-sufficient. For the very first time since gaining independence in 1991, we believe we are a subject in world politics. And we are influencing the entire northern hemisphere."

Polling seems to underline the point. Every year since 2012, Rating, a polling and ▸▸

Apr 24th–May 23rd: The battle for the Donbas

UN General Assembly resolutions, Mar-Apr 2022



The focus of the war shifted to the Donbas region, where Russia continued to make gains. On May 16th it captured the port city of Mariupol after a devastating siege.

15,000

Estimated number of Russians killed

Source: CIA/Estonian Intelligence

sociological-analysis outfit, has asked Ukrainians a simple question: "Do you support independence?" It's an odd question to be asking in a sovereign country, but the answers have a tendency to surprise. In 2012, just 62% said they were committed to the Ukrainian project. The latest figures, published on August 24th, show a dramatic turnaround: 97% now say they support independence. Alexei Antipovich, who heads the group, says the polling points to the emergence of a new kind of nation. Ukrainians are now overwhelmingly proud of their country (75%). They also largely identify as Europeans: up from 35% before the war to 60% today. When asked to name their priorities, locals name "independence" first, and *volya*, an untranslatable term that combines the notions of freedom and free will, second. Money comes a distant third, the pollster finds.

That is just as well, for the economic outlook is bleak. The direct physical damage from Russian shells, bombs and missiles is already estimated to be at least $113bn, and continuing to rise. The war is causing immense indirect damage, too. The central government is running a budget deficit of $5bn-7bn a month, which it is meeting with a mix of foreign loans, grants, and by printing money. Inflation is thought to be above 30%; interest rates are 25%. "The big picture is this is unsustainable," says Tymofiy Mylovanov, a former economy minister. Ukraine needs a lot more international support, which may or may not be forthcoming. It also needs to raise taxes, cut social payments and mobilise its economy better, he says. "The standard of living is going to go down quite a bit for many people."

In six months of war, Ukraine has startled the world by holding off a much more powerful attacker. Mr Putin has yet to achieve any of his main aims, and was humiliated in the battle for Kyiv. Russia has gained some ground in subsequent battles in the east, but Ukraine has found a way of countering its advantage in heavy artillery by zapping its logisitics with precision rockets. Public confidence that Ukraine will win the war is sky-high: 92% of Ukrainians think so, according to the latest Rating figures. It remains to be seen if Ukraine's soldiers will prevail. A long-hailed counter-offensive around Kherson is faltering, with Russia even reclaiming some territory north-west of the city.

Any serious reverses would test Ukraine's economic pressure points. But Ms Osmak says she is convinced the nation has passed a point of no return. Completing her meticulous inspection of the once high-tech, but now outclassed, Russian Pantsir surface-to-air missile system, she declares the "green monsters of Khreschatyk" to be monuments to a new Ukrainian statehood. Perhaps that is what her revolutionary father might have thought, too. "I think he would be really very, very sad at the hundreds of thousands who have lost their lives. But he would be happy that we have a state. And we do have a state. The monsters are proof." ■

Russian-speakers in Ukraine

Lost in invasion

ODESSA

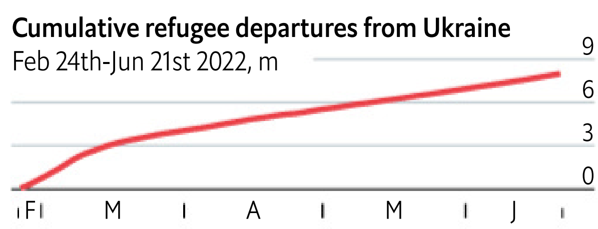
The war is putting many locals off speaking Russian

IN THE RUN-UP to his invasion, Vladimir Putin tried to justify his predatory intent by saying Russia needed to protect Russian-speakers in cities like Odessa. His self-serving argument is now the butt of local humour. "Two old Odessites meet and one of them suddenly starts speaking in Ukrainian," starts one joke currently doing the rounds. "'What's the matter?' asks his friend. 'Are you afraid of Ukrainian nationalists?' 'No,' he replies. 'I'm afraid to speak Russian—in case Putin thinks he needs to liberate me.'"

Language has been a contested issue in Ukraine for decades, with allegiances and resentments tending to be stirred up for political advantage ahead of elections or during revolutions. In broad terms, the west of the country is largely Ukrainophone, while the south and the east tilt Russian. In between, the country has always been ambiguously bilingual, with border constituencies speaking a mix of the two called Surzhyk. But the invasion is now crystallising what had been a complicated issue. Millions of Russian-speaking Ukrainians, appalled at what is being done ▸▸

May 24th–Jun 23rd: A well-handled refugee crisis

EU countries responded with generosity to an exodus of Ukrainian refugees which, at peak, reached 200,000 a day. But since early May, an increasing number of people have deemed it safe to return.



Jun 24th–Jul 23rd: Heading for stalemate

By the fifth month of fighting, the war was showing signs of settling into stalemate. Russia's gains in the east petered out after it took the town of Severodonetsk at the start of the month. A limited counter-offensive by Ukraine started in the south.

in their name, are making a point of switching to Ukrainian.

In Odessa, a traditionally Russian-speaking city, the central library is extending its Ukrainian conversation club to two sessions a week due to the increased demand. A recent visit showed that the classes attract a certain type of Odessite: eye-lined, permed, and the other side of 50. Oleksandr, the only man attending the classes, quips that the local ladies flock to any forum that gives them a chance to chat. But Tanya Mozgova, the librarian running the club, insists the city is undergoing a much wider linguistic shift. "Rockets have a way of persuading people whatever their sex or background. Vladimir Putin has fired the starting pistol on Odessa becoming a Ukrainian-language city."

In a lengthy essay on the supposed unity between the Ukrainian and Russian peoples published in July 2021, and in hindsight a clear signal that war was on the way, the Russian president dismissed Ukrainian as a "regional language peculiarity". But in his desire to assert influence over the country, he overlooked some basic facts. Russian and Ukrainian do indeed share a common linguistic ancestor, a language now known to scholars as Old East Slavic. But the two have been distinct languages since at least the 17th century. An analysis of their vocabularies shows that lexically they are about as aligned as Spanish is with Portuguese. Visitors to Ukraine can and have mistaken its widespread and relaxed bilingualism for linguistic interchangeability. But just as important, Ukraine's linguistic identity has been undermined by centuries of first tsarist and then Soviet policy that portrayed the local tongue as a kind of bad Russian, a language of the village.

Losing the argument

All that is now changing, thinks Ms Mozgova. The main shift in Odessa itself came three to four years ago, she says. That was when she first noticed that her invitations to speak Ukrainian were no longer being met with gruff expressions of incomprehension. For most of the members of her conversation group, the lightbulb moment came later. Olena Nikulina, a retired teacher, started learning the language only after the invasion in February. Larysa (surname withheld) started just a month ago. Lyudmila Grigorieva, a fashion designer, first took up Ukrainian in 2020, but says that she became "a much better student" once Russian tanks crossed the border. She says the homeliness of Ukrainian reflects a different mindset. "The Russian word for hospital is *bol'nitsa*, which comes from the word pain. The Ukrainian is *likarnya*, from the word to cure. That tells you a story, and there are many other examples like this."

Surveys by a Kyiv- and Lviv-based sociological group called Rating show the switch from Russian to Ukrainian is accelerating in all areas of the country. Only 20% of people now call Russian their native language, down from 42% ten years ago. Support for the demand to make Russian a state language, an objective pushed by Moscow-friendly forces for the past two decades, has also plummeted. Just 7% of people think it is a good idea, compared with a quarter before the war. The youngest generations are now almost exclusively schooled in Ukrainian, and Russian is no longer the lingua franca of popular culture. The Russian-language department in Kyiv's main university has even been renamed the "Department for East Slavonic and Applied Information Studies".

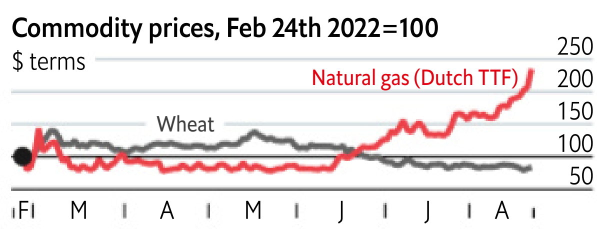
But perhaps most of all the change is visible in politics. Volodymyr Zelensky, Ukraine's Russophone president, once visibly struggled with Ukrainian. Now, even Odessa's formidable ladies say they are impressed with his proficiency. "He's learned to speak without an accent and it's becoming more natural for him," says Valentina, approvingly. She cautions that he doesn't know enough about local history, but not everyone agrees. In slow, heavily accented Ukrainian, Ms Grigorieva suggests giving the president some slack. He has enough on his plate, she says, and it's better to know no history than invent it. Her allusion isn't hard to decipher.

"One of Putin's advisers should just go to him and tell him that he's won, that he's conquered us," she continues. "Change the nuclear button for a toy one, and let him press it to his heart's content. Tell him everything is great. Tell him there's no more Ukraine. Tell him there's nothing to worry about. Then we can all get on with our lives." ■

↑ Russian troops survey the devastation they have wrought in "liberated" Donbas.

Jul 24th–Aug 23rd: The cost to the wider world

A long war looked ever more likely, as Ukraine's counter-offensive failed to gather momentum. The damage to the wider world continues, notably via sky-high gas prices. But food prices started to fall, helped by the re-opening of Odessa.



Charlemagne | The side-effects of war

As fighting in Ukraine drags on, the costs for Europe are mounting

A downside of the leisurely European summer is the intimidating to-do list that awaits one's return. With war still raging on the EU's doorstep, this *rentrée* feels particularly daunting. Regular meetings of the union's ministers are about to resume, just days after the six-month anniversary of Vladimir Putin's invasion of Ukraine on February 24th. Ukraine has defended itself against its massive neighbour more effectively than many in Europe thought possible back then. But as winter looms, Europe is starting to feel the war's side-effects more keenly. Keeping the EU united despite painfully high energy prices will be a challenge.

Nobody sitting around an EU summit table is in any doubt over who has borne the brunt of Russia's aggression. Ukrainians have been slaughtered, and Ukraine will one day need the kind of financial aid western Europe received after the second world war to rebuild its shattered cities. The price tag for Russia has also been hefty. Its army has been humbled, it is heavily sanctioned, most of its remaining civil liberties have been snuffed out and Mr Putin has been proved incompetent as well as despotic.

The cost for Europe is harder to pin down. Part of it relates directly to the conflict, such as the cheques written by the EU to keep the Ukrainian government afloat. This money has not been as important as America's supply of weapons and intelligence to the Ukrainian army, which has kept Ukraine in the war. But European generosity has helped, too.

Still, the largest costs to Europe have been indirect. Top of the list is the economic damage it is incurring: Russia has retaliated against Western sanctions by throttling the flow of gas on which Europe depends. There is also a cost associated with adjusting to a geopolitical environment in which most EU countries can no longer scrimp on defence. And politically the continent is feeling the effects of operating in crisis mode for six months. This has tested—and will continue to test—the mettle of the union.

The economic cost is the most immediate. European energy prices have spiked again this week as Russia announced that its Nord Stream 1 pipeline is to undergo further "maintenance" from August 31st, rousing suspicions that it may never be re-opened. In parts of Europe gas is now trading at what would equate to over $1,000 per barrel of oil, an absurd level. Governments face a choice: either to foot the power bills that would otherwise break many household budgets, or suffer a recession as consumers are left broke. Either way, public finances will be clobbered just as inflation—also caused in part by rising energy prices—has put an end to the era of free borrowing. (To make matters worse, the euro has fallen to below parity with the dollar, its lowest level in two decades.) For most people and businesses, the vague summertime prospect of having to pay more to keep homes warm and factories humming is about to become a harsh wintertime reality. Politicians trying to arrange another tranche of aid to Ukraine will not find it so easy when pensioners are shivering at home.

The strain on public finances will come just as the need to spend more on defence will be most acutely felt. The war has underlined just how little military equipment Europe could spare to succour Ukraine, and how ill-prepared many countries would be to defend their own territory. Germany has been most vocal about a need for a new approach: its *Zeitenwende*, a change in the spirit of the times, will result in a €100bn (just $100bn these days, alas) boost for its military in the coming years. Others are promising to juice up their defence budgets, including more spending coordinated at the EU level. A short, sharp conflict might have resulted in such promises being forgotten soon after they had been made. The drawn-out fighting means they will have to be acted on.

The cost in terms of European cohesiveness is the hardest to quantify. Crises have the potential to forge unity within the EU, but they can also stir division given time. The early response to the war showed Europe acting as one. Refuge was granted to all who needed it, Ukraine was given the morale-boosting status of EU candidate country, and sanctions were agreed on. The need for urgent action concealed fissures in Europe, notably between hawkish member states on the bloc's eastern fringe, who think the fate of the continent is being decided in Ukraine, and most western EU members, who worry about the risks of escalation.

After six waves of painstakingly negotiated sanctions since February, nobody expects much more in the absence of some new outrage on Russia's part. In recent weeks the likes of Poland and the Czech Republic have pushed for a ban on visas issued to Russians. The proposal, which will be discussed by EU foreign ministers on August 31st, has been largely batted away by western Europeans, to whom it smacks of collective punishment. The resulting inaction will tend to widen the fissures. If America reduces its support for Ukraine after the mid-term elections in November, questions will be raised about how Europe needs to fill the gap—or whether it can.

The price is right

In the early stages of the war, Europe was in denial about its costs: even asking citizens to adjust the thermostat felt like too much of an imposition. That is changing. Public lighting is being dimmed, cold showers encouraged. Emmanuel Macron, France's president, pleaded on August 19th for a willingness to "pay the price for our freedom and our values". The Belgian premier has warned of five to ten difficult winters ahead, just to be on the safe side.

This is a welcome change in rhetoric. Better to make the costs of supporting Ukraine explicit than pretend they do not exist. For Europe has little choice but to remain steadfast. No matter what hawks in Warsaw or Prague fear, it would be far too dangerous to nudge Ukraine into capitulation in order for Russia to restore its gas flows. The cost of countering aggression on the continent is high. But it must not be dodged. ■

The BBC

The bill for the box

The century-old funding mechanism for Britain's public broadcaster is under attack

A LANKY BRONZE George Orwell, cigarette in hand, guards the headquarters of the British Broadcasting Corporation. An accompanying inscription declares: "If liberty means anything at all, it means the right to tell people what they do not want to hear." The public broadcaster has done plenty of that: Boris Johnson has called it the "Brexit-Bashing Corporation". His advisers once promised to "whack" the BBC's source of funding.

Now the prime minister is heading for the door, just in time for the broadcaster's centenary celebrations in October. Yet any relief that BBC executives feel may be temporary, for the corporation must confront more serious challenges than the huffing and puffing from Downing Street. Like other European public broadcasters, the BBC faces uncertainty about its role in an era of Netflix and YouTube. Inside and outside the BBC, thoughts are turning to where its future funding may come from.

The BBC's revenue model is much the same as in 1923, when the Wireless Telegraphy Act introduced a fee of ten shillings a year (roughly £21, or $25, in today's money) for homes with radio sets. Today the licence fee is £159, payable by any household that watches live TV or uses iPlayer, the BBC's online catch-up service. (There are exceptions, such as poor elderly folk.) Last year the fee raised £3.8bn, 74% of the BBC's revenue; the rest was from commercial activities like selling shows abroad.

The near-universal charge has been justified by near-universal consumption. Every week 90% of British adults tune in to the BBC's eight national TV channels, 50-plus radio stations and sprawling website. But with competition from Hollywood and Silicon Valley, viewers are changing channel. Broadcast TV's share of British video consumption fell from 97% in 2010 to 70% in 2021, according to Enders Analysis, a research firm, which predicts a drop to around 60% in the next five years. Streaming is "stretching the TV generation gap", noted Ofcom, the communications regulator, in a report on August 17th that showed that the youngest adults watch one-seventh as much broadcast TV as the eldest. One in five 16- to 34-year-olds consume no BBC content at all in a typical week.

This is making the universal £159 fee harder to defend. So is the streamers' sheer value for money. The BBC provides plenty of things that Netflix and Co never will, from news (notably this year the Ukraine war) to education (80% of secondary pupils used the BBC's "Bitesize" classes during the pandemic). But the streamers' scale and ability to borrow mean that they can offer more for less. Disney+ costs half as much as the licence fee, yet Disney's content budget last year was more than five times as big as the BBC's. Amazon spent slightly more on its forthcoming "Lord of the Rings" series than the BBC did last year on all its film and drama combined.

Such comparisons have focused minds. The BBC's royal charter, which sets out its remit for the next decade, is up for renewal in 2027. Ahead of that the government has ordered a review of the licence fee, expected to run from September for about a year. The two candidates to succeed Mr Johnson, Liz Truss and Rishi Sunak, have yet to show their hand. But Ms Truss, the favourite, raised eyebrows on August 19th when she told GB News, a right-wing TV channel: "It's not the BBC, you know. You actually get your facts right." She is said to be considering hanging on to Nadine Dorries, Mr Johnson's culture secretary, who declared in January that the BBC's latest licence-fee settlement "will be the last".

Yet criticising the licence fee has long been easier than replacing it. Margaret Thatcher, who grew to loathe the BBC for its coverage of the Falklands war and Northern Ireland, thought the corporation should live off advertising, like Britain's other public-service broadcasters. But the ▸▸

review she commissioned in 1985 to endorse this idea warned her off, for reasons that remain true today. Advertising would generate a third less revenue than the licence fee, estimates Ampere Analysis, a research firm. It might divert the BBC from its public-service mission. And other ad-funded media—including the BBC's strongest critics in the press—oppose the idea, fearing competition for ad sales.

More recently, critics of the fee have proposed a subscription model, so that people might opt in or out of the BBC as they do with Netflix. Like ads, subscriptions would struggle to raise as much as the licence fee: even if the BBC persuaded two-thirds of fee-payers to opt in it would have to charge them 50% more to match its current revenue. And chasing subscribers would introduce the same commercial incentives as chasing advertisers.

Continued public funding of some kind thus seems inevitable. But the method could change. Of the 56 markets in the European Broadcasting Union, a group of public-service broadcasters, only 20 rely mainly on a licence fee. Some, including the Netherlands and Iceland, fund their broadcasters from general taxation. This month France said it would follow suit. Billing the taxpayer for public goods like Bitesize may be fairer than charging viewers, as well as more progressive. The main objection is that closer government involvement threatens broadcasters' independence. On August 24th Emily Maitlis, a former BBC presenter, said the BBC's board already had an "active agent of the Conservative Party", in the shape of a former head of communications at Downing Street.

One way around that would be a new, earmarked source of income. Finland and Sweden have a hypothecated income tax. In 2013 Germany ditched its licence fee for a property charge, which broadened the base of collection and thereby lowered individual bills. In July a House of Lords committee suggested a top-up to council tax, a charge on households. That would save on administration—collecting the licence fee cost the BBC £136m last year—and could be more progressive, since the tax is split into bands based on property values.

Ms Dorries is said to be interested in the household levy. But it is hard to imagine a Conservative government introducing a new "BBC tax". It would go down badly with hardcore BBC refuseniks, who at present can opt out if they promise they do not watch any live TV or iPlayer. Nearly 2m households claimed as much last year, 270,000 more than in 2020.

With no alternative very palatable, Claire Enders of Enders Analysis suspects that "where this review is heading is where all the reviews have always headed"—that is, a recommendation that the licence fee should remain. That may not be the end of it: the Lords committee argued that the BBC's funding model should be made fairer, which could suggest more means testing. Discounts could be extended to households on universal credit, say, with the rich making up the shortfall.

Bigger decisions lie ahead. Public broadcasters may ultimately face a choice between beefing up to compete with the streamers, or slimming down to eat-your-greens content, leaving entertainment to Hollywood. That is particularly tricky for the Tories, whose elderly voters love to criticise the BBC but are also addicted to watching it. So far the government has defaulted to moaning about the licence fee. But for a century that is one thing that has proved surprisingly hard to whack. ■

Energy pricing

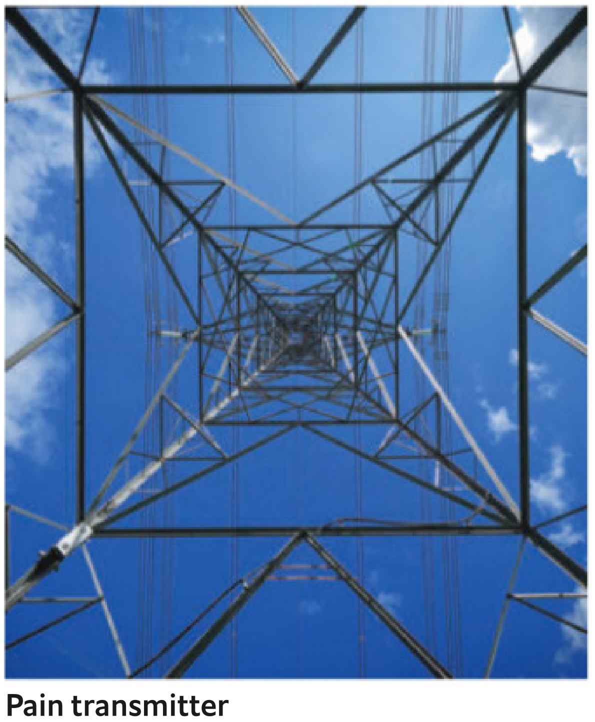
Electric shock

The energy market may be reformed. But too late to stop the price surge

BAD NEWS is no more welcome for being expected. On August 26th Britons learn just how high the regulatory "cap" on electricity and gas prices will be from October. The average household's monthly bill is likely to rise to about £300 ($355), more than three times what it was a year ago. Another leap, to £355, is likely in January. Businesses, which have no cap, have been suffering even higher increases.

Energy bills have climbed with wholesale gas prices, which the war in Ukraine has lately pushed to new heights. (European gas futures reached another record this week.) The link to gas bills is clear, if indirect. That to electricity bills, less so.

The wholesale power market runs on a "merit order" principle, under which the price paid to the costliest generator needed to meet demand is paid to all. That is usually a gas-fired power station, even though renewables and nuclear plants supply around 60% of Britain's electricity and renewables' running costs are often virtually nil. Sparked by soaring prices, the government launched a review in July. It thinks that if some clean generators were paid less, electricity bills could be slashed.


Pain transmitter

One idea is to pay all generators the average bid. Another is to pay each what it bids. A third is localised pricing, which would mean lower bills for people living near wind farms, say. All these ideas have their flaws. Costly generators would make losses under average pricing, yet are sometimes needed to keep the lights on. Paying what is bid could give generators an incentive to inflate their bids. Localised pricing might skew generators' decisions on where to build capacity.

A more radical notion is to split the market between renewable energy, priced at its average cost (far below the current wholesale price) and fossil fuels. The idea is that prices would be pulled lower, closer to the cost of renewable generation.

Some are sceptical about how far splitting the market would cut prices. Breaking it up "doesn't make sense", says Rahmat Poudineh of the Oxford Institute for Energy Studies, a think-tank. The price of much renewable energy is already in effect fixed. Roughly 20% is sold via "contracts for differences"; generators bid into the merit order but eventually receive a pre-agreed price. Only renewable capacity built before 2017, which sometimes gets a subsidy on top of the wholesale price, really rakes it in. The *Sunday Telegraph* has reported that Kwasi Kwarteng, the business secretary, is keen to see more such generators sign fixed-price deals.

Eventually, "someone has to pull the plug and make price equal cost", says Sir Dieter Helm, an economist at Oxford University. "The wholesale market is a 20th-century answer to a 21st-century market," one designed for fossil fuels with high running costs rather than renewables. In a merit order with no high-marginal-cost stations, the wholesale price can also crash to zero. That's of little use to renewables firms; and investors will be put off by volatility in prices.

A thorough redesign, fit for a net-zero age, could take years. Immediate balm for consumers, an urgent task for the next prime minister, will meanwhile have to come via lower taxes, higher benefits or subsidies to bills. But there are no painless answers. The head of one energy supplier has reportedly suggested freezing the cap for two years, with the state stumping up £100bn—which would be repaid by consumers over decades. ■

Bagehot | Of the Lords and the ladies

Boris Johnson seems set to make the House of Lords worse

THE TOILETS in the House of Lords are telling. Push open the heavy oak door marked "LADIES"—for once the word is being used with precision, not mere politesse—and you find yourself in magnificent, ornate rooms. A chaise longue stands against one wall; an oriental screen against another. Each of the massive marble washstands (such creations resist the mere word "sink") has a tiny portcullis crest between the taps.

Turn and peep into the cubicles, however, and the picture changes. Some are fitted with grab handles on the walls; one is all but encrusted with mobility aids. In the halls outside, moth traps dangle from grand Gothic furnishings. This, then, is the House of Lords: an odd blend of the genteel and the geriatric; of past grandeur and present decay; a place that is one part opulent palace, two parts eccentric old-people's home.

The House of Lords, as every Briton knows, is ridiculous. Westminster's second chamber has variously been described as "absurd"; an "anachronism" and as the "best day-care centre for the elderly in London". Its members have not always helped to dispel such attitudes. In the 1980s one lord argued that mere insanity should not bar peers from taking part. Read transcripts of debates and it is clear that it often didn't. During a debate in 1974 on aid policy for victims of crime, the fourth Earl Russell stood to explain that the House of Lords was the true heir to the Soviet Union and that "naked bathing on beaches or in rivers ought to be universal", before going on to add the engaging observation that Britain was currently governed by "spiritless papal bum-boys".

Perhaps this is why, after it was reported that Boris Johnson is intending to ennoble 30 of his chums when he at last departs from Downing Street in September, the news was greeted less with unbounded outrage than a shoulder-shrug of indifference and an aura of what-does-it-matter-anyway?

Some, it is true, balked at the sheer number on Mr Johnson's alleged list. The House of Lords is already far too big: with 800-plus members it is one of the largest legislative assemblies in the world. As many point out only China's National People's Congress is larger. And 30 new peers is a lot. Margaret Thatcher ennobled only seven in her leaving list; Harold Macmillan a minimalist one.

Others expressed alarm at the quality. The idea that Nadine Dorries—culture secretary, cabinet toady and author of soupy historical sagas ("Lord FitzDeane of Ballyford falls deeper under her spell...")—might become a peer of the realm distressed many. But generally the reaction was apathetic.

This is certainly not unprecedented. In the 1970s Harold Wilson's infamous "lavender list" of appointments (so called as it was allegedly drawn up by his political secretary on lavender notepaper) ennobled his raincoat-maker. In the 1920s David Lloyd George flogged honours so openly that an unofficial tariff was recognised: £10,000 for a knighthood; £50,000 (£2m, or $2.4m, today) for a peerage. Baronetcies, as one P.G. Wodehouse character noted despondently, "have gone up frightfully nowadays".

But that doesn't mean that another scandal doesn't matter. It does. Compared with those that have gone before, Mr Johnson's appointments are likely to be worse both quantitatively (if he adds 30, he will have created peers at a faster rate than any prime minister in the past half-century) and qualitatively (he has previously elevated his own brother, generous donors to his party and the son of a former KGB officer).

Moreover the Lords is far more valuable than it is often given credit for. True, it contains some silly appointments. But it also contains incalculably good ones. Sitting on its tiered seats are former heads of MI5, the army and the police; veteran politicians, QCs and academics; and the nation enjoys their expertise for £323 a day, a fraction of the fees that their Lordships might earn elsewhere—and some don't even claim it.

Undoubtedly, the Lords is easy to mock. Its traditions date back to Norman times; its ceremonies feature robes that date from 1850 and flunkies in tights. Its operation involves an unconscionable number of wigs, and far too many ruffles.

But tradition, slowness and even stasis can be invaluable. It has been said that one of the most malevolent constitutional instruments in the country is the Downing Street removal van, which arrives the morning after an election to transport the new prime minister to their official residence. There, they must make decisions of national import while their blood is still filled with adrenaline and removal boxes are still filled with their socks. Democracy is chaotic and dramatic. That is its job.

The House of Lords, by contrast, is stable to the point of staid. Step through the peers' entrance, just off the main street outside Parliament, and you find yourself in yet another grand room, with vaulted ceilings and mullioned windows. This is the Lords' cloakroom, and in it stand rows of coat racks with names in brass holders: here is "Baroness Redfern"; there is "Lord Taylor" and there, by that brolly, "Lord Tebbit". The overall atmosphere is one of quiet order: this day-care centre takes good care of its inmates.

Tenure and tenacity

Such cosiness might be mockable: it is also powerful. Peers are protected by their lifetime employment: they cannot be as easily bullied as MPs into agreeing to legislation they dislike. In recent decades the Lords has defended trial by jury and opposed infringements of civil liberties. And peers are far less cosseted than their fancy surroundings might make you think. Inspect the loo roll in those toilets and you find that it is, as it were, bog-standard.

The House of Lords is without a doubt odd. That does not mean it is worthless. One of the greatest dangers of the miasmatic Mr Johnson is not merely that he taints all he touches. It is that he makes everyone believe that what he spoils wasn't worth very much in the first place. But the House of Lords was, and still is. ■

The Mississippi Advantage

MISSISSIPPI ROLLS OUT WIDE-RANGING INCENTIVES FOR BUSINESSES, INCLUDING SITE UPGRADES AND CREDITS TO OFFSET TAXES

The State of Mississippi has been a river of commerce and trade for more than 200 years. Steamboats long ago gave way to fleets of trucks, trains, planes and ships carrying goods to every corner of the country. Just as the US economy roared back after the pandemic, so has Mississippi's, growing 4.4% in 2021—faster than its neighbours—while adding more than 15,000 jobs in transport and manufacturing.

One reason for this resurgence is a commitment to helping companies do business as quickly and easily as their products flow through the state. Under Governor Tate Reeves, the state recently streamlined its corporate incentives and earmarked nearly $25m to develop shovel-ready sites across the state to make Mississippi even more competitive.

"Companies enjoy our lack of red tape," says Laura Hipp, deputy executive director of the Mississippi Development Authority. "We offer seamless permitting and customisable incentives while boasting one of the lowest costs of living and costs of doing business in the country."

For example, companies locating or expanding in Mississippi are now eligible to apply for MFLEX, a universal credit for offsetting state taxes. Credits are determined based on project investment, new jobs created and average annual wages, making it easy for companies to calculate them and apply them where they have the greatest impact. Whereas traditional incentives are often complex, MFLEX is streamlined and simple, requiring a single application.

While incentives can help tip the scales in site selection, choosing a location with infrastructure in place to accelerate speed-to-market is critical. To that end, Mississippi is also investing nearly $25m —with another $40m poised to follow—in upgrades to the state's industrial parks, along with preparing new "mega-sites" for large-scale manufacturing and distribution facilities. These improvements range from faster broadband to new access roads and sites spanning hundreds of acres.

In both cases the goal is to bolster the state's existing advantages in workforce development and its strategic location by shortening the time and energy needed to start—and scale up—operations.

"These programmes are laying a foundation enabling companies to get to work remarkably fast," says Ms Hipp. "By providing companies with resources such as shovel-ready sites and greater financial flexibility, we're setting them on the path to success long before they begin."

This strategy has proven successful in attracting automotive giants like Nissan, which started manufacturing in Canton nearly 20 years ago and has since spent $4bn upgrading its assembly plant, including a recent $500m investment to partially convert the building to begin production of two new electric vehicles, and retrain and upskill nearly 2,000 employees. Nissan has since been joined by Toyota and Continental, each of which has invested more than $1bn and created thousands of jobs.

That winning streak appears positioned to continue as the state's post-pandemic recovery accelerates.

"We are not looking at the road directly in front of us," says Ms Hipp. "We're looking far into the distance to meet the needs of Mississippi's future industries."

MIGHTY MISSISSIPPI

Constitutional change

The temptation to tinker

BUENOS AIRES

Dictators and utopians are fond of fiddling with constitutions

In 2014 Tunisia adopted a new constitution, three years after Zine El Abidine Ben Ali, the country's dictator, was ousted in a revolt. It made Tunisia into a democracy that guaranteed religious freedom and equality between men and women. With the failure of the Arab spring, Tunisia's enlightened charter became a beacon.

On July 25th Tunisia's current president, Kais Saied, snuffed it out. Mr Saied had already suspended parliament. Last month he held a referendum on a new constitution. Amid boycotts, it was approved by just 28% of potential voters, which was nonetheless enough to make it law. It allows Mr Saied to declare an indefinite state of emergency and rule by decree. Parliament can no longer impeach him. Military courts can try civilians.

Tunisia's rewritten constitution empowers a despot to act as he pleases. On the other side of the world, Chile's democratic government may soon find its hands tied. On September 4th Chileans will vote on a new constitution of their own. Written after protests against inequality in 2019, it reads more like an activist's wish-list than a set of ground rules for government. Besides rights to education, health, housing, work and leisure, Chileans would enjoy rights to "nutritionally complete" food, "neurodiversity" and the "free development" of their "personality, identity and life projects". One study by the Centre for Public Studies, a Chilean think-tank, concluded that implementing the new charter could raise government spending by between 9% and 14% of GDP.

Despite their very different outcomes, both Tunisia's and Chile's constitutional changes spring from popular disillusionment with democracy. Tunisians had lost faith when their new democracy failed to bring prosperity; their apathy let Mr Saied get away with a power grab. Chileans' trust in political parties was low for years before the protests began.

Nor are they isolated examples. Since 2015 over a dozen presidents in Africa have ignored or weakened term limits, some through constitutional amendments. There has been a string of both amendments and full-blown rewrites in Latin American countries in the relatively recent past, including in Bolivia, Ecuador and Venezuela. But whereas previous waves of constitutional reform—in Africa after the end of colonialism, for instance, or ex-Soviet states after the fall of the USSR—enshrined liberal principles, this latest wave travels in the other direction.

Scholars identify two kinds of illiberal reform. The first has been called "abusive constitutionalism" by Rosalind Dixon at the University of New South Wales in Sydney and David Landau at Florida State University. "There is an emerging tendency for authoritarian actors to use the forms of liberal democracy to erode its substance," says Dr Dixon. The second is a trend towards micro-management, with charters guaranteeing an ever-growing number of highly specific rights that, in more stable countries, are usually left to lawmakers.

The letter and the spirit

Start with the first trend. Before he invaded Ukraine, Vladimir Putin, Russia's president, was busy fortifying his position at home. In 2020 Russia's parliament rubber-stamped a batch of amendments that could let him rule until 2036. To make sure Mr Putin would win a referendum on the amendments, the Kremlin pressed public sector workers to vote and bussed in eastern Ukrainians to whom they had given Russian passports.

The real purpose, which was to prolong and strengthen Mr Putin's power, was obscured by dozens of crowd-pleasing promises to make pensions inflation-proof, ban gay marriage, protect the Russian language and so on. Such omnibus amendments are "really new constitutions masquerading as amendments," says Richard Albert of the University of Texas at Austin.

Turkey's president, Recep Tayyip Erdogan, is another fan of such tactics. In 2017 a package of 18 amendments was approved in a referendum stacked in his favour. Dr Albert estimates they rewrote or repealed around 40% of the original constitution. The new charter allows the president to appoint judges, weakens parliament, and erases the office of prime minister. Mr Erdogan could rule until 2034.

Tunisia was following in the footsteps of Egypt, which rewrote its constitution in 2012 after throwing out a dictator who had been in charge for 30 years. That text was replaced in turn when the military retook power in 2013, with a document limiting the president to two four-year terms. In 2019 Abdel-Fattah al-Sisi, the holder of that office, made a series of changes that cleared the way for him to rule until 2030.

"Incumbents use referendums when they've struggled to get support from parliament or the courts—and usually they package the amendments in ways that hide their true intentions," says Nic Cheeseman, a professor of democracy and international development at the University of Birmingham. In Uganda in 2005, for instance, President Yoweri Museveni presented measures that bolstered multiparty politics, while also scrapping term limits. "He mixed the good with the bad to muddy the waters," says Dr Cheeseman.

Another trend is the proliferation of rights (see chart). Constitutions have become longer since the United States first codified one in 1787 (it ran to seven articles). Most of the growth comes from an expansion of so-called "social rights", to things like housing, health care, food and work. Rights for the environment and specific ethnic groups are also spreading. Chile's proposed constitution would, at 388 articles, include all of these and be among the longest in the world (India's 145,000-word epic holds the crown).

But in Latin America, it would not be out of place. The Comparative Constitutions Project, led by Zachary Elkins, Tom Ginsburg and James Melton, a trio of academics, analyses charters around the world. It reckons that of the ten countries that enshrine the most rights in their constitutions, five are in Latin America. Ecuador's constitution of 2008 leads the ranking with 99 rights, including to locally produced food and the "commendable and steady exercise of cultural and artistic activities". Bolivia, Venezuela, Mexico and Brazil also feature.

While abusive constitutionalism undermines democracy, stuffing charters with rights seems less obviously bad. Putting rights into a constitution can encourage reluctant governments to actually enforce them. Empirically, though, it can often be a worrying indicator. "There is a correlation: the more rights you have on paper, the less they are protected in practice," says Mila Versteeg, director of the Centre for International and Comparative Law at the University of Virginia.

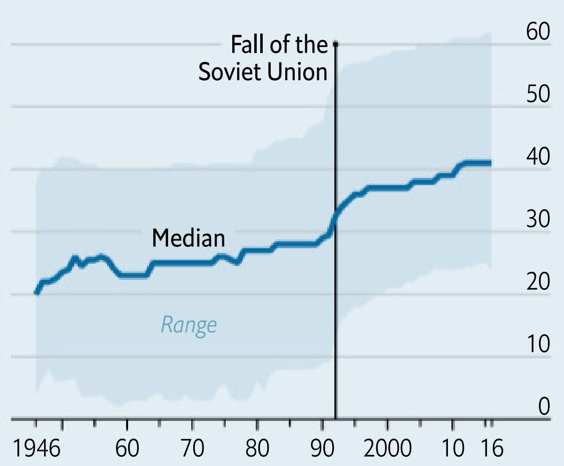
Syria's constitution, for instance, mandates that the state should create jobs and enforce "social justice". It is scant comfort to the government's critics languishing in dungeons that it also promises to protect freedom of expression. Venezuela's constitution bestows the right to comfortable housing and to salaries sufficient to enable workers to "live with dignity". None of that has stopped Nicolas Maduro's regime from plundering state coffers and reducing the country to penury.

Autocrats can also use promised rights as bribes, says Dr Dixon. Ecuador's constitution of 2008 includes rights for indigenous groups to be consulted over mining and logging projects on their lands. That won then-president Rafael Correa support from activists. Yet the constitution also gave the president the power to outline a "national development plan" and dissolve Congress if it obstructed it. When indigenous people protested against mining projects on their lands, Mr Correa had them charged with terrorism, disbanded environmental and indigenous organisations, and threatened judges who ruled that the mines were unconstitutional.

Despite the hopes of their left-wing authors, research suggests that, in practice, the benefits of extensive social rights often flow mostly to the rich. A paper by Octavio Luiz Motta Ferraz, a researcher at King's College London, notes that, of 4,343 lawsuits in Brazil citing the constitutional right to health between 2005 and 2009, 85% originated in the country's richest states, though these hold just 57% of the population. In 1997, a man with a rare disease sued the government for not providing a treatment only available at a private clinic in America. Brazil's taxpayers were forced to cover treatment, transportation, accommodation and food costs of around $64,000 ($118,000 in today's money).

The rights stuff

World*, number of constitutional rights per country



Source: "How constitutional rights matter", by A. Chilton and M. Versteeg, 2020

*194 countries

Necessary, not sufficient

There is no template for how to write the ideal constitution. America's Supreme Court has nine justices with lifetime appointments. Switzerland's has 38 justices who change every six years. Both documents work reasonably well. Japan's constitution has similar amendment rules to Alabama's. Yet it has never been altered since it was ratified in 1946, while Alabama's has been amended almost 1,000 times since 1901. Britain, New Zealand and Israel dispense with the idea of a single written charter altogether.

The idea that the text of a constitution, if perfect enough, can ensure success has also proved wrong. Tunisia is sliding towards dictatorship not because its old constitution was ill-drafted but because terrorism, an economic downturn and covid-19 hurt citizens' belief in their young democracy. "We don't know which way the causal arrow goes: Do you have a good system because you never rewrote your constitution or do you never rewrite your constitution because you have a good system?" says Adam Chilton, a constitutional scholar at the University of Chicago.

But academics have noticed patterns. Frequently changed constitutions are often a symptom of political corrosion, and tinkering can cause chaos in turn. Attempts to amend charters have led to violence in Burkina Faso, Burundi and Togo among others in recent years. The world's longest charters, such as India's and Brazil's, are also among the most changed.

There is a strong case for brevity, too, in which constitutions establish the ground rules of how a state functions and leave the specifics to politicians. Overly long constitutions often create conflicts between articles that can only be resolved with further tampering. And "if everything is highest law, then nothing is highest law anymore," points out Dr Versteeg. Omnibus amendments require voters to balance the merits and drawbacks of many changes at once, making it harder to generate consensus.

Indeed, that seems to be one of the lessons from Chile's experience. Polls suggest the new constitution will be rejected. The experience of trying to write it has left the country more polarised today than it was when it started. ■

Mergers and acquisitions

Blasted are the dealmakers

After a bumper period of dealmaking come the days of reckoning

THE DEATH KNELL for corporate America's greatest individual experiment in mergers and acquisitions sounded in November 2021 when General Electric announced its intention to split in three. A thousand deals were struck by Jack Welch, its notoriously gung-ho boss, who ran the American industrial and financial giant between 1981 and 2001. The pace did not slacken under his successor, Jeffrey Immelt. The result has been a monumental destruction of shareholder wealth. The firm's market value peaked at $594bn in 2000. Today it is a relatively measly $83bn.

This lesson notwithstanding, bosses just cannot shake the need to shake hands. In 2021 the urge reached fever-pitch: a record $5.9trn-worth of deals were announced globally, $3.8trn by operating companies and the balance by private-equity funds and special-purpose acquisition companies (see chart on next page). Competition for assets was fierce and due diligence frenetic. The cost of capital was historically low and purchasers paid top-notch prices, at a record median valuation of 15.4-times earnings before interest, tax, depreciation and amortisation (EBITDA), according to Bain, a consultancy. The number of deals for highly-valued technology firms soared, accounting for a quarter of the total volume.

If history is any judge, many of these deals will destroy value. It is easy to identify disastrous deals: large goodwill write-downs or even bankruptcy are useful signposts. But measuring the performance of the average deal is tough; relative share price performance is a quick but noisy measure and asking a counterfactual "what if" question is crystal-ball stuff. A recent review of academic literature by Geoff and J. Gay Meeks at Cambridge University estimates that only a fifth of studies conclude that the average deal produces higher combined profits or increases the wealth of the acquirer's shareholders. McKinsey, another consultancy, reckons that firms pursuing large deals between 2010 and 2019 had only a coin-flip chance of creating excess shareholder returns. Enough to put average Joes off dealmaking, but not budding Neutron Jacks.

Those chances of success are further reduced by the circumstances in which the latest crop of deals were struck. Times of frenzy, like last year, are particularly bad for matching suitable buyers and sellers. Dealmaking tends to snowball as chief executives, keen to expand their dominions (and compensation), watch others make their moves and are unable to stand idly by while competitors make hay. Unprecedented competition from private-equity funds only intensifies the urge to move fast. Compounding their zeal are the middlemen. Investment bankers, who get paid by the deal rather than by the hour, convince them anything is possible: flattery is hard currency in the market for advice.

There are few brakes on this train. Where activist investors might agitate on the sell-side of a transaction for a higher price (often successfully), this kind of scrutiny is less common on the buy-side. Strong shareholder dissent in reaction to Unilever's abortive $66bn bid for GSK's consumer health-care division in December 2021 is an all-too-rare example of own-

→ Also in this section

ers holding trigger-happy management to account. Today the division, called Haleon, is listed on the London Stock Exchange, valued at around half of Unilever's offer.

The result has been ambitious deals made at high prices. Lower asset values are already exposing the flawed logic of some struck at the top of the market. In August Just Eat Takeaway.com, a European food-delivery firm, announced a write-down of the value of Grubhub, its distracting American misadventure, by $3.3bn, barely a year after completing the $7.3bn deal.

As equity markets tumbled this year, the shotgun weddings announced in 2021 were being consummated. After the thrill of courtship begins the hard task of post-merger integration. This complex process is the domain of consultants, organisational charts and budgeting, rather than clandestine negotiations and punchy projections. It is being turned on its head by a mix of inflation and slowing growth. Bosses bet big that high prices would be justified by higher profits. They are now running new businesses in a new world.

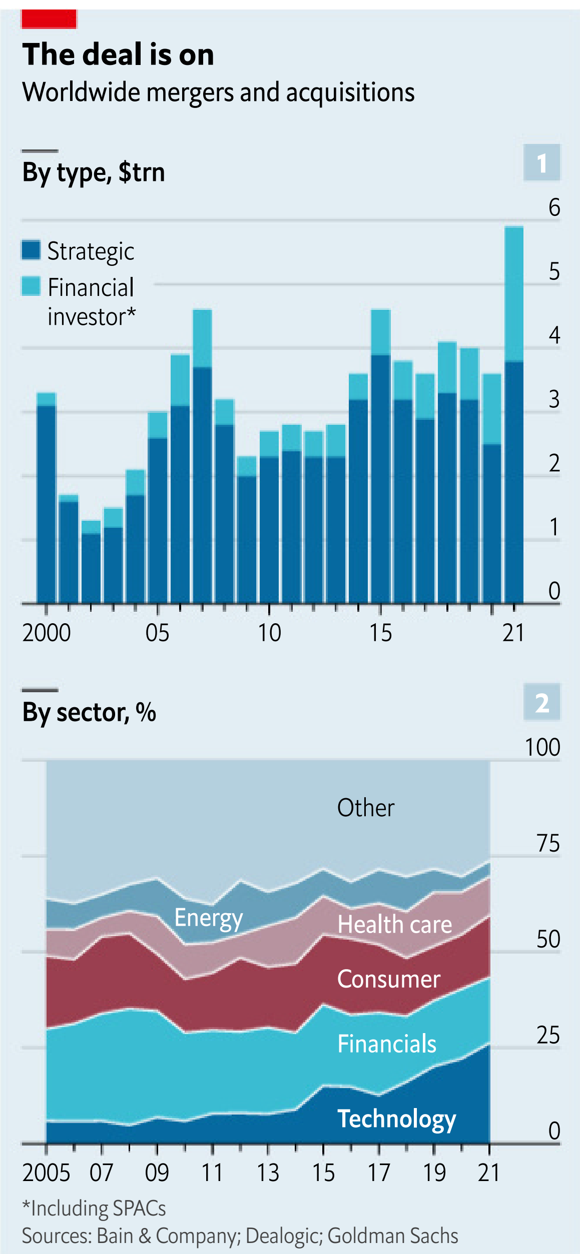
Buyers tend to overestimate the operational benefits of lumping two firms together ("synergies" in corporate speak). Often promised but seldom fully delivered, these projections persuade bosses that the pin factory is better in their hands than those of private-equity's financial wizards. Scale was the *idée fixe* of dealmaking during 2021. Such deals are usually predicated on heavy cost-cutting, which is far harder while inflation rages. Add current supply-chain chaos to yo-yoing input costs, and managers soon find their powers waning.

That difficulty is apparent at Warner Bros Discovery, an American media giant formed in April 2022 through the merger of Discovery and WarnerMedia. In an industry among the worst at realising such targets came a promise of $3bn of annual savings. Rising costs and cyclical pressures on advertising revenue mean that integration will be more difficult than planned. Expectations for EBITDA in 2023 are now $12bn, rather than $14bn when the merger was announced. The response of David Zaslav, the firm's boss, has been to tighten the screws even further (see next article).

Labour is often the first cost bosses turn to, even if lots of layoffs raise the chance of rifts between new bedfellows. Many of the most spectacular blow-ups have involved cultural transplant-rejection at the highest levels, though as in AOL and Time Warner's ill-fated $165bn tie-up in 2001 this is usually a symptom rather than cause of strategic mismatch. Yet the real risks occur further down the food-chain, as labour markets continue to convulse. The ability to retain good workers ("talent" in the integration dictionary) is critical. It comes high on the list of reasons why deals succeed in a recent survey conducted by Bain.

The war for talent has quickly turned into a great hiring freeze in the technology sector, but elsewhere labour shortages are the norm. Significant challenges await the integration of Canadian Pacific Railway and Kansas City Southern, a $31bn deal announced in September 2021 which is awaiting its final regulatory stamps. The merger in 1968 of Pennsylvania and New York Central Railroad provides a warning from history. Shortly before the new entity's bankruptcy in 1970, an internal report laid bare the role of high staff turnover in its failed integration: 61% of train masters, 81% of transport superintendents and 44% of division superintendents had been in their job for less than a year.

The dealmakers of 2021 entered the present inflationary period with a high bar to clear in order to justify the top-of-market deals they struck. As of now the mega-disasters of this wave of mega-deals are matters of speculation, though no one doubts they will emerge. Even this will not be enough to convince bosses to kick their dealmaking habit, at least while corporate balance-sheets remain strong. Activity has been remarkably resilient in 2022. Until bosses can be persuaded of other uses for their profits, new challenges mean only new types of deals. At least this year there may be a few bargains to be had. ■



*Including SPACs

Sources: Bain & Company; Dealogic; Goldman Sachs

The streaming wars

Dragons v hobbits

A big-budget battle between old and new Hollywood

HALF A BILLION dollars' worth of swordplay, sorcery and sex is on its way to a small screen near you. On August 21st Warner Bros Discovery launched "House of the Dragon", a spin-off from its racy smash-hit, "Game of Thrones", made at a reported cost of over $150m. Hot on its heels, on September 1st Amazon Prime Video will release "The Rings of Power", a more chaste but pricier drama based on the "Lord of the Rings" books. With a rumoured pricetag of $465m, Amazon's offering will be the most expensive piece of television ever made.

This will make for an epic ratings battle. But it is also part of a longer-running war that pits old Hollywood studios against new streaming upstarts. Warner Bros will celebrate its 100th birthday next year. Amazon, which makes its money from e-commerce and cloud computing, launched its video sideline only five years ago. As the streaming wars intensify, each side believes it has the advantage.

Lately the dragons of old Hollywood have gained ground. Investors flocked to streaming specialists during lockdowns, but have lost interest as new subscribers have dried up. Netflix, which once talked of a potential market of 800m households, appears to have stalled at 220m and has seen its share price fall by 60% this year. On August 10th old Hollywood claimed a symbolic victory when Disney announced that it had overtaken Netflix, with 221m streaming subscriptions. That figure double-counts subscribers to Disney's various services, and ignores the fact that many are in low-paying countries like India. But it has banished any doubt that ageing studios can play the streaming game.

Hollywood's old hands are also refocusing on the business of making money, after two expensive years of chasing subscribers. Disney says its main streaming service, Disney+, will see its losses peak this year before turning a profit in 2024. A steep price rise, beginning in December, will help. On a recent earnings call David Zaslav, Warner's new boss, bluntly criticised the old approach of "spend, spend, spend and then charge very little". Warner will aim for its streaming business to generate a gross operating profit of $1bn by 2025, he said. "If we do that, I don't really care what the [subscriber] number is...We want to make sure we get paid."

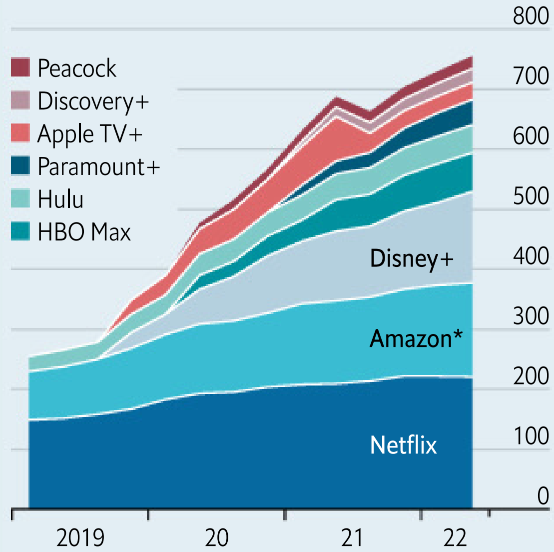
Old media formats will play a role. Cinemas, whose worldwide takings fell by 80% in 2020, are open again. The box office is still not what it was: Cineworld, the world's second-largest theatre chain, said on August 22nd that it was considering filing for bankruptcy. But Paramount, a 110-year-old Hollywood dragon, held back the release of "Top Gun: Maverick" during the pandemic and was rewarded in May with a box-office run of over $1bn. Warner, which in 2021 released all its films on its streaming platform at the same time as they launched in cinemas, has gone back to exclusive theatre runs.

Theme parks are full again, too, with Disney's American ones generating record revenues and margins. Even broadcast and cable TV, long in decline, look like relative havens as the streaming business gets tougher. "We effectively have four, five or six cash registers," Mr Zaslav told investors. "And in a world where things are changing, and there's a lot of uncertainty and there's a lot of disruption, that's a lot more stable and a lot better than having one cash register."

That may be a convincing argument against an upstart like Netflix, which depends on streaming. The trouble for old Hollywood is that some of its new competitors have bigger and more varied cash registers. Warner's path to profit involves drastic cuts—it has already scrapped its streaming news service, CNN+, and canned unfinished productions including "Batgirl". Amazon shows no sign of belt-tightening. Besides "Rings of Power", it recently bought Metro Goldwyn Mayer, the studio behind "James Bond", for $8.5bn and acquired rights to America's National Football League for a reported $1bn a year. Morgan Stanley, a bank, estimates that it will spend $16bn on media content this year. Netflix spent $14bn. Next year Amazon's spending could reach $20bn.

Unlike the old Hollywood dragons, some new streamers don't even need to get

Conscious of streamingness
Worldwide streaming-TV subscribers†, m



Source: Ampere Analysis
†Includes estimates
*Active viewers only

paid, in Mr Zaslav's words. Amazon Prime Video exists to keep people signed up to Prime, whose main benefit is free delivery of Amazon purchases. Apple's steadily expanding TV+ service is geared towards keeping customers in its ecosystem of phones and computers, where the firm makes its real money. The video services from Amazon and Apple also provide real estate for advertising, a business in which both have ambitions to grow.

Old Hollywood is fighting back, offering viewers bigger "bundles" of content at a reduced cost. Warner plans to combine its main streaming service, HBO Max, with Discovery+ next summer. Disney is experimenting with discounted packages of services like ESPN+ and Hulu; some wonder if entry to its parks could one day form part of a Disney mega-bundle.

Yet Hollywood's new rivals offer bundles of a different sort. Apple's video vault is far smaller than that of Disney or Warner, but its "Apple One" package includes not just TV but music, games, storage, news and fitness. Amazon Prime comes with a similarly eclectic bunch of benefits. As households look for savings, deals like these may prove tempting.

That may be why some old Hollywood dragons are doing business with the upstarts. On August 15th Paramount announced a deal with Walmart, a giant retailer, in which members of Walmart+, the store's answer to Amazon Prime, will get free access to the Paramount+ streaming service. Walmart also sees media as a way to keep customers loyal to its main business. It recently added music to its bundle, via a deal with Spotify.

As competition for viewers intensifies, the battle between old and new Hollywood is proving as bloody as an episode of "Game of Thrones". For consumers, who have more choice and more deals than ever, it is just as entertaining. ■

Chinese business

Heated exchange

SHANGHAI

Hot weather and drought hits manufacturing

A CITY RIVALRY is heating up between Shanghai and Chengdu. The highest temperatures and lowest rainfall since records began 60 years ago have led to severe power shortages across the south-western province of Sichuan, where Chengdu is located, and in its neighbouring municipality, Chongqing. As a result Sichuan has been forced to curb energy use at thousands of industrial firms. That in turn has threatened the supply of parts to carmakers, such as Tesla in Shanghai.

In a recent letter, Shanghainese officials urged the heat-struck region to guarantee supplies to feed their production lines. The has led to an outpouring of anger in Sichuan. The letter, which circulated widely on social media, listed the phone numbers of several officials in Shanghai. Some Sichuanese have taken to texting or calling them to complain about their lack of concern for residents' well-being, and then sharing the conversations online. "Who is Tesla to you?" complained one resident after their electricity had been shut off for an hour and a half every day.

In what may have been a gesture of solidarity, Shanghai switched off many of the bright lights of its famous skyline on August 22nd-23rd. But the rupture between the two cities reveals how far the drought is rippling through supply chains. China is in the midst of what is being called the worst heatwave ever recorded. The south-west has also been hit with a devastating ▸▸

Take me to the river bed

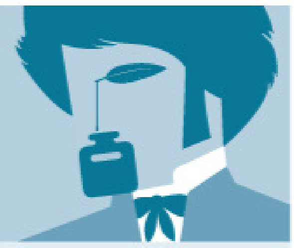
drought. Rainfall in Chongqing is down by 60% from seasonal norms.

The combination of heat and drought has increased demand for energy while also greatly reducing hydroelectric generation, on which the region relies. Dams make up about 80% of Sichuan's power generation and nearly 15% nationwide. Hydroelectric output in Sichuan has halved compared with last year. Local governments have prioritised residential needs, although some homes now lose power for several hours a day. But officials in Sichuan told up to 16,000 industrial consumers to shut down between August 15th and 25th. Sichuan and Chongqing produce about 6% of China's industrial output.

The power cuts have shut down operations in the region at firms such as Toyota, a Japanese carmaker, and Foxconn, one of Apple's main suppliers. But the impact is also being felt much further downstream. In Wuhan, about 900km east of Chongqing, low water levels on the Yangzi river have prevented the passage of ocean-bound cargo ships. Many companies based across China are losing access to components usually supplied by manufacturers based in the south-west.

China faced a crippling power crunch last year after the government curbed the use of coal in order to hit climate targets. Since then central planners have worked out some of the bottlenecks in the power supply. And a sluggish economy has also lessened demand. Perhaps the lessons learned last year will stop the crisis in the south-west from spreading nationwide. Even so the drought and heatwave have given Chinese policymakers an unwanted glimpse of problems they may face more regularly in coming years. ■

Bartleby In defence of commuting



Travelling to work is not always a waste of time

Americans are "always in a hurry", wrote Alexis de Tocqueville in "Democracy in America", his opus published in 1835. Until the covid-19 pandemic, nowhere was this more evident in recent decades than in packed trains at peak times as people commuted to work.

Almost 75% of professionals in America say the journey is what they dread most about going back to the office. Working remotely a few days a week is here to stay. Rush-hour traffic, overcrowded trains and transport strikes (like those on London's tube in the past week) all argue for working from home. Across America and Europe rising fares eat into people's salaries. The outcry for lower carbon emissions adds additional weight to the argument for millions of employees not undertaking unnecessary journeys. In some emerging cities, getting to work involves honks and epic gridlock as well as accidents.

Every now and again, most people will nevertheless need to make the trip to the office and back. Whether you are walking, cycling, on a Vespa, taking the bus, the tram or the subway, the range of options is wide, and rich in texture and colour. Some people will insist that no commute is ever worth the trouble. With the right attitude, though, it does not have to feel like temporary brain damage. This guest Bartleby, who takes the underground to *The Economist*'s London office three times a week, finds it both useful and oddly fulfilling.

Just how useful and fulfilling will depend on what exactly your commute looks like. But unless you hop into your car on your driveway and hop out at your company car park, it will involve at least some physical activity. If you are cycling, or just picking up your walking pace to catch that bus or train, you combine being outdoors with an element of struggle—a healthy amount of which can be invigorating, not draining. And if you don't catch it, don't worry. Your hours have almost certainly become more flexible than the previous nine-to-five routine. That next train may anyway be less like a cattle car.

Like all dislocations, even regular and predictable ones, the daily commute is also a time and place where you are more exposed to physical and psychological elements from which you are shielded at home or at work. In "Falling in Love" a film released in 1984, Meryl Streep and Robert De Niro meet as they commute on the same train month after month from the suburbs to New York City, until, one day, they embark on an emotional affair. The plot is banal and the dialogue dim but the idea that a journey injects a sense of risk and possibility is both deep and real.

Public transport, which a lot of commuting involves, remains the most democratic way of going to work. As chairman of the Federal Reserve from 1979 to 1987, Paul Volcker travelled coach class on the shuttle from New York to Washington, DC, and took the bus in both cities. As a public servant embodying civic duty, the central banker was known for his financial discipline in personal affairs, as well as monetary policy. At a time when greed was good, and limos, helicopters and private jets were great, frugality from "the custodian of the nation's money" sent a strong message. As companies bracing for a recession tighten their belts, Volcker's example seems particularly relevant.

Perhaps most important of all in an era of remote work, the commute helps mark out the mental distance between home and the office, which disappears when the kitchen table has become your work station. It offers a useful buffer—a liminal space separating the personal and the professional.

Getting ready to leave for work in the morning involves an element of planning—sometimes even anticipation. Stepping out of your home, and your comfort zone, you feel more alive by default. When walking to the train station, purpose is externalised and compressed. In the afternoon, you can use that time as a curtain to separate the day from the rest of the evening, probe into those pieces of inner life that nag and still feel connected to the world. Bartleby lets her thoughts meander while on the move. Time wasted is time gained.

Few people relish holing up in one place for ever. Working remotely from a secluded village in Italy may sound like a treat for a while. Yet like all sameness, it soon begins to feel stifling. In a modern world where de Tocqueville's words ring true of everyone everywhere, it may seem strange to add to the hurriedness. But not if you think of the commute as punctuation in the larger tale.

South-East Asian tech firms

Tropical Depression

SINGAPORE

Investment in the region is stumbling

Investors couldn't get enough of South-East Asia's consumer-technology giants a year ago. This year, they have been unable to log off quickly enough. Tech firms across the region are suffering. They have been buffeted by the same forces that have sent tech stocks globally tumbling by more than 20% this year. On top of this, surging inflation and the expectation of higher interest rates have diminished the appeal of companies which aim for rapid growth in the present with reliable profits only arriving sometime in the future.

South-East Asia's giants not only have to cope with the ills besetting tech firms worldwide, but also face a "last-in-first-out" problem. The region is not a large part of the allocation of many global portfolios, and investors who piled in at the later stages of the boom may have lost their appetite. This has pushed down valuations further than the global slump. Sea, the region's largest listed tech firm, is a case in point.

Sea's market capitalisation is now $36bn, down from over $200bn late last year. The firm's share price recorded another steep decline after it released quarterly results on August 16th. Revenues, mostly generated by Shopee, its e-commerce subsidiary, and Garena, its video-gaming arm, rose more slowly than expected, up by 29% year-on-year to $2.9bn. Tech companies globally are being punished for an inability to produce reliable income by investors now monomaniacally focused on cash generation. Sea's free cashflow in the second quarter ran to minus $607m, the largest negative figure on record.

Sea is not alone in its struggles. Grab, a Singaporean superapp offering deliveries, ride hailing, financial services and more, listed publicly in December. Its shares have since tumbled. Bukalapak, an Indonesian e-commerce firm which also listed last year, has seen its valuation drop by two-thirds over the past 12 months. GoTo, the Indonesian holding company that owns Gojek and Tokopedia after their merger in 2021, avoided the rout but its shares have languished in recent months.

Grab's second-quarter results, due after *The Economist* is published, and GoTo's, unveiled on August 30th could bring better news, but Sea's recent experience shows that the three firms' ambitious plans for payments and financial technology, which require big investments and many years to grow, do not suit impatient investors.

Amid the gloom there are some reasons for cheer. Emerging-market equity-fund allocations to the region have risen slightly this year, notes Steven Holden of Copley Fund Research, as fund managers have looked for alternatives to Russian equities. China's crackdown on its tech companies also leaves investors looking for other places to park their money.

Beyond listed firms, venture-capital activity has slowed but not collapsed. Capital raised for funds focused on the region this year stood at $8.3bn on August 22nd, compared to $13.2bn for all of last year, according to Preqin, a data provider. The sum invested in VC deals this year runs to $10.7bn, already more than the total for all but two previous years—2018 and 2021. Sustained interest in smaller, private companies is good news for South-East Asia but does little for the pain of the larger listed ones. ■

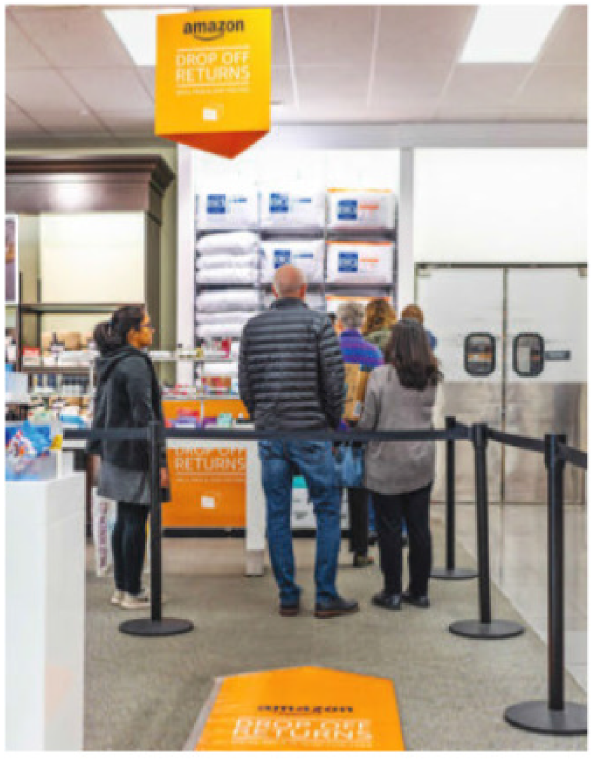
E-commerce

Sending it back

A tidal wave of returns hits the e-commerce industry

Getting a package delivered is easy. Sending it back is not. Repacking, printing labels and shipping it back up to the seller is an increasingly familiar experience for online shoppers. In America 21% of online orders, worth some $218bn, were returned in 2021, according to the National Retail Federation, up from 18% in 2020. For clothing and shoes it can reach around 40%. It is a headache for retailers.

The problem has its roots in the birth of e-commerce. To compete with bricks-and-mortar sellers and make consumers comfortable with ordering online, e-commerce firms offered free returns. Consumers came to expect it. The scale of returns has been amplified by the covid-induced boom. In America online-shopping now makes up 15% of retail sales by value, up from 10% at the start of 2019.



Many unhappy returns

Returns could grow as nervous consumers cut spending. In May, Boohoo, a British online fashion firm, forecast lower profits for the year, in part because of a higher return rate. In June, Asos, a rival, did the same. Overstocking, as retailers miscalculate changing demand, adds to the problem. Steve Rop of GOTRG, a startup which helps retailers sort returns, notes an uptick in returns of discounted goods as consumers realise they don't want them.

Each step of the process is costly. Retailers have to pay for goods to be picked up or posted. Processing returns is labour-intensive, explains Zac Rogers who worked as a returns manager at Amazon and is now at Colorado State University. The outbound system is highly automated and streamlined; a return must be opened and someone has to decide what to do with it. "A worker in an Amazon warehouse can pick 30 items in a minute, but a return can take ten minutes to process," says Mr Rogers.

Once processed, only 5% of returned goods can be resold immediately by retailers. Most go to liquidators at knock-down prices or are thrown away. Retailers typically recoup about a third on a $50 item, says Optoro, a firm that helps with returns.

One solution involves adding friction. Last year Uniqlo, a Japanese fashion brand, became one of the first retailers to levy a small fee for posted returns. Zara, a rival, followed suit in May. Other firms, including Amazon, are selling more refurbished goods as a way to cut losses.

Startups are getting in on the action. Using artificial intelligence to help retailers decide what to do with the returned goods, taking into account factors such as price trends in second-hand markets, is the brainchild of GOTRG. Happy Returns, another startup bought last year by PayPal, a fintech firm, helps with logistics. It has 5,000 drop-off points for returns across America, mostly in chain stores. The returns are aggregated and sent back to retailers all at once, saving up to 40% of postage costs, says David Sobie, the firm's boss.

Some are experimenting with virtual reality (VR). Over half of items are returned because they are the wrong size. In June Walmart said it will buy Memomi, an augmented-reality (AR) startup that lets shoppers virtually try on glasses. Walmart also offers ways to try on clothes and arrange furniture in rooms using AR. Amazon recently launched a VR feature that lets users try on shoes. Retailers will now try virtually anything to cut down on returns. ■

Schumpeter | Buffett's bold bet on Oxy

Could America's demonised oil industry become a force for decarbonisation?

When Warren Buffett was asked to explain in April why Berkshire Hathaway, his investment firm, had built a 14% stake in Occidental Petroleum, or Oxy, over a frenetic fortnight of buying starting two months earlier, his answer was long. It included a digression into John Maynard Keynes's "General Theory" of 1936, and a rollicking description of why Wall Street still resembles a gambling parlour, as it did back then. He barely mentioned the Houston-based oil company, now worth $69bn, besides saying that he had read Oxy's annual report for 2021 and that Vicki Hollub, its boss, "made nothing but sense". The pithiest explanation came from Charlie Munger, Mr Buffett's long-standing sidekick: "We found some things we preferred owning to treasury bills."

It hardly sounded like a resounding endorsement. Yet Berkshire's stake has since climbed above 20%, making it Oxy's biggest shareholder by far, and on August 19th it got authorisation from an energy regulator to purchase up to half of the firm's shares. The buying spree has made Oxy the highest climber this year in the S&P 500, one of America's stockmarket benchmarks. It has also fuelled speculation that it is the prelude to a takeover.

Whether it has grander designs or not, it will come as no surprise that a firm like Berkshire, whose energy subsidiary includes coal-fired power plants and whose freight trains run on diesel, is keen to invest in oil. Though it also has huge wind and solar capacity, its nonagenarian executives are proudly old school. As for their faith in Ms Hollub, a cynic might say her greatest appeal is the value destruction she unleashed when Oxy bought Anadarko, a rival, for $55bn in 2019. The aftermath of that ill-timed deal, shortly before the pandemic, caused the debt-ridden firm to underperform its American peers—at least until oil markets rebounded this year. Mr Buffett likes nothing better than a cheap old-economy stock, especially one belching cash.

That's one way of looking at it. Another is that Mr Buffett, who supported Ms Hollub's bid for Anadarko by providing $10bn of high-yielding investment, has come to appreciate her idiosyncratic approach to America's oil business. For what it's worth, Schumpeter, who first met Ms Hollub six years ago, has long considered her a cut above the average American oil-industry boss. An engineer by training, back then she went into detail explaining how Oxy increased the yield of old oil wells by pumping in carbon dioxide to dislodge the residual crude, which she said lowered the costs, as well as the carbon footprint, of each barrel. Today, she doubles down on that, saying that Oxy is on the verge of building a carbon-management business that could reach the size of its oil-and-gas one by 2050—which she says could make it the "last company standing" in America's oil industry. As she puts it: "Oxy is what an oil and gas company of the future has to look like."

What she means is that, in addition to pumping more oil and gas, Oxy is betting on carbon-sequestration technologies to lower its net carbon footprint. The main one is direct air capture (DAC), a way of sucking CO_2 from the atmosphere through giant extraction fans and burying it underground. Oxy will soon start construction of its first DAC plant, which will cost up to $1bn and be located in the Permian Basin of Texas. Its baseline plans are to build 70 worldwide by 2035. They are critical to the firm's pledge to become fully net-zero by mid-century. But Ms Hollub also hopes they will become a big business in their own right as companies pay for carbon sequestration to offset their emissions. United Airlines and Airbus, an aircraft manufacturer, are early backers.

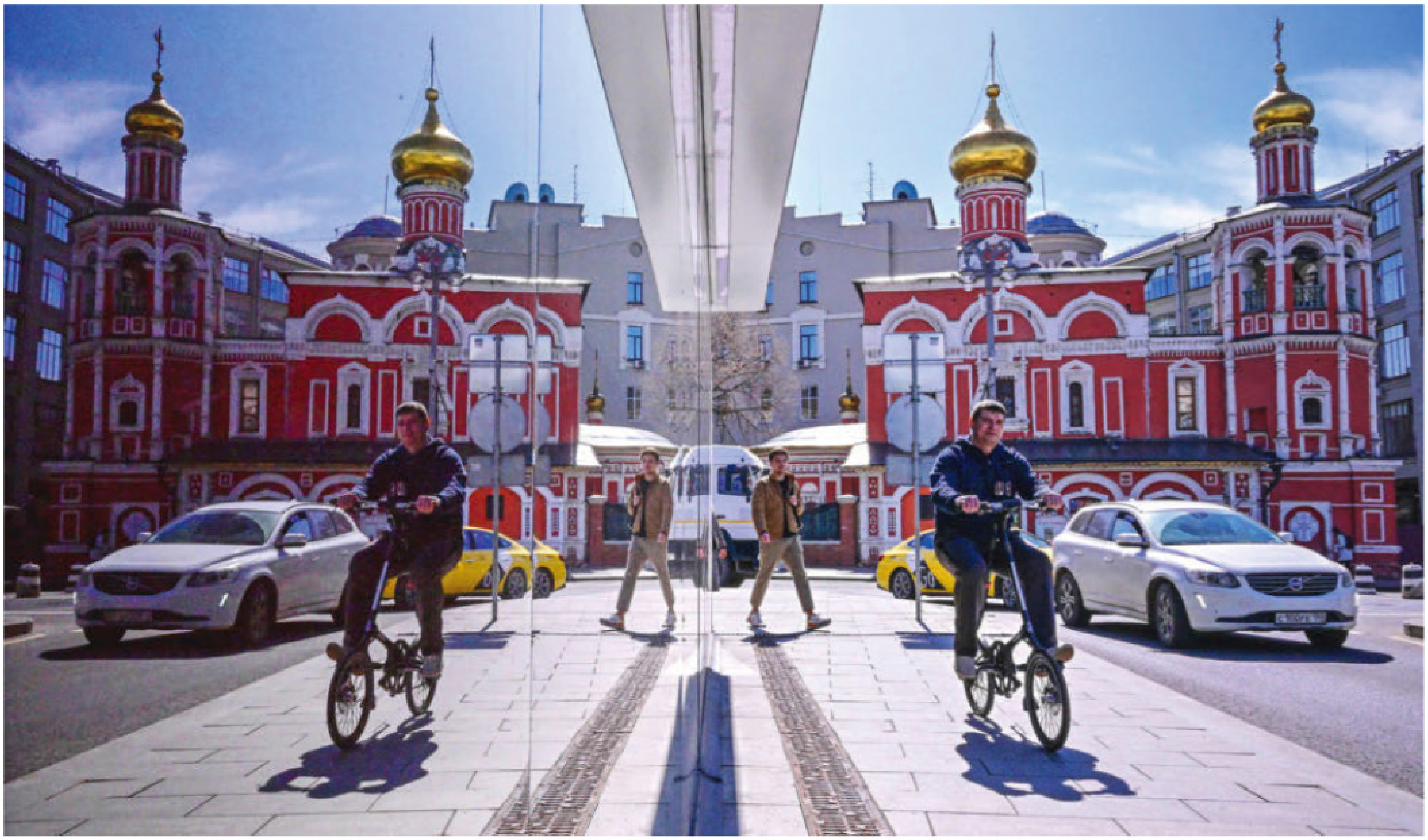
A tailwind is whipping up. America's newly approved Inflation Reduction Act substantially increases DAC tax credits (though per tonne of CO_2 sequestered it remains eye-wateringly expensive). If costs come down, the recent stampede by companies to commit to net-zero targets is likely to create "incredible demand" for carbon sequestration, including DAC, says Michael Greenstone, a professor of economics at the University of Chicago. "Everyone wants a guaranteed way of removing tonnes of CO_2."

There's a sting in the tail. Oxy will continue to use plenty of the sequestered gas for enhanced oil recovery, its decades-old practice of using CO_2 to squeeze more oil out of reservoirs. When that fuel is burned, it will add to the stock of carbon in the atmosphere, reducing some of the benefits of storage. Moreover, Oxy's low-carbon wager is, as yet, still relatively small. This year it intends to spend $100m-300m on low-carbon ventures, compared with total capex of up to $4.3bn. Given the scale of the climate problem, it goes without saying that many will dismiss small decarbonisation steps by the oil industry as greenwashing. Thom Allen of Carbon Tracker, an NGO, estimates that the energy industry worldwide emits nearly 1,000-times more tonnes of greenhouse gases a year than there is capacity for all forms of carbon capture and storage.

Sewage system for the planet

Those are justifiable red flags. Yet they miss a big point. While people still want to use oil and gas to run factories, homes and vehicles, the fossil fuels need to come from somewhere and the less net carbon they add to the atmosphere, the better. Ms Hollub is not blinkered by the industry's survival instincts. She laments some efforts to halt climate legislation by the industry's lobbyists. Her bet on sequestration is also supported by science: ultimately, some forms of carbon removal are as vital for cleaning the air as sewage systems are for handling household waste.

Whether such arguments appeal to Mr Buffett she is loth to say—though she points out that Kraft Heinz, a consumer-goods company part-owned by Berkshire, recently struck a big renewables deal with one of its energy subsidiaries. The Sage of Omaha may be old school, but he surely notices how the tide is turning in favour of renewables. No doubt he likes Oxy's oil. But the unfashionable idea that the demonised petroleum industry can help spearhead decarbonisation probably tickles him, too. ■



Economic warfare

Split reality

Sanctions have been less effective than hoped—but they will eventually impair Russia's economy. The first in a series of articles on the war's consequences

When Russia invaded Ukraine on February 24th, "Oleg", a senior executive at a Russian airline, braced for turbulence. It did not take long to arrive. Within days Western countries had barred his firm's aircraft from entering their airspace. They also prohibited exports of plane parts and semiconductors to Russia: a problem, since three-quarters of the country's commercial fleet comes from America, Europe or Canada and parts are needed for repairs. Many analysts predicted the industry would crash before the summer. In fact, airlines have managed to rotate their planes to keep viable routes open. But they will not be able to defy gravity for ever. Some are starting to cannibalise grounded aircraft for parts. Oleg expects many planes to be unsafe to fly within a year or two.

The delayed but dangerous descent of Russian aviation illustrates the insidious power of Western sanctions. Since February America and its allies have unleashed an unprecedented arsenal to try to squash Russia's economy, the world's 11th largest, hoping to stall the war effort, prod people and plutocrats to protest and deter other foes (namely China) from similar escapades. Some sanctions, such as freezing the assets of Kremlin cronies, are old tactics on a new scale. Those meant to cut Russia from the financial system—the exclusion of commercial banks from SWIFT, a messaging network, and the immobilisation of $300bn in central-bank reserves—are novel bazookas. A third type, comprehensive export bans, had previously targeted single firms, not an entire country.

Yet wave after wave of penalties—the EU passed its seventh package in July—have not razed Fortress Russia (see next story). Meanwhile, as gas prices rocket, the sanctions' political costs are mounting. So is the West losing the economic war? Not quite. As with the aviation industry, it will take time for the damage to materialise. Russia, a country with low external debt and heaps of foreign-exchange reserves, was always unlikely to succumb to a financial heart attack. Even when sanctions are most successful, such as when they forced Libya to abandon weapons of mass destruction in 2003, past regimes have taken years to work. To assess how effective the West's arsenal is proving, *The Economist* has ranked a trio of measures—the freezing of oligarch assets, financial sanctions and trade restrictions—on a scale from pretty useless to truly hurtful. Our analysis suggests that they will, in time, start to seriously impair Russia's economy.

The least effective sanctions are those that have won the most publicity: the blacklisting of apparatchiks deemed close to the Kremlin. World-Check, a data firm, reckons that 1,455 members of Russia's kleptocratic elite are now unable to travel to some or all Western countries, or to access their possessions there, or both. The frozen assets comprise bank deposits and market securities, held in escrow accounts at Western banks. They also include must-have tycoon toys such as country cottages, football clubs, jewellery and yachts, seized by live-streamed crews of policemen at rivieras around the planet.

Targeting oligarchs is an attractive approach for governments that need to be seen to be doing something. It also gives Russia few direct means of retaliation. Western moguls own little there; many American and European firms have already written off their Russian investments. Accordingly, Western enforcers are seeking greater powers to go after the Fabergé eggs. America's Department of Justice wants to use anti-mafia laws to liquidate the assets seized and give the proceeds to Ukraine. The EU is proposing to make the violation of sanctions a crime, which would toughen up enforcement across the bloc.

Yet most of the assets targeted by the West end up slipping through the net. Anders Aslund, a former adviser to the Russian and Ukrainian governments, reckons that just $50bn, out of $400bn of offshore assets that are blocked on paper, has so far been frozen. Oligarchs have hidden some of their offshore treasures behind as many as 30 layers of shell companies incorporated in the Cayman Islands, Jersey and other havens, with redacted disclosure documents in multiple languages. Others keep a grip on assets they ostensibly no longer control by transferring ownership to kin or placing puppets on the board.

Missing the boat

Meanwhile, the enforcement of these sanctions is left to the private custodians of said assets, from Swiss wealth managers to marinas in St Tropez, which often lack the means or inclination to probe all that deeply. Big banks often refuse to move funds on behalf of suspicious entities if they are found to be at least 25% controlled by designated Russians (the legal threshold is 50%). Yet smaller fintech and crypto firms are less diligent; companies supposed to monitor physical assets, such as harbour managers, are generally clueless. A similar discrepancy exists between jurisdictions. America recently scolded Switzerland and the UAE, where dozens of Russian-owned private jets are grounded in the desert, for not doing enough to uncover sanction-evaders.

It is not clear that freezing such assets does much to hobble Russia's economy anyway. Most oligarchs hold little political influence. A former Ukrainian energy boss reckons that Vladimir Putin, Russia's president, is quite happy to see them taken down a notch. Meanwhile, efforts to confiscate the assets and send the proceeds to Ukraine have gone nowhere.

Financial measures, the second type of sanctions, target the nerve centres of the Russian economy: commercial lenders and the central bank. The former have faced a sliding scale of prohibitions since the invasion, depending on their size and proximity to the Kremlin. Capital-market sanctions, the softest kind, bar Western investors from buying or selling bonds or shares issued by 19 Russian banks. Ten lenders, including the two biggest by assets, have been kicked out of SWIFT, which more than 11,000 banks use globally for cross-border payments. Twenty-six can no longer facilitate international transfers in American dollars, after Uncle Sam banned its own banks from offering "correspondent-banking" services to them.

Such measures have bite. Research by Stefan Goldbach and colleagues at the Bundesbank shows that, between February 1st and April 30th, the SWIFT suspensions caused a near-total collapse of money transfers between the excluded Russian banks and the German branch of Target 2, the system for clearing payments between euro-zone banks. Alternatives to SWIFT, such as telex, are clunky and slow. Bans on correspondent banking are powerful, too. Not only is the dollar used directly to settle about 40% of cross-border trade, but it also serves as a staging post in many transactions involving second-tier currencies. Now Russia must sometimes resort to barter, a cumbersome and risky option.

Yet financial sanctions have failed to choke off most payments. Banks that process Europe's voluminous purchases of Russian fuel, notably Gazprombank, are still allowed to use SWIFT. Much of the rest is being channelled, legally, through smaller banks that remain connected to the network. Doing without dollars is trickier. India, which has been guzzling Russian oil since February, is still looking for a viable way to pay for it in rupees. But a jump in payment volumes going through CIPS, China's home-grown SWIFT, from May to July suggests China is having more luck. Trading volumes in the yuan-rouble pair on the Moscow exchange have reached records of late.

Freezing the reserves held by the Central Bank of Russia (CBR) in the West, equal to about half of its $600bn-worth total stash, has had similarly mixed results. Within hours of the measure being announced, the rouble's value against the greenback, which the central bank could no longer defend, cratered by more than 30% (see chart). As the CBR cranked up interest rates to halt the fall, from 9.5% to 20%, domestic credit tightened, hurting demand and pushing Russia into recession. In June the sanctions also forced Russia into its first major foreign-debt default for more than a century after they prevented the central bank from processing $100m in payments due to bondholders.

Hardly troubled

Roubles per $, 2022

Inverted scale

Source: Refinitiv Datastream

Yet it took just a few weeks for the rouble to rebound, allowing the CBR to slash rates fast, to 8% on July 25th. The official exchange rate does not reflect the true appetite for the currency: capital controls, first imposed in the wake of the CBR freeze, remain largely in place. But it still points to a flaw in the West's original plan. While the CBR's foreign stash of dollars and euros remains off-limits, Russia earns fresh hard currency every day, thanks to its giant oil-and-gas exports. This means it does not need to borrow, making its default largely inconsequential.

Which leaves trade restrictions, another two-pronged measure. Actions to curb Russia's oil-export revenues, which last year contributed 36% of its federal budget, have received more attention than they deserve. America no longer imports any Russian oil, but it bought little in the first place. The EU has pledged to stop buying seaborne crude oil from Russia in December, and refined petroleum in February. It is already buying a little less: a combined 2.4m barrels per day (bpd) in July, against 2.9m before the war. Most of those barrels, however, are being picked up by India and China, albeit at a discount of around $25 relative to the price of Brent crude, the global benchmark currently at $101. No embargo is planned on Russian gas, which is harder to replace and brings in less than 10% of the Kremlin's revenue.

Whether Russia is earning less now than it would without sanctions is debatable. Rystad Energy, a consultancy, reckons it will lose up to $85bn in oil-and-gas tax income this year, out of a potential bounty of $295bn, because of the discount. Then again, it is partly the threat of a Western embargo that has kept global oil prices at such high levels. Capital Economics, another consultancy, estimates that Russia has sold its oil at an average price of $85 per barrel since February, higher than 90% of the time since 2014. And contrary to early expectations, Russia is continuing to export nearly as much petroleum as it has in recent years.

Might that change when the EU's import ban comes into force in the next few months? Finding new buyers to mop up the 2.4m bpd shunned by the bloc will be difficult. Moreover, from December 31st EU and British insurers, which dominate the oil-shipping market, will be barred from serving tankers carrying Russian cargo. That could prove a big obstacle. Many ports and canals may not allow ships through if the risk of oil spills is not covered. Reid l'Anson of Kpler, a data firm, thinks such frictions will force Russia to cut production by 1.1m bpd by the end of 2022, equivalent to about 14% last year's exports.

Yet there is already talk that Europe will delay its bans if the winter proves too harsh. Commodity traders say that, at such discounts, there will always be buyers. China and India may self-insure; Russia has said it will offer reinsurance. If its oil exports really do dwindle, the market is so tight that prices may jump, nullifying the impact. America, realising this, is trying to convince its allies to impose a price cap on Russian oil—something which could prove hard to implement. Shadowy traders in Bahrain or Dubai may cheat to secure bigger volumes. Russia may retaliate by withholding oil for a short period, provoking a price spike and putting pressure on the West to back down.

Let the chips fall

The most potent sanctions are, in fact, the least discussed: export controls. In successive salvos since February, Western governments have made it compulsory for a range of domestic industries to seek licences before selling to Russia, and they are rarely granted. The restrictions go well beyond "dual-use" products—those with both military and commercial applications, like drones and lasers—to cover advanced kit such as chips, computers, software and energy equipment. They also target low-tech goods, such as chemicals and commodities, that are usually restricted only if set for Iran or North Korea.

The breadth of such sanctions is remarkable. What makes America's particularly vicious, however, is the "Foreign Direct Product Rule" (FDPR), which extends the controls not just to products made in the United States, but also to foreign ones made using American software and tools or containing American inputs. When America pioneered the FDPR in 2020 to prevent Huawei, a Chinese telecoms giant it suspected of spying, from acquiring advanced semiconductors, it hammered the firm, even though plants in America account for just 15% of global chipmaking capacity. This time America claims that global chip exports to Russia are down 90% from last year.

That is bad news for the country's manufacturing sector, which needs imported inputs. Mr Putin has worked hard since 2014 to insulate Russia's financial system against Western sanctions—by dedollarising its trade, diversifying its central-bank reserves and developing homegrown payment networks—but the same is not true of the country's industry, which up until the war began remained woven into the global trading order, even if less so than other countries.

Chips and other electronic components from 70 different American and European firms have been found in Russian weaponry. Other industries, from mining to transport, require foreign parts and expertise to carry out maintenance. A German supplier to the Moscow metro reckons that, if it stopped providing servicing, the network would see disruptions within a month and be paralysed after three. Russia also needs nifty software and hardware to develop new products, from consumer electronics to electric cars.

Some effects are already visible, even though export controls kicked in late (most had a one-to-three-month grace period). Manufacturing output fell by 7% between December and June, led by carmaking (a 90% fall), pharma (25%) and electrical

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Turkey and Russia

Mates' rates

ISTANBUL

The connection between Russian sanctions and bizarre Turkish monetary policy

MANY COUNTRIES are moving away from Russia, but one is getting closer: Turkey. Russian tourists and émigrés are pouring into Istanbul and the country's coastal resorts, snapping up properties by the thousand. Russia is helping to fund a nuclear plant costing $20bn in Akkuyu, in the south. While many countries have cut exports to Russia since its invasion of Ukraine, Turkey's have surged by 60% in dollar terms. Western firms, constrained by sanctions, appear to be using Turkey as a go-between to export to Russia.

Turkey's bizarre monetary policy is one reason why the country is so keen on Russian cash. Despite inflation soaring to 80%, on August 18th Turkey's central bank cut its interest rate from 14% to 13%—the opposite response to what any sane economist would recommend. Recep Tayyip Erdogan, Turkey's president, wants lower borrowing costs in order to goose the economy, and thus improve his chances at the election next summer. But loose monetary policy has caused the lira to slide. It has lost three-quarters of its value against the dollar since 2018, and a weaker currency adds to Turkey's inflation difficulties by raising the cost of imports still higher.

Enter the sanctions-busting gambit. Turkey desperately needs foreign currencies in order to buy lira on financial markets, thus supporting the currency's value without raising rates. The central bank has probably spent tens of billions of dollars in this way in recent months. Russia is swimming in hard currency from exports of hydrocarbons, and is short on friends and foreign goods. Turkish exports to Russia help bolster Mr Erdogan's foreign reserves, since exporters now have to exchange some of their foreign earnings with the government for domestic currency. Sanctions-busting and madcap monetary policy are thus two sides of the same coin.

American politicians have signalled their unease at Turkey's strategy. Analysts warn it risks secondary sanctions. But Mr Erdogan sees money as more important than warm relations with the West. "He has an election to win," says Timothy Ash of BlueBay Asset Management. "He is going to push it to the limit".

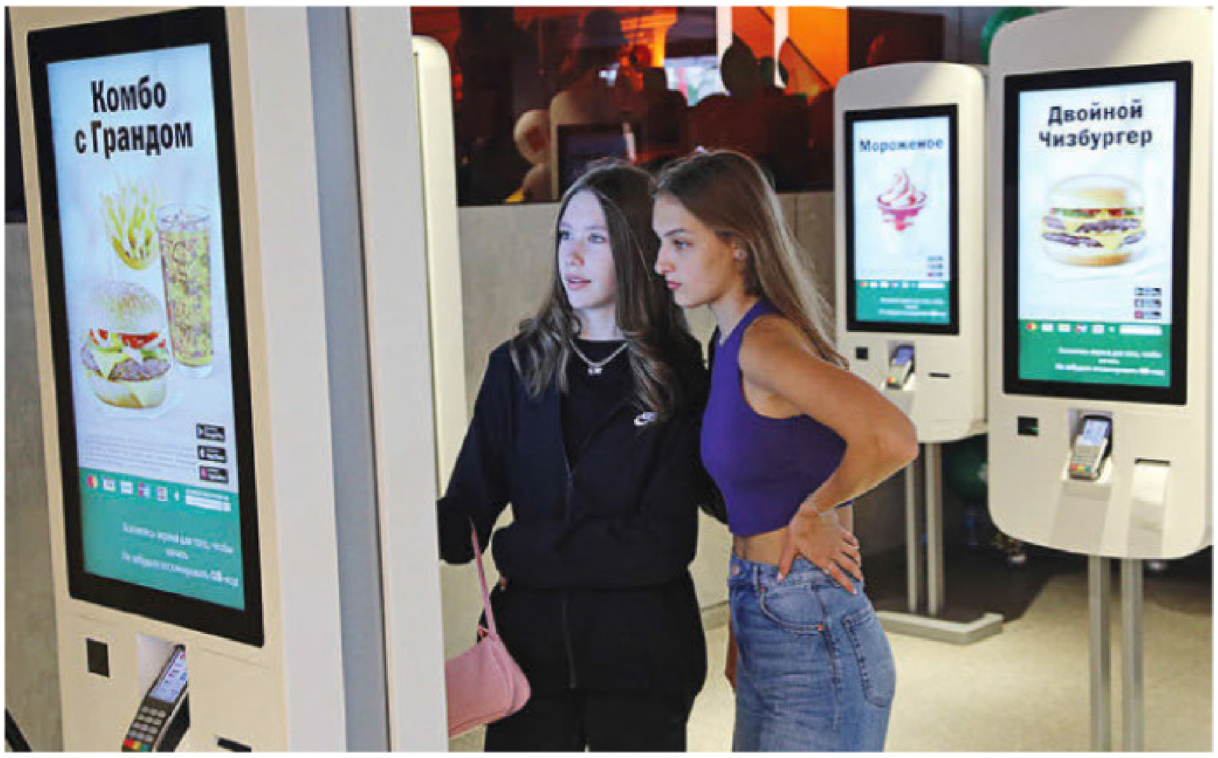
Getting away from it all

equipment (15%). In May Russia eased safety standards to allow for the production of cars without airbags and anti-lock brakes. A lack of high-tech kit has hampered Russia's 5G roll-out. The country's cloud-computing champions, such as Yandex, an internet firm, and Sberbank, a lender, are struggling to expand data centres. The chip shortage is hindering new plastic-card issuance on MIR, the domestic payment system. A lack of specialised vessels may hobble Russia's Arctic drilling plans; a dearth of foreign technology and know-how could even slow down old-school oil-and-gas extraction. Basic industries, such as the mining and refining of metals, have slumped, too.

Russia is trying to fight back. Previously it tapped the unauthorised grey market to source sensitive Western tech and military kit, often from resellers in Asia and Africa. In June it went further by legalising "parallel" imports, allowing Russian firms to bring in goods, such as servers and phones, without the trademark holder's consent. Artem Starosiek of Molfar, a Ukrainian intelligence firm, says there has been a boom in "credit-card tourism", as tour operators that once organised covid-vaccine trips for Russians now fly them to buy Visa-issued cards in Uzbekistan. Trade between Western countries and Russia's neighbours, such as Georgia and Kazakhstan, has grown rapidly since the invasion.

Yet it is hard for an entire economy to be run on smuggled goods, especially when some of them are scarce everywhere. Chinese firms, which usually supply a quarter of Russia's imports, have been slow to help, since they too fear losing access to essential Western parts. Even Huawei has curtailed its links with Russia. The shortages will therefore last, with their effects compounding over time as wear and tear takes its toll and the rot spreads from one industry to the next. The result will be a slow, grinding degradation of Russia's economy.

This degradation will be compounded by the sanctions' less tangible effects. Konstantin Sonin of the University of Chicago reckons several hundreds of thousands of Russians—many of them highly skilled—have left the country since the invasion. More than 1,200 foreign firms have also pledged to leave, according to scholars at Yale University. The IMF forecasts that the country's growth rate in 2025-26 will have fallen by roughly half, compared with estimates from before the outbreak of war. So long as America and its allies maintain their sanctions, Russia's industrial backbone, intellectual brawn and international links will fade, and its future will be one of sagging productivity, little innovation and structural inflation. Economists were wrong to predict an instant crash. What Russia is getting, instead, is a one-way ticket to nowhere. ■



Russia

Bearing it

Few expected the Russian economy to be holding up six months into the war

EVEN IN NORMAL times, the Russian economy is about as transparent as a Siberian snowstorm—and these are not normal times. Since Russia's invasion of Ukraine the Central Bank of Russia (CBR), and Rosstat, the official statistics agency, have stopped publishing data on everything from trade to investment; many question the reliability of those numbers that are still emerging. Investment banks, no longer advising clients on Russian companies, have pared back their research efforts. Multilateral organisations have pulled economists out of the country.

In the blizzard, a furious debate has erupted about how the Russian economy is performing. A recent paper by five researchers at Yale University, which has drawn widespread attention, says that a retreat of Western firms, plus sanctions, are "crippling" it. Any apparent economic strengths are a mirage. "Putin-selected statistics are then carelessly trumpeted across media and used by reams of well-meaning but careless experts in building out forecasts which are excessively, unrealistically favourable to the Kremlin," the researchers argue. Others are less gloomy. "The economy is not collapsing," wrote Chris Weafer, a respected Russia-watcher, in a recent paper. Where does the truth lie?

After Russia invaded Ukraine, its economy went into free fall. The rouble lost more than a quarter of its value against the dollar. The stockmarket crashed, forcing regulators to suspend trading. Western companies pulled out of Russia, or pledged to do so, by the hundred, as their governments slapped on sanctions. Within a month analysts had revised down their forecasts for Russian GDP in 2022 from growth of 2.5% to a decline of close to 10%. Some were even gloomier. "Experts predict Russia's GDP will contract up to 15% this year, wiping out the last 15 years of economic gains," the White House reported.

Both sides of the debate agree the country is still hurting. Massive increases in interest rates in the spring, designed to stabilise the collapsing rouble, along with the withdrawal of foreign businesses, have pushed it into recession. In the second quarter GDP fell by 4% year on year, according to official figures. Many of the country's 300 single-industry cities hurt by sanctions are in a full-blown depression. Lots of people, especially educated types, have fled; others are shifting assets out of the country. In the first quarter of 2022, the latest available data, foreigners pulled out $15bn-worth of direct investment, easily the worst figure on record. In May 2022 Russian remittances to Georgia were an astonishing ten times higher in dollar terms than the year before.

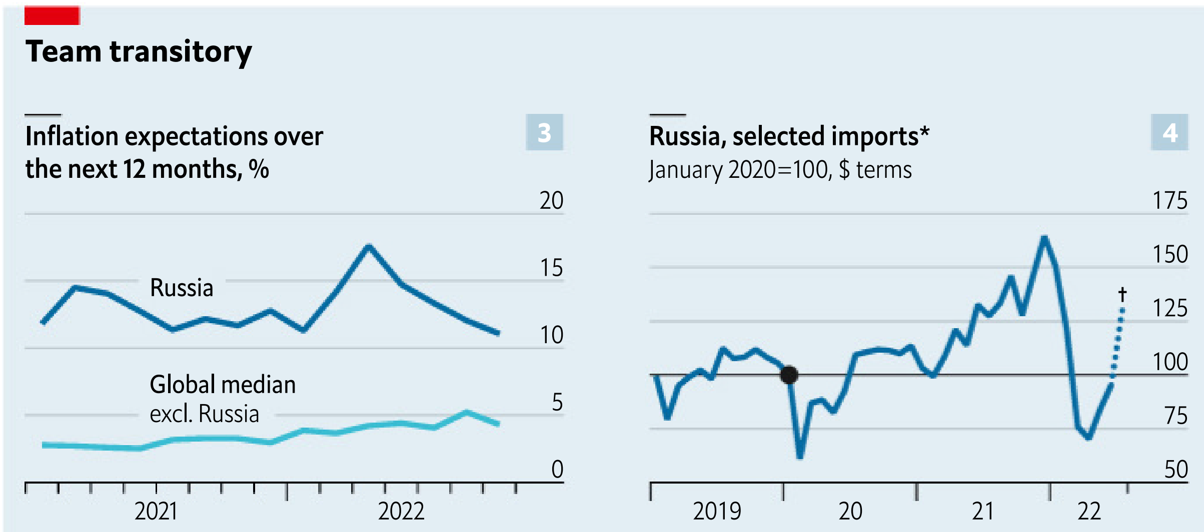
But *The Economist*'s analysis of data from a wide variety of sources suggests that Russia's economy is doing better than even the most upbeat forecasts predicted, as sales of hydrocarbons have fuelled a record current-account surplus. Take, for example, a "current-activity indicator" published by Goldman Sachs, a bank, a real-time measure of economic growth (see chart 1). This declined dramatically in March and April, if not on a scale comparable with the global financial crisis of 2007-09 or even the invasion of Ukraine in 2014. In subsequent months it has recovered.

Other measures tell a similar story: of a recession, but not a deep one, at least by Russia's volatile standards (see chart 2). In June industrial production was 1.8% down on a year earlier, according to a paper published by JPMorgan Chase, another bank. An index of service-sector growth, compiled by sending surveys to managers, shows a smaller hit than during previous crises. Electricity consumption seems to be growing again, after an initial decline. The number of railway loadings, a proxy for goods demand, is holding up.

Meanwhile, inflation is easing. From the start of 2022 to the end of May consumer prices rose by about 10%. The fall in the rouble made imports dearer; the withdrawal of Western companies cut supply. But prices are now falling, according to Rosstat. An independent source, published by State Street Global Markets, a consultancy, and PriceStats, a data firm, derived from online prices, shows similar trends. In its public statements, the CBR now worries about falling prices as well as inflation.

A stronger rouble has cut the cost of imports. And Russians' inflation expectations have fallen. A data set from the Cleveland Federal Reserve, Morning Consult, a consultancy, and Raphael Schoenle of Brandeis University shows expected inflation over the next year has dropped from 17.6% in March to 11% in July (see chart 3). With plentiful gas, Russia is also unlikely to see a European-style surge in inflation produced by higher energy prices.

Falling prices are not the only thing helping households. True, the unemployment rate, at an all-time low of 3.9% in June, is misleading. Many companies have furloughed staff, some without pay, in order to avoid registering redundancies. But there is not much evidence of a jobs calamity. Data from HeadHunter, a Russian jobs site, suggest that the economy-wide ratio of jobseekers to vacancies rose from 3.8 in January to 5.9 in May—making it harder to find a job than before—and then fell back a bit. Data from Sberbank, Russia's largest lender, indicate that median real wages have sharply increased since the spring.



*From Belarus, China, France, Germany, Italy, Japan, S Korea, Turkey & United States †Estimates based on data from China, Japan & S Korea
Sources: Morning Consult; Federal Reserve Bank of Cleveland; Raphael Schoenle; Refinitiv Datastream; *The Economist*

In part because the labour market is holding up, people can keep spending. Sberbank's data suggest that in July real consumer spending was pretty much unchanged from the start of the year. Imports fell in the spring, partly because many Western firms stopped supplying them. Yet the decline was not severe by the standards of recent recessions, and imports are now bouncing back fast (see chart 4).

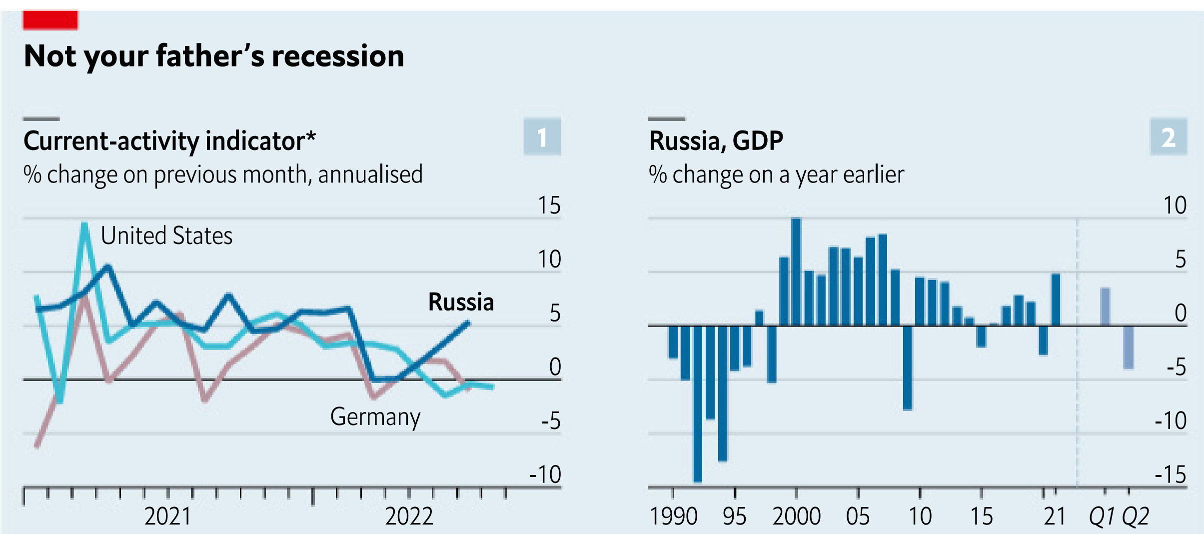
Three factors explain why Russia keeps beating the forecasts. The first is policy. Vladimir Putin has little understanding of economics, but he is happy to delegate economic management to people who do. The CBR is stuffed with highly qualified wonks who took swift action to prevent economic collapse. The doubling of interest rates in February, in combination with capital controls, shored up the rouble, helping to cut inflation. The general public know that Elvira Nabiullina, the bank's governor, is serious about keeping a lid on prices, even if this does not make her a popular figure.

The second factor relates to recent economic history. Sergei Shoigu, Russia's defence minister, may have been on to something in February when, according to the *Washington Post*, he told the British government that Russians "can suffer like no one else". This is the fifth economic crisis the country has faced in 25 years, after 1998, 2008, 2014 and 2020. Anyone older than 40 has memories of the extraordinary economic tumult brought about by the fall of the Soviet Union. People have learned to adapt, rather than panic (or revolt).

Parts of Russia's economy have long been fairly detached from the West. That comes at the cost of lower growth, but it has made the recent increase in isolation less painful. In 2019 the stock of foreign direct investment in the country was worth about 30% of GDP, compared with the global average of 49%. Before the invasion only about 0.3% of Russians with a job worked for an American firm, compared with more than 2% across the rich world. The country requires relatively few foreign supplies of raw materials. Thus the extra isolation has not had much of an impact on the figures to date.

The third factor relates to hydrocarbons. Sanctions have had a limited impact on Russian oil output, according to a recent report by the International Energy Agency. Since the invasion, Russia has sold in the region of $85bn-worth of fossil fuels to the EU. The way in which Russia spends the foreign currency thus accumulated is something of a mystery, given sanctions on the government. There is little doubt, though, that these sales are helping Russia to continue to buy imports—not to mention pay soldiers and buy weapons.

Until Mr Putin leaves office, Western investors will be reluctant to touch Russia. Sanctions will remain. The CBR acknowledges that while Russia does not rely much on foreign materials, it is desperate for foreign machinery. Over time, sanctions will take a toll, and Russia will produce goods of a worse quality at a higher cost. But for now its economy is stumbling along. ■



*High-frequency measure of economic growth
Sources: Goldman Sachs; Haver Analytics; World Bank

Commodities

Against the grain

SINGAPORE

Global food prices have dropped to pre-war levels

SIX MONTHS after Russian tanks rolled into Ukraine, an inflationary shock is still ripping through boardrooms, finance ministries and households. But in one crucial area, prices have come back to Earth. The cost of grains, cereals and oils, staples of diets around the world, has returned to levels last seen before the war began.

Russia and Ukraine are agricultural powerhouses—until recently, the world's largest and fifth-largest exporters of wheat and two largest exporters of sunflower oil. It was not, therefore, a surprise that food prices surged in February and March, driven by fears that exports would be disrupted by war; indeed, the worry was that shortages would persist, decimating grain stocks and causing mass starvation.

That terrible outcome now appears to have been been avoided. Last week wheat futures in Chicago, for delivery in December, dropped to $7.70 per bushel, far below the $12.79 they reached three months earlier and back to their level in February. Corn is also back to its pre-war price. Meanwhile, palm oil, found in thousands of dishes from ice cream to instant noodles, has dropped back not only to its pre-war price, but below it (see chart).

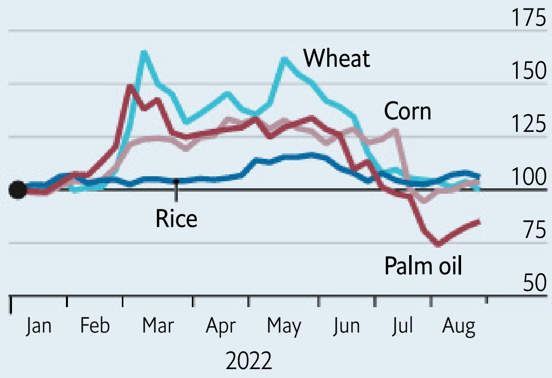
The recent deal brokered by the United Nations, allowing Ukrainian grain exports to leave the port of Odessa, can only explain a fraction of the shift: it was signed in late July, after most of the decline in prices. More can be credited to the strength of Russian wheat exports. America's agriculture department suggests that Russian farms, far from being disrupted, will export a record 38m tonnes in 2022-23, some 2m tonnes more than they managed the previous year. A bumper harvest is underway, in part due to good weather earlier in the year, and there is strong demand from traditional importers in north Africa, the Middle East and Asia.

The worries about shortages may have been overstated in the first place. Charles Robertson of Renaissance Capital, an investment bank, argued at the time that cereal traders were overexcited—wrongly grouping together long-term disruption to oil-and-gas supplies and less plausible prolonged disruption to the food supply. "Global wheat stocks were extremely high," says Mr Robertson, "which told us either that the relationship between stocks and prices had broken down or...that speculation had got ahead of itself."

Back from the brink

Commodity prices, January 4th 2022=100

$ terms



Sources: *FT*; Refinitiv Datastream; S&P Global Commodity Insights

The sheer volume of speculation on futures markets may also help explain the volatility. Michael Greenberger of the University of Maryland, formerly a division director at the Commodity Futures Trading Commission, a regulator, notes that rules limiting speculation are routinely avoided by American banks, which assign swaps to their foreign subsidiaries.

The drop in prices will not immediately feed through to consumers. Wheat and other cereal prices have returned to their pre-invasion levels when priced in dollars, but not in many other currencies. The greenback has climbed this year on the expectation of more rapid interest-rate rises by the Federal Reserve, leaving some emerging-market economies struggling. The Turkish lira is down by 27% against the dollar this year and the Egyptian pound is down 18%. The countries are two of the three largest wheat importers in the world.

Prices were high by historical standards even before the war, and there is no guarantee they will not rise again. Droughts across much of the world will affect crop yields. Meanwhile, fertilisers are still expensive. Urea, a compound used in the production of nitrogen-based ones, currently runs to $680 per tonne—down from $955 in mid-April, but still a lot more than the $400 it cost a year ago. That reflects the surging cost of natural gas, an ingredient in fertilisers. With fuel prices in Europe continuing to hit record highs, there may be more nasty surprises in store. ■

Obituary

Animal spirits

Julian Robertson was a hedge-fund manager who embodied an era

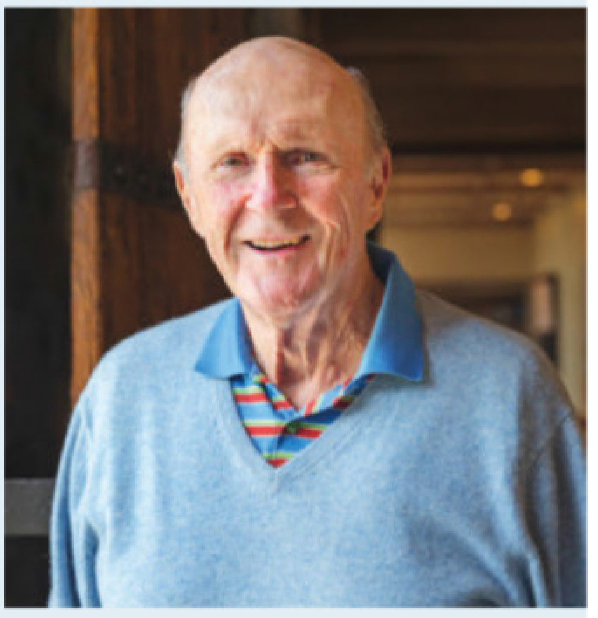
JULIAN ROBERTSON was the archetypal hedge-fund manager. He had the kind of Southern charm that inspired fierce loyalty and opened the wallets of Wall Street titans. He was competitive, energetic and athletic—in short, a classic jock—who flew his staff out west on his private jet for gruelling hikes, mountain climbs and dips in icy lakes.

He founded the archetypal hedge fund, too. Mr Robertson picked stocks—buying firms he liked and going short on those he did not. And he was exceptionally good at it. He set up his fund, Tiger Management, in 1980 aged 48, with just $8m. Between then and its peak in 1998 its annual returns averaged 32% after fees (the S&P 500 delivered 13%). By 1998, the fund managed $22bn.

This expansion may have been his undoing. Tiger began betting on currencies. In 1998 it lost almost $2bn in a single day when the yen surged against the dollar. The fund then bet against the tech boom. It lost 19% in 1999 and a further 14% in the first few months of 2000, before Mr Robertson shut it down.

"I didn't want my obituary to read 'he died getting a quote on the yen'," he recalled in 2013. So he invested in young managers, often former employees. His pawprints are all over Wall Street. A litter of "tiger-cub" funds flourished, and 200-odd hedge funds can trace their roots to him in some form or another.

But his death on August 23rd comes as the cubs are struggling. Last year Bill Hwang blew up Archegos, his family office. This year a fund run by Chase Coleman, another cub, is down by 50% or so. Today the most successful hedge funds are mostly run by quants who rely on algorithms not instinct. Mr Robertson was the archetype of an era, but that era has come to an end.



Southern charmer

Free exchange | Everyone has a price

Economists have changed their mind: high energy costs really do reduce use

ACROSS EUROPE, two questions will set the political weather this winter. How high will my energy prices go? And what will the government do to protect me? Attempting to shelter from the gathering storm, French and Spanish politicians, among others, have already capped or otherwise lowered gas and electricity prices. With wholesale gas futures for early 2023 still climbing—up to more than €300 ($299) per MWh, from less than €30 last summer—and Europe's economic indicators blinking red, more will follow suit. That prospect is enough to drive economists to despair.

Politicians want to protect voters from big bills, but also need to cut energy use, so as to avoid blackouts and reduce Russia's oil-and-gas revenues. Price caps help voters, but do so inefficiently and reduce the incentive to cut energy use. Until recently, however, economists would have said that their impact on fuel consumption was minor and their impact on gas consumption uncertain. A body of research had found that consumers were largely unresponsive to higher petrol prices: they need to drive to work, and will do so even if expensive. In this analysis, capping prices would not make a huge difference to energy consumption.

Yet a new batch of studies have overturned the conventional view, suggesting prices really do matter. The difference reflects a change in research methods. The earlier generation of studies analysed aggregate data, such as weekly sales and prices in a region, not demand from individual consumers or even driving patterns. This is a problem because crucial information gets lost when aggregating data. A mild increase in the weekly average price could hide a drop at the start of the week. If that drop encourages more demand, an aggregate analysis might find that a higher price leads to more consumption, not less. And prices at the pump are not set in isolation. They respond to demand, making the price-demand relationship two-way. Disentangling this is tricky.

More recent research analysing micro data has produced striking results. To assess how consumers react to higher petrol prices, Laurence Levin of Visa, a payments firm, and co-authors looked at daily card transactions from 243 American cities in the late 2000s. They found a sizeable response. For a 10% rise in petrol prices, consumption fell by about 3%. They also showed that, if they had used aggregate data, they would have concluded there had been a much smaller drop. Christopher Knittel of the Massachusetts Institute of Technology and Shinsuke Tanaka of Tufts University used even more granular data, looking at a Japanese fuel-economy app, and found similar results with one extra detail: drivers not only responded to higher prices by driving less, they also drove more carefully to save fuel.

Natural gas, like petrol, is also an essential good. But here, too, new research finds that consumers cut back when prices are higher. Maximilian Auffhammer of the University of California, Berkeley, and Edward Rubin of the University of Oregon looked at 300m energy bills in California. In some parts of the golden state similar households are supplied by two different gas firms, which employ different price-adjustment mechanisms—providing the researchers with something akin to the treatment and control groups that are often used in medical research. They established that a 10% rise in gas prices led to an average 2% drop in consumption. An interesting variation hid behind these figures. During summer months, there was hardly any response to prices; in winter, households cut use by 4%

California's price changes were small compared with those Europe is facing. How households respond to enormous price shocks has rarely been studied, owing to a lack of real-world data. One exception is that produced by Ukraine, which Anna Alberini of the University of Maryland and co-authors have studied, looking at price rises in 2015 after subsidies were cut. They found that among households that did not invest in better heating or insulation a doubling of prices led to a 16% decline in consumption.

Policies to help households cope with high prices have also been studied—and the results are bad news for politicians capping prices. In California, where a government programme cut the marginal price of gas for poor households by 20%, households raised their consumption by 8.5% over the next year to 18 months. Ukraine has found a better way to help. Households struggling to pay their bills can apply for a cash transfer. Since such a transfer is unrelated to consumption, it preserves the incentive for shorter showers, and thus does not blunt the effect of high prices on gas use. Another option is a halfway house between a price cap and a transfer. An Austrian state recently introduced a discount on the first 80% of a typical household's consumption, which means people retain an incentive to cut back on anything over that.

Spilt milk

Households are not the only consumers of gas. Early in the war, manufacturers and agricultural producers argued against doing anything that might risk supplies, since production processes took time to alter and output losses could cascade through the economy. But initial evidence from the German dairy and fertiliser industries suggests that even heavy users respond to higher prices. Farmers have switched from gas to oil heating; ammonia, fertiliser's gas-intensive ingredient, is now imported instead of being made locally.

Over time, households and industry will adapt more to higher prices, meaning that with every passing month demand for gas will fall. If Europe's politicians are serious about cutting gas use, they should heed the latest research and avoid price caps. There is even a self-interested case for doing so. Without high prices to encourage households and industry to cut back on their energy consumption, governments will have to find ways other than the price mechanism to allocate scarce resources. Who wants to be the politician to have introduced rationing? ■

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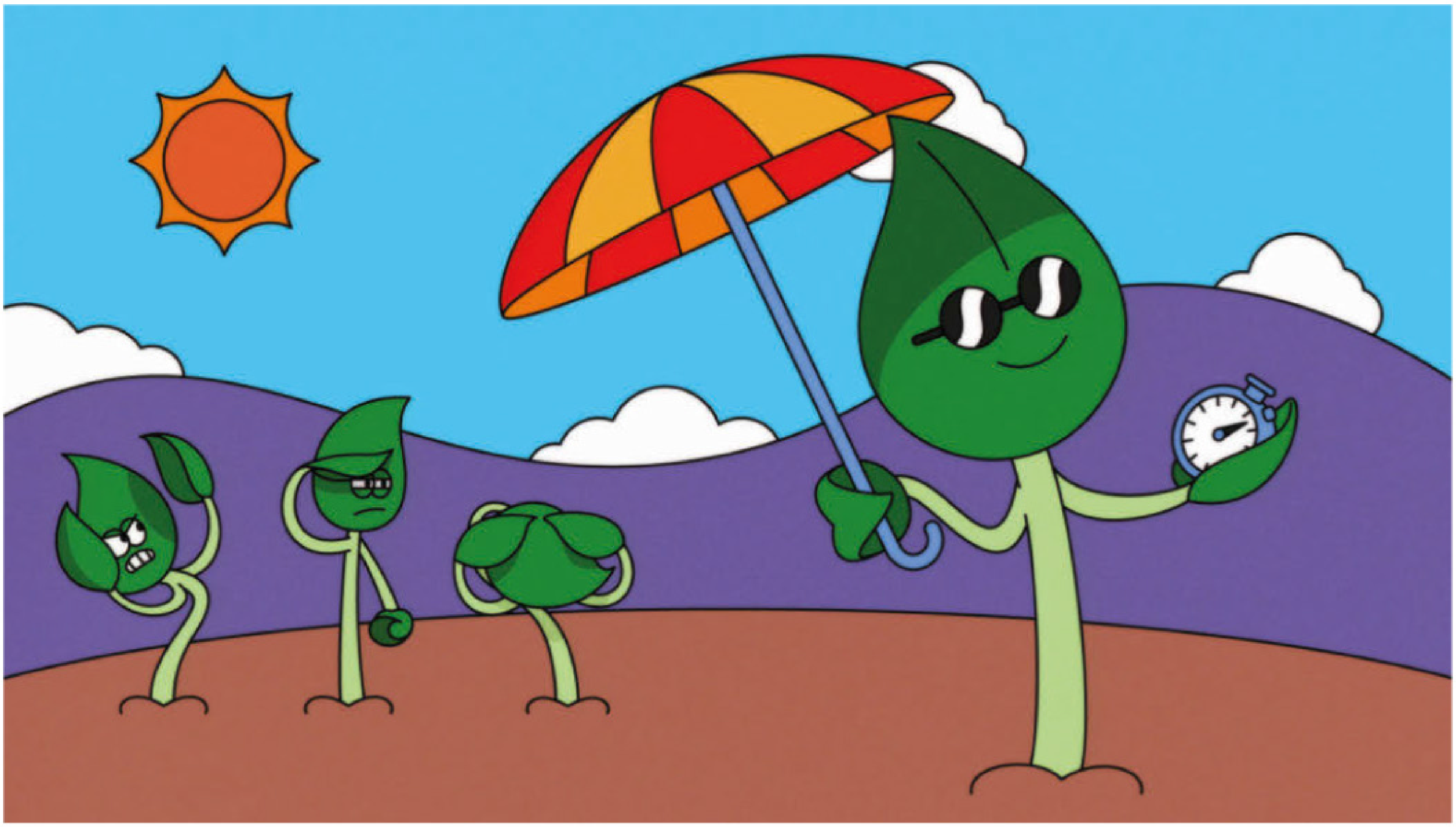


Genetically modified crops and photosynthesis

Light and shade

A genetic tweak that makes soyabean plants 20% more productive

PLANTS ARE layabouts, and as such easily underestimated. They seem simply to sit there, growing or dying according to the roll of the meteorological dice, the appetites of herbivores, the caprice of pests and the skill (if they are cultivars) of their attendant farmers and gardeners. But their passivity is superficial. On the inside, plants are endlessly active. Their sedentary way of life requires it. They must continually adapt in their biochemical processes to changes from which animals can simply run, swim, slither or fly away.

Understanding how plants do this is scientifically fascinating. It also offers the possibility of changing not just the look and size of members of the vegetable kingdom, as humans have been doing for ten millennia, but also their inner workings. The potential such change offers is demonstrated spectacularly by a study published recently in *Science* by Stephen Long of the University of Illinois Urbana-Champaign and his colleagues.

Dr Long's team used genetic modification to improve the way soya plants deal with fluctuating illumination, thereby increasing yields dramatically. They did this, moreover, not in a laboratory, but in a field. Plant breeders get excited by yield increases of one or two percent. Most of Dr Long's strains saw augmentations of more than 20%, and one improved by a third. Those sorts of numbers could make a big difference in a world with a growing population and which is at risk of losing significant amounts of farmland to climate change.

Soyabean maverick

That plants have something to fear from fluctuating sun and shade might sound surprising. Solar cells—which, like leaves, work by energising electrons using sunshine—produce more energy in bright light, and less when shaded, without any fuss. But biological photosynthesis is far more sensitive than the photovoltaic response of semiconducting silicon. When a shaded leaf is suddenly exposed to the sun the photosynthetic machinery within it risks blowing a fuse. And as the sun traverses the sky, and the wind blows, such transitions from shade to sun and back again are the norm, not the exception.

Plants have therefore evolved various safety valves to remove energy from their photosynthetic apparatus and dissipate it as heat. But, clever as they are, these valves are a bit slow to respond. In soya plants it takes minutes for them to ramp up after a leaf finds itself in full sunlight, and longer still for them to turn themselves off when shade returns. When they turn on too slowly, the light they receive in the interim has time to overexcite and damage the photosynthetic machinery. When they are too slow to turn off, diffuse illumination that a shaded leaf might put to good use gets wasted as heat instead.

Dr Long and his numerous lab-mates have long worked on improving the safety valves involved. Their main idea is to get the relevant valves to turn off more quickly. The longer the protective effects persist after a leaf has been shaded, the less photosynthesis it ends up doing. In 2016 they reported putting extra copies of three genes identified as crucial to this process into tobacco plants, which are easier to modify than most crops. The leaves of the modified specimens returned to peak efficiency much more quickly in the shade than did normal tobacco leaves. The modified ▸▸

plants also grew a good bit more strongly than unmodified controls. But there were doubts as to quite why that was, and whether similarly modified seed crops would invest their photosynthetic gains into growing more or bigger seeds.

The latest experiments with soya were designed to put those worries to rest. Dr Long and his colleagues took the genetic troika from their tobacco experiments and inserted it into Maverick, a soya cultivar that is reasonably easy to manipulate genetically. The vagaries of such manipulation mean that the same genes added to the same plant do not always give the same result, so the researchers created a range of strains. In 2020 they planted eight of them on the university's farm.

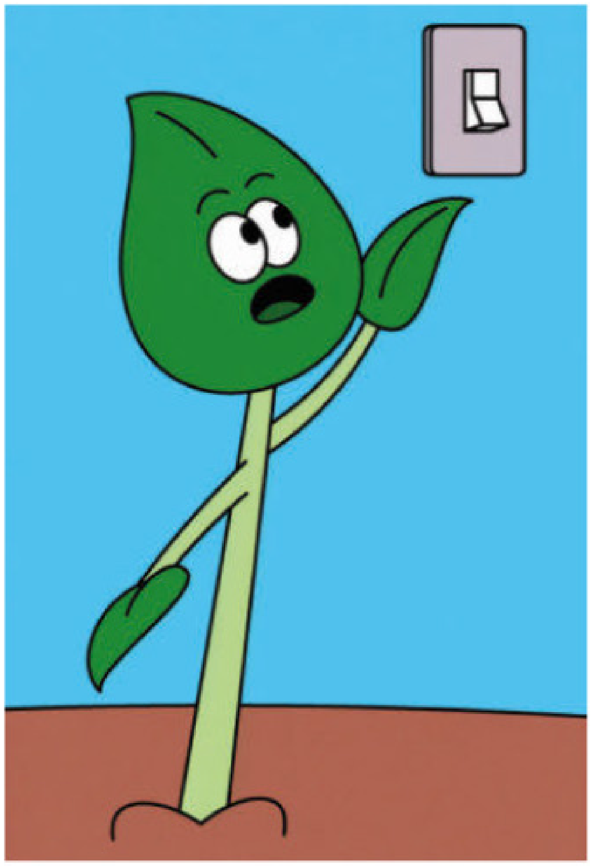
Come harvest, they found that five of the eight had significantly higher yields than unmodified plants used as controls, while three showed no improvement. The average increase in yield across the five successes was 24.5%. The best performing strain went up by 33%.

The following year they performed the same experiment and saw no improvement—but this proved to be one of those rare cases where the notion of an exception proving the rule actually applies. The 2020 crop had higher yields because it produced more seeds. At the point when the 2021 crop was about to produce its seeds the look of the seed-pods made it appear that the same was about to happen again. But then a storm knocked the plants flat.

In their new, recumbent pose the plants' leaves were piled on top of each other, rather than waving free. Those above got more light all the time; those below, less. None saw much by way of variation.

The obvious prediction in these circumstances would be that gene modifications designed to allow leaves to handle variations in light would make no difference. And that prediction was borne out. Having prepared pods with space for a bumper crop of seeds the plants filled them with just the normal number.

Thomas Sinclair of the University of North Carolina, who is sceptical about the whole idea of improving yields by increasing photosynthesis, points out that this was one small plot in one place, and that almost all of the modified plants seem to have been examined, rather than a subset, as might be more normal. Agronomists, he says, need much bigger experiments in a number of environments to be convinced. Dr Long, who put the experiment together with his colleagues Amanda De Souza and Steven Burgess, says the team is working on larger trials in more places. His lab is also working on editing, rather than adding to, the genome to achieve similar effects, and on endowing crops with other ways of increasing photosynthesis that they have found to work in tobacco.



Such efforts are not restricted to soya. Rice and wheat (a crop in which yield increases provided by other means have slowed over past decades) are other possibilities. Work aimed at putting the technology into seeds of these crops and others, which can then be provided to farmers—in particular, poor farmers—will be taken on by Gates Ag One, a company owned by the Bill & Melinda Gates Foundation, which helps fund Dr Long's lab.

This is not quite the first time that ramping up photosynthesis has seemed to increase a crop's yield: Dr Long points to an increase in rice yield from plants that produced more rubisco, the protein which uses the energy of photosynthesis to store carbon as organic molecules, reported in 2020 by Makino Amane of Tohoku University and his colleagues. But the field is oddly empty, given that photosynthesis is basic to turning sunshine into calories.

This is in part because most approaches to breeding plants have no way of tackling photosynthesis directly. Breeders look for practical improvements in yield and other beneficial traits. They worry less about underlying mechanisms. Most increases come from making plants better at getting the nutrients they need from the soil. Nor has this practical approach had the accidental effect of improving photosynthesis. A study published in 2016 of soya cultivars put on the market between 1923 and 2007 showed no consistent trend in photosynthetic capacity. Indeed some researchers, like Dr Sinclair, see increasing photosynthetic productivity as a red herring.

No one argues that photosynthesis is as good as it could possible be. Evolution has no interest in perfecting a single process—it simply blesses the organisms best able to survive and reproduce. Plants make endless trade-offs to those ends: how much effort to put into roots versus stalks versus leaves; how much to feed helpful fungi and bacteria in the soil; how much toxin to put into tissues to deter those who would munch on them; and so on. They have no overwhelming incentive to maximise photosynthesis simply because it underlies all the rest.

That is why almost every textbook on the subject tells its readers that photosynthesis is inefficient. For a healthy wild plant to maximise the amount of sunshine it eats is simply a suboptimal strategy. But the same is not true for crops. "Crops are not healthy plants," observes Alexander Ruban, a biophysicist at Queen Mary, University of London, who works on the mechanisms Dr Long and his colleagues exploit, any more than domesticated animals are healthy animals that would flourish outside a farm.

Whether animal or vegetable, farmed organisms are geared to fulfil a particular, limited purpose, not to live a full and rounded life (something which is more easily accepted of a plant than, say, a pig). Increases in photosynthetic capacity which would be irrational for a wild plant make perfect sense in a crop, because crops live for people, not themselves. And if better photosynthesis means that they can live for, and feed the lives of, more people than before, that is to the good. ■

Electric vehicles

Horses for courses

Battery swapping makes sense for commercial, but not private, vehicles

One of the most successful battery-swapping schemes for electric vehicles (EVs) is run by Gogoro, a Taiwanese firm. It has some 500,000 subscribers who, in return for a monthly fee, can quickly exchange depleted batteries from their electric mopeds and scooters for fully charged ones at a network of kiosks around the country. What makes Gogoro's scheme so popular is that it uses a standardised battery which fits into machines produced by different manufacturers.

Japan's giant automakers are now looking at doing something similar with delivery vans and light trucks. A consortium of Daihatsu, Isuzu, Hino, Suzuki and Toyota is exploring the use of easily detached "cartridge" batteries to power such vehicles. These cartridges would be smaller than the fixed batteries of typical EVs (though several could be bundled to provide more range) and would be standardised to fit any vehicle adapted to the system. When empty, they could be removed and replaced quickly with fully charged ones at automated drive-in swap stations. Yamato Transport, a big Japanese delivery service, is working with the consortium on ways to set up a network of such stations.

Swapping batteries like this would be a useful way of powering commercial EVs that are constantly on the road and therefore require frequent recharging. Conventional fast charging, of the sort a private motorist might employ at a service station, is intended only for occasional use because doing it repeatedly strains a battery, shortening its working life. Swapped-out battery cassettes, by contrast, can be recharged slowly and efficiently, but without keeping a vehicle off the road. The consortium thinks battery swapping might help cut peak electricity demand at businesses as well, by eliminating end-of-shift surges when lots of vehicles return to base and plug in simultaneously.

The consortium will also have to decide whether to sell cartridge batteries outright and let transport companies do their own swapping, or lease them and rely on third-party swap-stations. If they do come up with a workable scheme, it might encourage producers of commercial EVs in other countries to try something similar. But there are a lot of bumps in the road ahead before any of this will happen.

For one thing, it is not just a common specification for the battery that has to be agreed, but also the means by which it is attached and removed. That impinges on how companies design their vehicles, making agreement harder to come by. At present there is little standardisation in the EV business. Batteries come in many shapes and sizes, and chargers work with some vehicles but not others. A lot of batteries are also tricky to remove. Increasingly, indeed, they are designed into vehicles as part of the structure. Manufacturers who once assumed batteries would become commoditised now develop their own, employing them to provide commercial advantages such as increased range, faster acceleration and quicker charging.

The success of a battery-swapping scheme would thus depend on how its cost compared with charging batteries *in situ*—though both options would probably be available on any given commercial vehicle. For private cars, where leasing batteries has not been popular, success is less likely.

Battery-swapping schemes for cars do exist. Nio, a Chinese carmaker, provides swap stations in its home market, where many people live in apartments and so have no access to home charging. But most manufacturers are looking at better batteries and improved charging infrastructure.

Tesla, America's biggest EV producer, considered battery swapping but ditched the idea in favour of developing its own Supercharger network. And charging times on most networks are coming down, with some high-voltage systems able to top up batteries from 20% to 80% in under 20 minutes. That still does not overcome the battery-strain problem. But future batteries, particularly the solid-state variety that some companies are developing, promise to be smaller and capable of greater range, so will need charging less often. Most private electric-car drivers will thus still need to keep their charging cables handy. ■

Sulphur, oil and greenery

Brimstone, not treacle

In the world of greenery, no good deed goes unpunished

BRIGHT YELLOW though it be, sulphur is, from one point of view, a pretty green product as well. Its principal source, providing more than 80% of the total made, is compounds derived from refining oil and gas, which would otherwise go to waste. Left *in situ*, these would gum up catalysts and also burn to form sulphur dioxide, a notorious pollutant that causes acid rain. Instead, their sulphurous contents are used in the vulcanisation of rubber, to make preservatives for foods and as ingredients of soap. They are also turned into sulphuric acid, a chemical of great industrial importance that is used, among other things, in the manufacture of fertiliser.

The irony of all this, pointed out in a paper just published in the *Geographical Journal* by Mark Maslin and his colleagues at University College, London, is that, as demand for oil and gas drops in response to the climate-change-induced energy shift currently going on, sulphur produced this way will become less available. Yet this is happening at a moment when demand for the element is increasing.

Partly, that demand growth reflects a need for more fertiliser as human populations expand. But it is also a consequence of the role of sulphuric acid in the production of metals like lithium and nickel that go into electronic devices (including electric cars) and the batteries that power them. These elements are often extracted from their ores by leaching them out of the rock with acid. And the acid preferred for this is sulphuric.

Dr Maslin and his colleagues used past trends, industry forecasts and various paths to decarbonisation described by the International Energy Agency and BP, a fossil-fuel company, to map out plausible future supply and demand pathways for sulphur. They found that demand could rise from 246m tonnes today to as much as 400m tonnes by 2040. Matched against predicted supply, this would cause an annual shortage of between 100m and 320m tonnes, equivalent to 40-130% of current production—assuming no other response was made.

Of course, some sort of response would be made—just not a particularly green one. There is no global shortage of sulphur. Before its extraction as a by-product of oil and gas refining, it was won from the Earth's crust by the Frasch process, use of which could easily be expanded. The Frasch process, however, involves injecting pressurised superheated water into rocks that contain elemental sulphur. This generates sulphuric acid as a by-product and also liberates toxic heavy metals from the rock in question, causing serious pollution. Some days, you just can't win. ■

Where there's muck, there's brass

Space flight

A flying turkey

The Space Launch System is yesterday's rocket, powered by yesterday's technology and brought about by yesterday's thinking

On December 14th 1972 Eugene Cernan, commander of Apollo 17, took a last look around the Taurus-Littrow valley, climbed his lunar module's ladder and blasted off for home. His were the final footprints so far pressed into the Moon's surface. Indeed, no human being since then has ventured more than a few hundred kilometres from Earth.

Nor will that change on August 29th, the current scheduled lift off, from the Kennedy Space Centre in Florida, of the first flight of NASA's Space Launch System (SLS), heir to the mighty Saturn Vs that carried the Apollo project to the Moon, and putative workhorse of the Artemis programme, Apollo's tardy follow-up, which has its eyes first on the Moon and then on Mars. Instead, the SLS will send a capsule called Orion, carrying three mannequins wired with radiation sensors, to the Moon's vicinity. This will arrive, if all goes well, on September 3rd. And if it continues to go well, people (four of them) will follow the dummies into lunar orbit in 2024, and a further two will make new footprints, perhaps at the Moon's south pole, in 2025.

Back to the future

It all sounds terribly futuristic. It isn't. Artemis, named after Apollo's twin sister, who was goddess of the Moon as he was god of the Sun, is a mishmash, built on top of previous, abandoned plans to return to the Moon. And the SLS, in particular, looks like an attempt to relive the 1960s using the technology of the 1970s. It is not merely an *homage* to the Saturn V (though not quite as powerful). Much of it is built from re-used and repurposed components from the Space Shuttle, an experimental spaceplane that first flew in 1981, just eight years after the last Saturn V went up.

The SLS's distinctive orange body, for instance, is a stretched version of the Shuttle's external fuel tank. Attached to the bottom are four of the same RS-25 engines that powered the Shuttle itself (each of the engines on the rocket currently on the launch pad has been into space several times before). Strapped either side are a pair of solid-rocket boosters, likewise stretched, that are also derived from those that helped the Shuttle into orbit.

Building on old technology was not NASA's idea. The SLS was created by Congress, and foisted on an unwilling Barack Obama in an effort to protect manufacturing jobs, particularly in Alabama, where much of the Shuttle was built. Critics have dubbed it the "Senate Launch System".

Despite being made from recycled material, which was supposed to save money, the SLS is both late and expensive. It was originally scheduled to take off in 2016. Its development cost is $23bn and climbing. The cost per launch depends on how many launches eventually happen, but one official estimate puts it at more than $2bn.

Many observers, including, on one occasion, a serving boss of NASA in the shape of Jim Bridenstine (he ran the agency from 2018 to 2021), have questioned whether the SLS is even needed, for it is not the only giant rocket under construction. Over the past couple of decades NASA has acted as midwife to an innovative, private-sector "New Space" industry, the most famous member of which is SpaceX, founded in 2002 by Elon Musk, a serial entrepreneur.

Objective, Moon

SpaceX has already undercut the rest of the industry with its cheap, reusable Falcon rockets, and regularly flies both cargo and astronauts to the International Space Station. The firm is now working on Starship, a rocket that overtops even the Saturn V in both size and power. Starship is designed to fulfil Mr Musk's quixotic vision of setting up a colony on Mars. It would be more than up to the task of taking a handful of astronauts to the Moon.

It would be orders of magnitude cheaper, too. Though the Shuttle was partly reusable, the SLS is not. After each launch every part of it except the Orion capsule that is its payload will be ditched in the ocean or abandoned in space. Both of a Starship's stages, by contrast, are designed to return to Earth under their own power, so that they can be refuelled and flown again. Mr Musk hopes to drive launch costs down to $10m a pop. But even if they were double that, they would still be just 1% of the cost of an SLS launch.

On paper, then, SpaceX's rockets look an obvious alternative to the SLS, for Artemis or any other NASA endeavour that involves heavy lifting. But the agency has had its hands tied. When Mr Bridenstine suggested in 2019 that America could return to the Moon using SpaceX's existing largest rocket, the Falcon Heavy, which, depending on where in space it is going, has about two-thirds of the SLS's lift capacity, he provoked a row with Richard Selby, a senator from Alabama who was then chairman of the Senate appropriations committee (he is now vice-chairman). Welcoming the SLS in 2011, Mr Shelby said that NASA's exploration of space, "has always been and always will be through Marshall Space Flight Centre [in Alabama]."

I come from Alabama...

The New Space industry, though, is already involved in other parts of the Artemis programme. The SLS cannot carry enough mass to lunar orbit to enable astronauts to descend directly to the lunar surface. Instead, they will have to rendezvous with a waiting descent vehicle called the Human Landing System (HLS). In 2021 NASA awarded the contract for that to SpaceX. Artemis also involves the construction of a space station, the Lunar Gateway, in orbit around the Moon. The first components of this will be carried by Falcon Heavies.

And there is one other matter to consider when assessing the SLS's future. Mr Selby, its shield and defender, is not seeking re-election this year. SpaceX, meanwhile, hopes to launch its first Starship before the year's end. If that goes well, the question of whether the SLS's first flight should also be its last will grow yet more pertinent. ■

Monumental art

Make me a "City"

GARDEN VALLEY, NEVADA

For 50 years, Michael Heizer has worked on a vast sculpture in the desert. Was it worth the effort?

"CITY", A SCULPTURE project in the Nevada desert, is so big and has taken so long that it has become something of a myth in the art world. Some observers thought it would never be completed. It is more than a mile and a half long and half a mile wide (2.4km x 800 metres). Yet "City" sits so discreetly in the landscape that from a distance it is almost invisible. Only when you step into it, and walk the length of the pebbled cinder base, do you get a sense of how vast the artwork is.

Artists have always thought big as well as long-term. With the help of 400 workers, Gutzon Borglum and his son spent 14 years (on and off) carving the presidential sculptures on Mount Rushmore. For the last 37 years of his life Auguste Rodin worked sporadically on a set of giant carved doors called "La Porte de l'Enfer", modelled on Dante's Hell, for a museum in Paris that was never built. Michael Heizer, the creator of "City", more than matches them for vision and obsession.

Many artists began working outdoors with earth and rock in the 1960s, inspired by the photographs of Earth floating in a sea of black that were beamed back by the Apollo space missions. Some were drawn to the American West, with its broad skies and expansive landscapes. Robert Smithson headed to Utah for "Spiral Jetty", completed on the shore of the Great Salt Lake in 1970. Walter De Maria's most famous work is "The Lightning Field" (1977), a grid of stainless-steel poles in New Mexico.

Theirs was a particularly American art, full of energy—the land equivalent of Jackson Pollock's action painting. "I don't think there's ever been such invention in art as the late 1960s," says Michael Govan, director of the Los Angeles County Museum of Art (LACMA), a crucial supporter of America's land artists. "You'd have to go back to the early teens of the 20th century, when abstraction was invented, or maybe to the invention of perspective."

"City" is the most ambitious land-art project of the lot. America was still fighting the Vietnam war when Mr Heizer started work on it in 1972. Fascinated by drawing from an early age, as a young teenager he helped his father, an anthropological archaeologist, who was excavating at La Venta, an ancient Olmec site on the Yucatan peninsula. Then he spent a year in Paris, mostly in its museums. "I saw it all firsthand," he has said. "You can't go to school and learn about art by looking at a bunch of slides projected on a wall."

After taking a few courses at the San Francisco Art Institute, he focused on making large geometrical paintings. But he was most interested in the uncharted possibilities of monumental sculpture. Like others, he looked West; but in his case the landscape was part of his family's story. He was descended on both sides from men who had made a living from mining, and was gripped by the idea of digging into the ground to create "negative sculpture". He called his new works "ultra-modern art". His partner, Kara Vander Weg, a senior director at the Gagosian gallery—and co-vice president of the Triple Aught Foundation, which owns and runs "City"—says he wants his tombstone to read "Totally Negative".

In 1969 Mr Heizer gouged out over 200,000 tonnes of earth and rock from the Mormon Mesa in Nevada. He called the work "Double Negative". Its influence can be seen in the long tapered memorial to the casualties of the Vietnam war created by Maya Lin in Washington, and in the seemingly bottomless pools at the centre of Michael Arad's tribute to the victims of the attacks of September 11th 2001 in New York.

Riddle in the desert

When Mr Heizer conceived "City" he began at one end, with a section he called "Complex One"—a rectangular slope surrounded by concrete struts. "I worked entirely intuitively," he says, "with no ongoing thought or consecutive way of planning." For years he operated diggers and earth-movers alone or with a small band of construction workers, breaking off only to do commissioned works for other people in order to raise money.

After more than two decades, the project reached a crisis point. "Complex One" was crumbling and Mr Heizer was broke and in hospital. His friends feared he might die. A small initial donation solicited by Mr Govan from the Lannan Foundation, a family foundation that supports artists and culture, helped reinvigorate him. When Mr Heizer went back to work, Mr Govan says he had recast the project to make it much larger. For his part, in 2015 Mr Govan spearheaded a campaign to turn the surrounding land into a conservation area. (The Lannan family have contributed half of the $40m that the project has cost. A new $30m endowment, partly funded by LACMA, is meant to secure its future.)

Now finished, the work is as much a garden—albeit one with no flowers—as a city. There are mounds and walkways, as well as discrete spaces that could be neighbourhoods. Your perceptions, as you stand at the foot of the rising steles or lie at the bottom of the huge pebbled bowl known as the "Teardrop", are constantly jolted.

Jokes and visual puns abound. From one angle, "Complex One" seems to be a simple earthen wall with struts sticking out; move farther back and the struts come together to frame the wall as if it were a painting. Mr Heizer may be playing with geometry and sightlines, but he is also teasing self-important galleries and museum curators. "Growing up with his father's work," says Mr Govan, "he knew there were other ways to think about art: especially architectonic-scale art, which has a different feeling to it. It's not about its size, it's about what it means and how it makes you feel."

On September 2nd "City" will at last open to the public—though to maintain its solitary aura, Mr Heizer has insisted that only six people a day will be allowed in to see what all his labour has achieved. Whatever his motivation for the past 50 years, it was not the lure of the crowd. Now 77, the artist himself has made his last visit to the site. He lives far away, at sea level, for the sake of his damaged lungs. Dressed in workmen's trousers and ostrich-skin cowboy boots, he does not look decrepit. Only a nasal cannula attached to an oxygen pump betrays his frailty.

His stubbornness is undimmed. Asked if he thinks environmental concerns add extra significance to his work, or whether "City" may inspire people more interested in experiences than in things, he is blunt: "It's the visitor who does the interpretation. I don't give a damn." ■

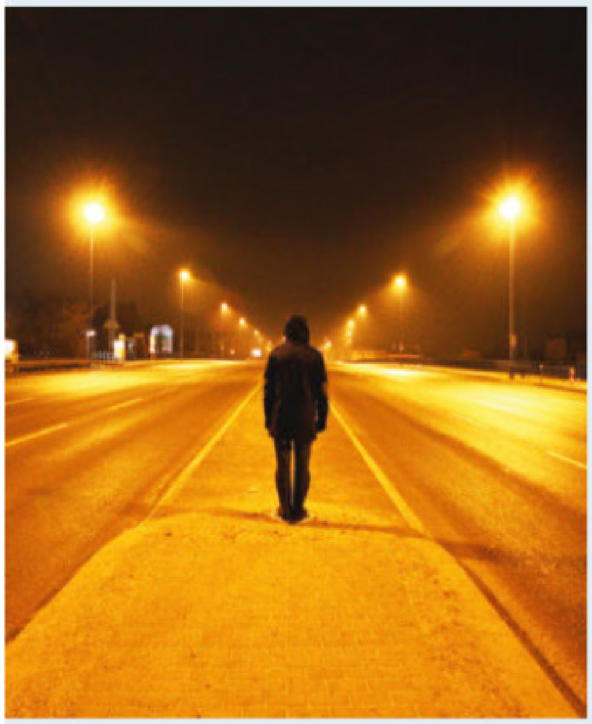
Urban fiction

Alone in Berlin

Sojourn. By Amit Chaudhuri. *New York Review Books; 144 pages; $16.95. Faber; £14.99*

"IT WAS EVENING, and I didn't know the name of the road I was taken to." Disorientation arrives in the very first line of "Sojourn" and percolates through this short, memorable book. Its narrative follows a winding path that will be familiar to readers of Amit Chaudhuri's previous seven novels. It is 2005, and the unnamed narrator, an Indian writer like the author, is a visiting professor at a university in Berlin, where a revolving cast of ordinary, mostly friendly people wander in and out of his life.

An exiled Bangladeshi poet takes him shopping and to meals. He is briefly involved with Birgit, a woman who attends his seminar. He strives to communicate with his housekeeper without a common language. In short, he does not do all that much. But all the time he keeps his eyes and mind firmly trained on the world around him.



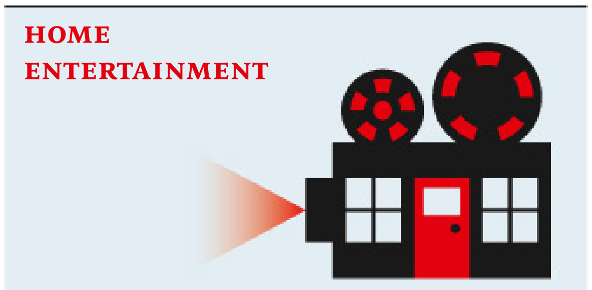
The faces that you meet

The characters are subtly and evocatively drawn. The narrator and Birgit climb stairs "with the urgency of childhood friends"; his poet pal, Faqrul, has a laugh "like a kettle's hiss". But Berlin itself has the main role.

This too is in keeping with Mr Chaudhuri's earlier work, which has often been preoccupied with cities he has known and left, from Mumbai to London, and with the way in which urban landscapes can act as repositories of personal memory. In Berlin it is the burden of history, lurking behind the placid modernity, that weighs on the narrator's mind. An acquaintance tells of being beaten up by neo-Nazis at the Holocaust memorial, made up of "flat stones, like rockery on an abandoned shore".

With its eventful past and capacity for endless reinvention, Berlin has bewitched many foreign authors, from Christopher Isherwood to John le Carré and beyond. On the surface, Mr Chaudhuri's version is a sleek metropolis from which squalor and serious political strife have vanished: a world of department stores, university cafeterias, dance halls brimming with content, swaying locals. The edgy cultural scene that in recent years has made the city a beacon for artists and clubbers is nowhere to be found. The narrator prefers a quieter life. When he muses that Berlin gives him "licence to experiment", he is referring only to a spontaneous decision to order rice pudding.

As winter progresses, and the days grow emptier, the narrator begins to crumble inwardly, falling unconscious in public and, at times, forgetting his own name. Mr Chaudhuri's writing, limpid and sparse, neatly illustrates this struggle to navigate the inner life: the fight to hold onto a fragile sense of self that can quickly disintegrate, as the surrounding world remains unperturbed, moving indifferently forward and away.



Conversations with friends

In Goethe company

Revisit the musings of the greatest writer in the German language

ANYONE WHO worries that the media spotlight kills true art is in good company. In 1824 Europe's most revered writer complained that "our present generation of talents live their lives in the full glare of publicity", which blights creativity like "toxic rain". Yet Johann Wolfgang von Goethe uttered those remarks during interviews with a fan that would fill a vast, three-volume compendium of talk. By the 1820s the author of "Faust" and "The Sorrows of Young Werther" was venerated as the godfather of German literature. He may have damned upscale arts journalism, but Goethe still spent nine patient years helping invent the genre.

Interview-based portraits of the great were not unknown in 1836, when Johann Peter Eckermann first published his "Conversations with Goethe". Both Napoleon and Lord Byron inspired unofficial memoirs by associates. James Boswell's "The Life of Samuel Johnson" had appeared in 1791. Eckermann, however, fixed on a format—quotation mixed with character sketches and background scene-painting—that profile-writers would follow for two centuries. From 1823 until Goethe's death in 1832, this devoted disciple transcribed the thoughts of the author. An entrepreneurial autodidact who worked as Goethe's assistant-cum-editor, Eckermann blended star-struck worship of a "heroic figure" with close-up observation of his idol's habits, quirks and deeds.

Previously, English-language readers of the "Conversations" have had to hunt down an archaic translation. Now Penguin Classics has published Allan Blunden's companionable new version. It lets readers grasp not just the mental might of the sage of Weimar, but his charisma. Goethe worked tirelessly, ate simply and preferred his "old wooden chair" to "plush living and pampering". He reflects on a lifetime of unremitting toil, "like rolling a heavy stone", and justly concludes: "I have done more than my fair share."

Eckermann recorded their dialogues honestly but wrote them up with artistic licence—"more like a painting" than a photograph, suggests Ritchie Robertson in his introduction. Verbatim or not, Goethe's talk roams with wit, charm and hard-headed sense across literature, art, nature, science and statecraft. He adores Byron, Molière, Scott, Shakespeare and Voltaire. He wants French social grace and English reason to enrich German life, and admires the Germans' ability to "appreciate everything foreign". He snipes at provincialism, pedantry and metaphysics. Meeting Hegel, he tells the philosopher pointedly: "I am a great believer in the study of nature; it keeps you sane."

Eckermann's Goethe has his head in the heavens but his feet on the ground. He loves gardens, picnics, birds and mountains—and takes up archery, aged 75, like an excited child. A moderate in politics, sceptical of power, he presciently tells his amanuensis that he can never see a statue of some worthy without imagining it "being pulled down and smashed by a future generation". The "Conversations" help Anglophone readers understand why Goethe stays on his pedestal. ■

The story of oil

A dirty business

A Pipeline Runs Through It. By Keith Fisher. *Allen Lane; 768 pages; £35*

IN 1908 DRILLERS working for Weetman Pearson hit a gusher. Pearson, a British industrialist, had done a deal with the anti-American government of Mexico for a 50-year oil concession that covered much of the state of Veracruz. From a depth of 1,830 feet (558 metres), the Dos Bocas well exploded into a broiling fountain of oil that rose 1,000 feet into the air.

The ensuing fire raged uncontrolled for 57 days, spilling more than 10m barrels of oil and leaving a toxic environmental legacy that persists today. A geologist at the site observed: "What had been lush *monte* [bush] was now a gaunt spectre of dead trees. The air stunk with the smell of rotten eggs. There was no sign or sound of animal, bird or insect life…It smelled and looked like I imagined hell might look and smell." The oilfields opened up by this catastrophe were so prolific and profitable that they became known, apparently without irony, as the "Golden Lane".

As Keith Fisher shows in "A Pipeline Runs Through It", a sprawling, painstakingly researched history of oil from the Palaeolithic era to the first world war, black gold has been as much a curse as a blessing for the people on whose land it has been found. Oil has always been a dirty business, both literally and metaphorically.

Mr Fisher begins with a slightly plodding survey of the uses found in bygone eras for the different kinds of oil that seeped from the ground. It was an adhesive for toolmaking, a waterproofing agent for boats and roofs, a medicinal cure and a lubricant. The Byzantines chucked a napalm-like substance, known as Greek Fire, over the walls of besieged cities. The book gets into its stride when it reaches the late 18th century. Then the extirpation of Native American nations paved the way for the development, just over 50 years later, of the "oil region" of Pennsylvania and New York states. It was there that large-scale industrialised oil production first occurred.

The soaring demand for oil was driven mainly by its use for lighting (after being refined into kerosene). It burned cleaner, brighter and with less smell than other oils, such as those derived from coal or whales. The oil rush began in 1859 along what became known as Oil Creek, near Titusville, Pennsylvania, when an entrepreneur called Edwin Drake became the first ▸▸

American to drill for oil successfully. As wildcatters rushed to the region, small refineries started popping up all over the place. Railway companies cashed in by providing the only route to market until pipelines, which required large amounts of capital, could be constructed.

Into this Wild East of desperate competition—and prices that fluctuated madly as capacity grew either too fast or too slowly—stepped John D. Rockefeller, whose Standard Oil set out to control the industry through a process of "combination", or monopolisation. Such was Standard's financial muscle and legislative clout that competitors sold it their assets before being driven out of business. By controlling pipelines and refineries, Rockefeller could also dictate terms to producers.

There will be blood

Standard's grip on what was rapidly becoming a global market triggered a response from European colonial powers, which saw the dangers of becoming reliant on imports from America or Russia. With no less violence or ruthlessness than their American counterparts, they set about exploiting existing and newly acquired colonies to correct the imbalance. The British turned to the Indian subcontinent and then to Persia, the Dutch to the East Indies.

The most intense competition was between Standard, as it sought concessions in the Far East, and the emerging behemoth, Royal Dutch Shell. Nowhere was the pursuit of oil bloodier than in Aceh at the northern tip of Sumatra. In 1896 Dutch forces were sent to open up the area for exploitation through "merciless chastisement" of the local population. Atrocities in Aceh became routine. Over the next 40 years up to 100,000 Acehnese would be slaughtered for the sake of oil. Hendrikus Colijn, an officer with a well-earned reputation for brutality, described his approach to his work in a letter home to his wife:

> I saw a woman, with a child about half a year old in her left arm and a long lance in her right hand, charging towards us. One of our bullets killed both mother and child. From then on we could grant no more mercy. I had to gather together 9 women and 3 children, who were begging for mercy, and they were all shot. It was unpleasant work, but there was no alternative.

These horrors did not harm Colijn's career. He became head of Royal Dutch Shell and prime minister of the Netherlands.

By the beginning of the 20th century, with both the refinement of the internal-combustion engine and the realisation by the navies of the great powers that their ships could go farther and faster with boilers fuelled by oil rather than coal, reliable access to oil in times of war became a major security concern. Mr Fisher writes especially well about the maniacal drive of Admiral "Jackie" Fisher (no relation) to shift the Royal Navy from coal to oil propulsion with the backing of Winston Churchill, at the time the First Lord of the Admiralty. To ensure that the great Dreadnought battleships could still rule the waves, in 1914 the House of Commons voted overwhelmingly for the "socialist" solution of nationalising the Anglo-Persian Oil Company (which would later become BP).

It was in the nick of time. A few weeks later Archduke Franz Ferdinand was killed in Sarajevo. More than a century on, and despite faltering attempts to stall climate change through decarbonisation, the war in Ukraine is a reminder of the world's continuing dependence on oil.

This book has its faults. At times the narrative is overloaded with detail, and the author seems reluctant to flesh out the many extraordinary (and rapacious) characters who populate the story of oil. But it is nevertheless a compelling read, crammed with eyewitness accounts, and an immensely valuable guide to a great and terrible industry. ■

Treasure and curse

Immigration and xenophobia

Creatures of the deep

The Fishermen and the Dragon. By Kirk Wallace Johnson. *Viking; 384 pages; $28*

A SHOCKING PHOTO from 1981 opens this account of nationalist violence in south-east Texas. It shows a boat patrolling Galveston Bay, near Houston; the occupants include robed, hooded and armed members of the Ku Klux Klan. Their aim was to menace Vietnamese fishermen who had recently arrived in the Gulf of Mexico. Hanging by the neck from one of the boat's outriggers is an effigy of an immigrant.

Kirk Wallace Johnson traces this ugly turf war in "The Fishermen and the Dragon", a thoughtful and thoroughly researched work of social history. Tensions emerged in the mid-1970s with the arrival of Vietnamese migrants in the small harbour town of Seadrift, 150 miles south-west of Galveston Bay. A community blossomed as enterprising newcomers learned to shrimp, bringing unwelcome competition to the locals. Some Texans responded by race-baiting the new fishermen and destroying their boats.

After a campaign of harassment, an immigrant shot one of the nationalists and was acquitted of murder charges on a finding of self-defence in 1979. After that, the Klan arrived in force.

Between racist oaths, some Texans insisted they were defending their way of life against foreign communists. Ironically, many of the newcomers had fought against the North Vietnamese before moving to America. Mr Johnson points out that the good ol' boys were "lashing out against capitalism all along". Contrary to baseless claims, the Vietnamese "weren't receiving secret government support; they were just

Johnson In with the old

Against the odds, some regional languages have been saved from oblivion

GO TO THE Basque Country of Spain and, linguistically, you feel you are entering not just another country but perhaps another continent. Familiar world languages—Spanish and French—suddenly give way to the otherworldly-seeming Basque, with its proliferation of x's and k's, and alien-looking words of tongue-twisting length. Basque (also known as Euskara) is unrelated to the Indo-European family that includes almost all European languages.

Its survival has not been assured. The dictatorship of Francisco Franco from 1939 to 1975 relentlessly centralised the state and insisted that citizens "speak Christian"—that is, Spanish. Public use of Basque was forbidden. When Franco died, the Basque-speaking population was mostly old and rural. For a language, this is usually a terminal diagnosis.

Against all odds, since the 1980s the number of speakers has grown by almost 350,000, out of a regional population of 2.1m. Education has been crucial. In 2017 two-thirds of pupils were studying in schools where Basque was the language of instruction, up from around 14% in 1984; 87% of ten- to 14-year-olds are reckoned to know the language. This is why, in the most recent big survey, the Basque-speaking population (41%) almost matched the non-Basque-speakers (44%). The other 15% are said to understand Basque but struggle to speak it.

For those who follow language revival, this is a galloping success. The world is filled with regional minority languages whose few fluent speakers are old. Being able to halt a death spiral is considered a victory. To increase the number of speakers is a triumph.

But there is another side to the story. In the Basque Country just 376,000 people have the language as their first, transmitted to them in the home. Basque is weakest in the three provincial capitals, where the population is dominated by people from Spanish-speaking homes. As one Basque parliamentarian puts it, even as the knowledge and prestige of the language are growing, outside schools actual usage still seems to be shrinking.

With different proportions, the outline of this narrative can be seen elsewhere. Ireland's constitution names Irish as the national and first official language. A requirement that all youngsters study it has halted its decline: it is another great victory that 30% of the population claims to be able to speak it. The fact is, though, that few actually do—just 1.7% on a daily basis outside school, and only another 2.5% weekly. A similar tale could be told of Welsh. Rising numbers can speak it, and it has a prominent public presence on signs and in government. But daily use is mostly confined to small pockets of the country.

Such strategies are nonetheless being imitated. In New Zealand, the decline in Maori may be ending. The age groups most likely to speak it are the old (who learned it at home the traditional way) and the much younger, probably thanks to recent immersion programmes. The New Zealand government aims to raise the number of speakers to 1m by 2040, out of a total current population of 5m. This will require many non-Maori to learn it; increasing numbers are doing so. This is all to the good—but those who have learned it as a second language, Maori and non-Maori alike, are far less likely to use it in daily life.

What would it take to get people to live in these languages, as opposed to merely acquiring them? Some Basques say ruefully that in a mixed group in which just one person is uncomfortable in Basque, the rest quickly switch to Spanish. They say that in Catalonia, a similar group is more likely to insist on continuing in Catalan (which, for this and unrelated historical reasons, is far more widely spoken in its territory than is Basque). Insisting on Irish, meanwhile, would border on the absurd, as Manchán Magan showed in a television mini-series, "No Béarla" ("No English"). In it he tries to carry out daily tasks—buying a bus ticket, finding a mechanic—in Irish only, with comical results.

Activists typically want their language to live, even predominate, not just survive. But that might mean shaming those who abjure it. Governments might have to force shopkeepers to address customers in it. Such coercion would be unpopular and illiberal.

A rosy view is that Basque-type situations are the best of all worlds. People can take advantage of the opportunities offered by a major language while keeping the traditional one going—an invaluable link to the past, preserved in adversity. That is success indeed, if bound by painful, possibly inevitable limits.

willing to work harder, for longer hours and less pay, while spending less." Racism and xenophobia were always the foundation of the terror campaign.

The immigrants fought back in court. Aided by the Southern Poverty Law Centre, they obtained injunctions to stop the Klan's harassment and disband the group's paramilitary training camps. Mr Johnson skilfully recounts the outrageous litigation tactics of the Texas Klan's "grand dragon", Louis Beam. He arrived for his deposition in full robed regalia and tried to have an African-American federal judge recused for alleged prejudice against Klansmen.

Although many of these events occurred more than 40 years ago, there is a queasy topicality to the fight for the Texas Gulf. Mr Johnson pointedly reports the use by white nationalists of phrases that have re-entered the political lexicon. Before burning a cross and a mock-up of a Vietnamese boat, Klansmen chanted "America First", among other slogans. Beam whipped up a rally by describing the Vietnamese as "your replacements". "As I look over the crowd here today," he said at another event, "I see some very fine people."

The passages on environmental decay along the Gulf coast are resonant, too. A report of 1989 by the Environmental Protection Agency declared Texas to be America's gravest offender in industrial air pollution; Calhoun County, home to Seadrift, was the worst in the state. Less well-judged are the closing chapters on Diane Wilson, an activist whose hunger strikes helped bring about reduced-discharge agreements and settlements with industrial firms in the area. Her tale would have served better as Mr Johnson's next book rather than as an epilogue to this powerful story. ■

Economic & financial indicators

Economic data

	Gross domestic product % change on year ago latest		quarter*	2022†	Consumer prices % change on year ago latest		2022†	Unemployment rate %		Current-account balance % of GDP, 2022†	Budget balance % of GDP, 2022†	Interest rates 10-yr gov't bonds latest,%		change on year ago, bp	Currency units per $ Aug 24th	% change on year ago
United States	1.6	Q2	-0.9	2.3	8.5	Jul	8.3	3.5	Jul	-4.1	-6.0	3.1		182	-	
China	0.4	Q2	-10.0	3.6	2.7	Jul	2.4	5.4	Jul‡§	2.2	-6.2	2.4	§§	-29.0	6.87	-5.7
Japan	1.1	Q2	2.2	2.0	2.6	Jul	2.2	2.6	Jun	1.5	-6.1	nil		-8.0	137	-19.8
Britain	2.9	Q2	-0.3	3.6	10.1	Jul	8.7	3.8	May††	-3.1	-5.0	2.6		195	0.85	-14.1
Canada	2.9	Q1	3.1	3.6	7.6	Jul	6.7	4.9	Jul	1.2	-3.5	3.1		191	1.30	-3.1
Euro area	3.9	Q2	2.5	2.8	8.9	Jul	7.9	6.6	Jun	1.5	-4.4	1.4		184	1.00	-15.0
Austria	9.5	Q1	10.0	3.9	9.3	Jul	8.0	4.3	Jun	-1.0	-4.6	2.0		221	1.00	-15.0
Belgium	3.3	Q2	0.8	2.2	9.6	Jul	9.3	5.5	Jun	-1.0	-4.8	2.0		218	1.00	-15.0
France	4.2	Q2	2.1	2.6	6.1	Jul	6.0	7.2	Jun	-1.9	-5.9	1.9		206	1.00	-15.0
Germany	1.5	Q2	-0.1	1.0	7.5	Jul	8.3	2.8	Jun	3.5	-3.2	1.4		184	1.00	-15.0
Greece	7.9	Q1	9.7	4.0	11.6	Jul	9.0	12.3	Jun	-5.8	-5.0	4.0		340	1.00	-15.0
Italy	4.6	Q2	4.2	3.0	7.9	Jul	7.2	8.1	Jun	0.3	-6.1	3.7		311	1.00	-15.0
Netherlands	5.3	Q2	10.9	2.6	10.3	Jul	10.8	3.6	Jul	7.4	-3.2	1.7		205	1.00	-15.0
Spain	6.3	Q2	4.6	4.7	10.8	Jul	9.2	12.6	Jun	0.5	-5.2	2.4		218	1.00	-15.0
Czech Republic	5.1	Q1	0.8	2.2	17.5	Jul	16.7	2.5	Jun‡	-3.6	-5.7	4.6		276	24.7	-12.2
Denmark	6.3	Q1	2.8	2.1	8.7	Jul	8.2	2.5	Jun	8.3	0.8	1.7		190	7.44	-15.1
Norway	3.9	Q2	2.9	3.2	6.8	Jul	4.8	3.2	May‡‡	16.4	8.7	1.4		76.0	9.65	-8.5
Poland	9.4	Q1	-8.9	3.2	15.6	Jul	14.7	4.9	Jul§	-3.0	-3.7	6.4		463	4.77	-18.4
Russia	-4.0	Q2	na	-7.5	15.1	Jul	18.0	3.9	Jun§	11.2	-3.8	9.1		198	60.3	22.3
Sweden	3.8	Q2	5.7	2.3	8.5	Jul	7.3	8.6	Jun§	3.0	-0.2	1.8		171	10.6	-18.0
Switzerland	4.4	Q1	1.9	2.4	3.4	Jul	2.9	2.2	Jul	6.2	nil	0.8		115	0.97	-6.2
Turkey	7.3	Q1	4.9	3.3	79.6	Jul	73.7	9.7	Jun§	-3.6	-3.8	12.8		-389	18.1	-53.6
Australia	3.3	Q1	3.1	3.2	6.1	Q2	6.1	3.4	Jul	2.0	-2.4	3.6		252	1.45	-4.8
Hong Kong	-1.3	Q2	4.1	0.7	1.9	Jul	2.9	4.3	Jul‡‡	1.4	-6.7	3.0		194	7.85	-0.8
India	4.1	Q1	1.9	6.9	6.7	Jul	7.3	6.8	Jul	-1.5	-6.5	7.3		104	79.8	-7.0
Indonesia	5.4	Q2	na	5.0	4.9	Jul	5.3	5.8	Q1§	1.0	-4.3	7.0		82.0	14,848	-3.1
Malaysia	8.9	Q2	na	5.0	3.4	Jun	3.1	3.8	Jun§	2.5	-6.2	4.0		75.0	4.49	-6.0
Pakistan	6.2	2022**	na	6.2	24.9	Jul	18.5	6.3	2021	-5.0	-7.0	12.6	†††	275	219	-24.7
Philippines	7.4	Q2	-0.4	6.7	6.4	Jul	4.9	5.7	Q2§	-3.8	-7.7	6.0		178	56.1	-10.6
Singapore	4.4	Q2	-1.0	3.6	7.0	Jul	5.6	2.1	Q2	18.1	-0.9	2.9		147	1.39	-2.9
South Korea	2.9	Q2	2.9	2.7	6.3	Jul	5.5	2.9	Jul§	3.1	-2.5	3.4		149	1,342	-13.1
Taiwan	3.0	Q2	-7.0	2.9	3.4	Jul	3.3	3.7	Jul	14.0	-1.2	1.2		79.0	30.3	-7.8
Thailand	2.5	Q2	2.7	2.8	7.6	Jul	6.0	1.5	Dec§	-0.3	-5.0	2.5		115	36.1	-8.7
Argentina	6.0	Q1	3.5	4.3	71.0	Jul	70.2	7.0	Q1§	nil	-4.6	na		na	137	-29.0
Brazil	1.7	Q1	4.0	2.2	10.1	Jul	9.7	9.3	Jun§‡‡	-0.7	-6.2	12.2		153	5.10	3.5
Chile	5.4	Q2	nil	1.5	13.1	Jul	11.1	7.8	Jun§‡‡	-7.1	-2.8	6.9		200	914	-14.6
Colombia	12.6	Q2	6.0	6.6	10.2	Jul	9.8	11.3	Jun§	-5.1	-4.7	12.1		518	4,364	-11.7
Mexico	2.1	Q2	4.1	2.4	8.2	Jul	7.6	3.3	Jun	-0.8	-3.2	8.9		198	19.9	1.9
Peru	3.3	Q2	2.3	2.6	8.7	Jul	7.8	7.6	Jul§	-3.7	-2.1	8.0		129	3.86	6.0
Egypt	5.4	Q1	na	5.9	13.6	Jul	12.9	7.2	Q2§	-6.0	-5.9	na		na	19.2	-18.2
Israel	4.8	Q2	6.8	4.9	5.2	Jul	4.3	3.4	Jul	2.9	-1.7	2.8		180	3.27	-1.5
Saudi Arabia	3.2	2021	na	7.5	2.7	Jul	2.5	6.0	Q1	15.9	10.9	na		na	3.76	-0.3
South Africa	3.0	Q1	8.0	1.9	8.1	Jul	6.4	33.9	Q2§	-1.2	-6.2	10.3		143	16.9	-11.6

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index Aug 24th	% change on: one week	Dec 31st 2021
United States S&P 500	4,140.8	-3.1	-13.1
United States NAScomp	12,431.5	-3.9	-20.5
China Shanghai Comp	3,215.2	-2.3	-11.7
China Shenzhen Comp	2,160.4	-3.7	-14.6
Japan Nikkei 225	28,313.5	-3.1	-1.7
Japan Topix	1,967.2	-2.0	-1.3
Britain FTSE 100	7,471.5	-0.6	1.2
Canada S&P TSX	20,021.4	-0.8	-5.7
Euro area EURO STOXX 50	3,667.5	-2.4	-14.7
France CAC 40	6,386.8	-2.2	-10.7
Germany DAX*	13,220.1	-3.0	-16.8
Italy FTSE/MIB	22,431.5	-1.4	-18.0
Netherlands AEX	713.8	-1.3	-10.5
Spain IBEX 35	8,199.4	-2.8	-5.9
Poland WIG	52,711.9	-3.9	-23.9
Russia RTS, $ terms	1,182.4	4.0	-25.9
Switzerland SMI	11,012.9	-1.0	-14.5
Turkey BIST	3,060.3	2.7	64.7
Australia All Ord.	7,242.3	-1.9	-6.9
Hong Kong Hang Seng	19,268.7	-3.3	-17.6
India BSE	59,085.4	-1.9	1.4
Indonesia IDX	7,194.7	0.9	9.3
Malaysia KLSE	1,467.3	-3.4	-6.4

	index Aug 24th	% change on: one week	Dec 31st 2021
Pakistan KSE	43,338.0	-0.8	-2.8
Singapore STI	3,233.5	-0.9	3.5
South Korea KOSPI	2,447.5	-2.7	-17.8
Taiwan TWI	15,069.2	-2.6	-17.3
Thailand SET	1,631.6	-0.5	-1.6
Argentina MERV	140,246.1	11.3	68.0
Brazil BVSP	112,897.8	-0.7	7.7
Mexico IPC	47,449.7	-2.6	-10.9
Egypt EGX 30	10,105.2	0.5	-15.2
Israel TA-125	2,116.2	1.7	2.1
Saudi Arabia Tadawul	12,443.8	-1.6	9.8
South Africa JSE AS	69,808.7	-1.6	-5.3
World, dev'd MSCI	2,736.0	-3.1	-15.3
Emerging markets MSCI	985.1	-3.0	-20.0

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2021
Investment grade	166	120
High-yield	467	332

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

Commodities

The Economist commodity-price index 2015=100	Aug 16th	Aug 23rd*	% change on month	year
Dollar Index				
All Items	151.9	152.8	0.3	-5.5
Food	143.0	143.8	3.2	9.9
Industrials				
All	160.2	161.2	-1.9	-15.4
Non-food agriculturals	156.0	154.0	0.4	9.7
Metals	161.5	163.4	-2.6	-20.5
Sterling Index				
All items	191.7	196.8	2.0	9.5
Euro Index				
All items	165.5	169.7	1.8	11.3
Gold				
$ per oz	1,777.2	1,752.0	1.9	-3.0
Brent				
$ per barrel	92.4	100.2	-4.0	40.9

Sources: Bloomberg; CME Group; Cotlook; Refinitiv Datastream; Fastmarkets; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

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

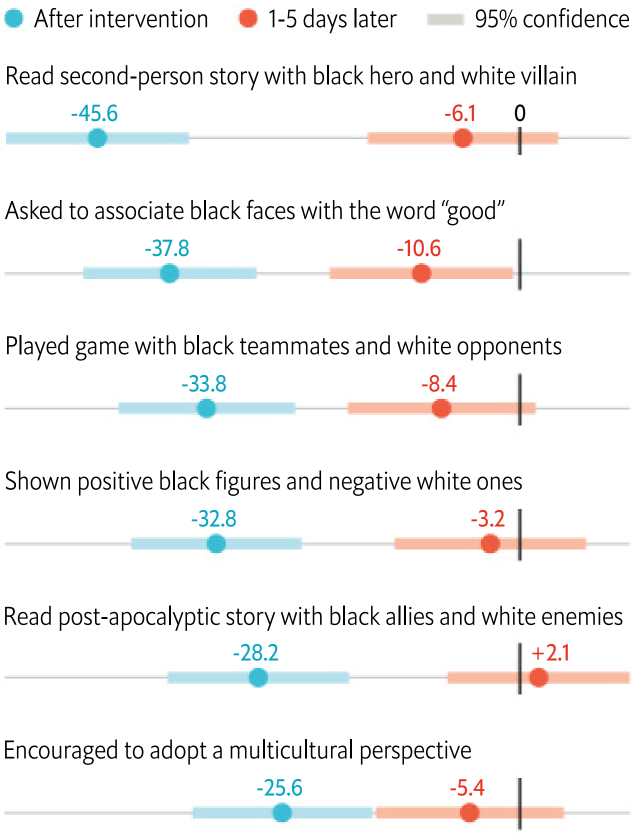
→ Workplace interventions to reduce discrimination and harassment often fail to bring lasting progress

Share of managers from group, % change 20 years after intervention begins
Estimate, 829 American companies, 1971-2015

	White		Asian		Black		Latino	
Intervention	Men	Women	Men	Women	Men	Women	Men	Women
Civil-rights grievance procedure			-9.6	-6.6	-8.2	-6.3	-7.2	-6.9
Harassment grievance procedure	+4.3	-4.3	-5.7	-2.9			-7.8	-3.2
Diversity training	-5.2		-6.9	-6.8	+5.5		-7.6	-8.1
Legalistic diversity training (for managers)	+6.5	-7.0	-5.6		-4.9	-5.3		
Harassment training		-2.8						
Harassment training (for managers)	-4.1	+5.2						
Cultural-inclusion training (for managers)	-7.0		+18.9		+7.3		+14.9	

No significant change

Change in racial bias compared with control, %
Implicit association test, non-black Americans, 2016



Sources: "Getting to diversity", by F. Dobbin and A. Kalev, *Harvard University Press*, 2022; "Reducing implicit racial preferences", by C.K. Lai et al., *Journal of Experimental Psychology*, 2016; ZoomInfo

This is an intervention

Workplace anti-discrimination programmes often fail, or backfire

Diversity and anti-harassment training is a booming industry. International company surveys suggests the number of people hired for jobs with "diversity" or "inclusion" in the title has more than quadrupled since 2010. Attempts to reduce discrimination and harassment in the workplace are laudable, and make good business sense. But only if they work.

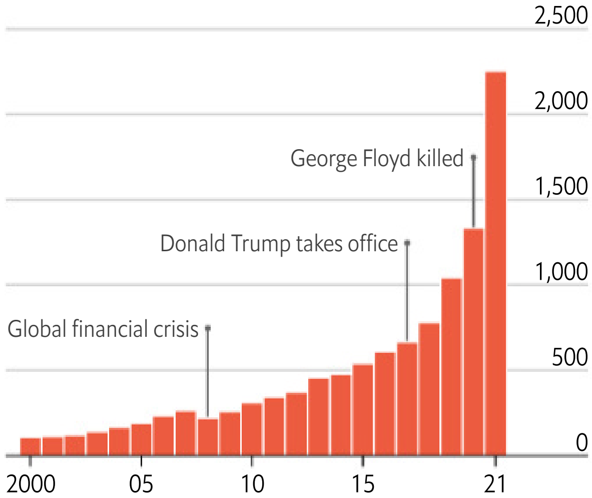
Unfortunately, the consensus now emerging among academics is that many anti-discrimination policies have no effect. What is worse, they often backfire. Some among them suspect the reason many interventions nevertheless remain popular is a hidden motive: that they are used not to reduce discrimination, but to shield against litigation.

Successful anti-discrimination programmes should, for instance, help make firms' management less male and pale. For a forthcoming book, Frank Dobbin and Alexandra Kalev tested this proposition. They collected data on anti-discrimination training programmes and targeted grievance procedures at 829 American companies implemented from 1971 to 2002, and how they affected the representation of ethnic groups and genders in management up to 2015. They found that most did the opposite of what one might expect. On average, 20 years after these interventions were introduced, the group that benefited most were white men.

What about the short-term? One large experiment compared the effects of eight one-time interventions to reduce unintentional biases, such as reading a vivid story with a black hero and a white villain. Among 6,321 non-black Americans, all reduced implicit bias favouring white over black people immediately after. But when retested one to five days later, the effects of all interventions had faded. Statistically speaking, the effects of all but one were nil.

Yet some programmes worked well. Mr Dobbin and Ms Kalev found that cultural-inclusion training, with an emphasis on

New hires for "diversity" or "inclusivity" jobs
World, 6,312 companies



how managers could increase their teams' productivity with a more varied crew, was linked with greater diversity among higher-ups later on. Targeted recruitment, mentor programmes, and cross-training between groups, were also found to help.

This is in line with a recent study by Oriane Georgeac and Aneeta Rattan, who found that atypical candidates feel less likely to be included when given a company statement with a business case for diversity instead of one with a simpler acknowledgment of its importance. They suggest explicit rationales make some suspect they will be judged based on stereotypes—rather than how they do their job.

You can forgive firms their initial eagerness to implement programmes of unproven effectiveness. In global surveys, 75% of them now say diversity is a stated value or priority. But if they mean what they say, such firms should now be shifting resources, away from programmes that do not work (or worse) and towards those that do.

But it could be, at least in America, that the courts will need to move first. Many employers may be motivated to institute diversity policies less by productivity or morality than by legal liability. In a study of 1,188 federal civil-rights opinions decided between 1965 and 2014, Lauren Edelman, a researcher, found that judges increasingly considered such practices evidence of compliance with civil-rights laws, regardless of effectiveness. If judges start paying more attention to which programmes work, it may force firms to do so too. ■

What freedom means

Albert Woodfox, held in solitary confinement for more than four decades, died on August 5th, aged 75

"I FEEL MY soul as vast as the world, truly a soul as deep as the deepest of rivers; my chest has the power to expand to infinity. I was made to give."

When Albert Woodfox first read those words of Frantz Fanon, he was sitting on the floor of a nine-by-six cell. Or on his concrete bunk, the only furniture apart from a metal toilet and a metal sink. There were bars on the door, and a tiny window that let in a sliver of sky. His ankles were shackled, and a leather strap bound his wrists to his waist. In these he would shuffle alone for an hour a day round a larger concrete space, ringed with barbed wire, which was laughably called the exercise yard. The other 23 hours he spent in his cell in the Louisiana State Penitentiary. He was there for almost 44 years, or 16,000 days, probably the longest spell of solitary for any man in the history of American prisons.

The place was known as Angola. It had once been a slave plantation, holding mostly Angolans and growing mostly sugarcane on 18,000 acres. Cutting cane was now done by prisoners, labouring in gangs supervised by white guards who rode alongside with shotguns on their laps. The task was so brutal that men would pay to have limbs broken to avoid it. He had cut cane during his first stint there, before he was locked up alone. He was not nostalgic for it, not even for the company.

In summer his cell was torment. Mosquitoes ate him alive, and he sweated so much that his constant pacing left a wet stripe on the floor. But in any season at any time the worst things, the panic and claustrophobia, could hit him. Soaking sweat would tighten his floppy prison jumpsuit, and the walls would move towards him. The air and the ceiling would descend to smother him. He would leap up then, pacing and pacing, to send the horror away. Each morning on waking he asked himself whether this was the day he would at last lose his sanity.

He was there for a murder he had not committed, the stabbing of a guard called Brent Miller in 1972. Not a shred of evidence linked him to that crime, but he had picked up radical thinking in prison. That was enough to frame him. After three indictments and two trials he was found guilty, but the witnesses were unreliable and the US Court of Appeals in 2014 overturned his conviction, mostly citing racism. The next year he was released after pleading "No Contest" to lesser charges: as good as innocent, to his mind. Almost all the time between he was in solitary, occasionally in the Red Hat block, where the walls were an arm-span apart, rats ran through the darkness and the only food was bread.

Of course he was no angel, but a hardened criminal. From boyhood, growing up ragged and poor in the Sixth Ward in New Orleans, he stole canned goods from shops and pastries from delivery vans. His mother tried to keep him straight but, arrogant, he wouldn't listen. Older, he stole cars, stereos, TVs, and turned to armed robbery to support a heroin habit. He hurt his own people, black folk who had nothing, and didn't care. His street name was Fox, but he chose to be a Wolf, who won any fight and who saw incarceration, especially in Angola, as a badge of honour. The only real freedom he knew in those years came when he and his gang would steal the tourist buggy-horses from their stable and race them at night in a park until their mouths foamed.

In Angola, though, he began to change. Conditions there were so bad that he cobbled together a moral code for himself. Sexual slavery was rife, but when he watched a new inmate weeping after being raped he determined to stamp it out. He and a fellow prisoner, Herman Wallace, set up a chapter of the radical Black Panthers—whose methods he had first observed in Tombs prison in Manhattan—to protest against the cane-cutting, and curbed stealing in their cell-tier by organising the share-out of food. They argued for black autonomy, dignity and self-esteem, free minds. When he was put in solitary, supposedly for the Miller murder but really for these ideas, Wallace and another Black Panther, Robert King, were locked in solitary too. Together they pledged that they would not only survive, but come out stronger.

So it happened. His own tiny cell now became a university, full of law books borrowed from the prison library. Armed with case law, read 40 or 50 times if need be, he won small privileges for all the solitary prisoners: fans, radios, magazine subscriptions and an end to unnecessary strip-searches. For two hours a day he would read about the troubles of the outside world, which not only took him mentally out of his cell but expanded his sympathy with the whole of suffering humanity. He did not care much now if, when he complained about his toilet blocking up, tear gas was sprayed in his face. Far worse was happening elsewhere.

A lot of noise went on too, but of a good sort. The ringing bars became a communication system on which prisoners could send maths tests to each other, or invent quizzes. They would play chess by shouting out their moves. His own greatest achievement, he felt, was to have taught a prisoner called Goldy to read. On his hour out, he would stand in front of Goldy's cell and they would go through the dictionary together. After that, he encouraged his pupil to call him any time of the day or night if he still couldn't understand. One glorious day Goldy found sounds and words knitting together, and the world opened up to him.

In all these ways, Fox's solitary cell became the opposite of what his captors intended. It grew to contain the world. And when at last he was released, in February 2016 on his 69th birthday, the real world seemed in many ways no freer. He moved there, still, as though he felt his shackles. He avoided eye contact with others, and feared crowds because an attack might come from any side. In the security of his cell he had dived and soared. Outside, at first, he shrank again. It took a while for him to grow into a fierce campaigner for an end to the evil of solitary confinement, but when he did he discovered afresh the truth he had learned in that nine-by-six cell: that his soul was as vast as the world, as deep as the deepest river, as wide as infinity, and as free. ■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