The Economist

Rogue Britannia: Grand Theft Global

Ukraine: the war for Donald's ear

How heatwaves threaten pregnancies

The end of brainstorming

AUGUST 23RD–29TH 2025

All-American silicon

The fantasy of home-grown chipmaking

RICHARD MILLE

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A Racing Machine On The Wrist

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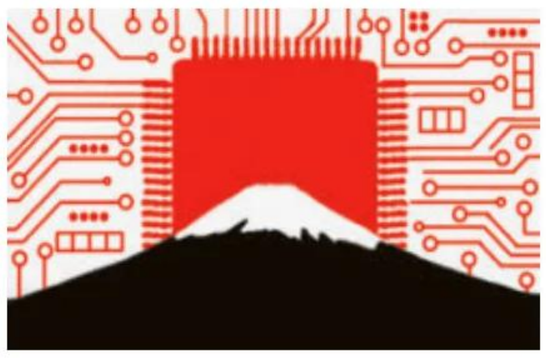

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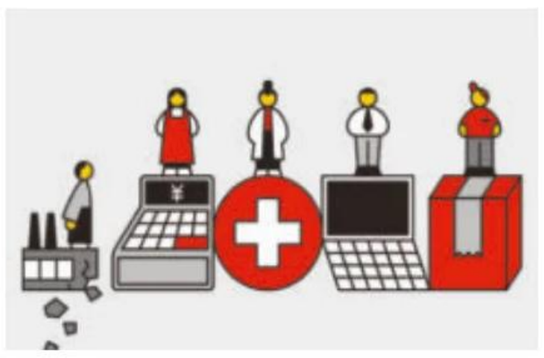

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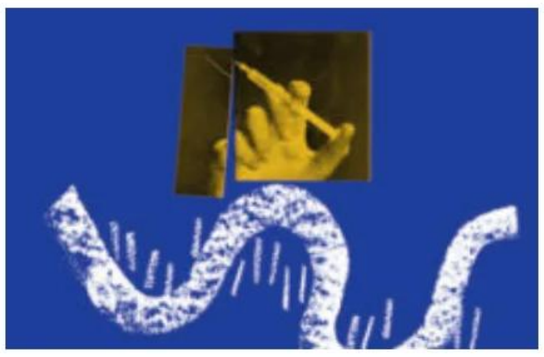

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to take part in *"a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."*

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The world this week Politics

Volodymyr Zelensky travelled to **Washington, DC**, to meet Donald Trump for talks on ending the war in Ukraine. Mr Zelensky was backed by seven European leaders including the heads of NATO and the European Commission. The American president proposed a bilateral meeting between Mr Zelenksy and Vladimir Putin, Russia's president, after which he would join them for three-way talks. Russia has yet to respond to the proposal.

Mr Trump was equivocal on the nature of any security guarantees that America might offer **Ukraine**. The Kremlin has said attempts to settle Ukraine's security guarantees without Russian participation are a "road to nowhere".

Spain sent around 2,000 soldiers to battle some of the country's **worst wildfires** on record. At least four people were killed as fires ravaged hundreds of thousands of acres of land. The area destroyed by fires is said to be twice the size of London. Pedro Sánchez, Spain's prime minister, returned early from holiday to deal with the crisis.

Asylum-seekers will be removed from a hotel in **Essex** after an English court granted a temporary injunction to stop them being housed there. The decision follows weeks of protests outside the Bell Hotel in Epping after a man staying there was charged with sexual assault. He denies the charges. The ruling is a further blow for the Labour Party and a boon for the populist Reform UK, which supported the protests. Nigel Farage, Reform's leader, welcomed the ruling and said he hopes it "provides inspiration to others across the country".

In the first round of **Bolivia's presidential elections**, voters turfed out the ruling socialist party, after nearly 20 years in power. Neither of the front-runners secured enough votes to win outright. Rodrigo Paz, a centrist senator, and Jorge Quiroga, a right-wing former president, will head to the polls in a run-off on October 19th.

America is beefing up its military presence in the **southern Caribbean**, sending air and naval forces and 4,000, marines and sailors. Officials told Reuters the aim is to combat drug threats in the region; in February America designated several gangs as foreign terrorist organisations. The build-up suggests an attempt to rattle Venezuela's leader.

He's back

Canada's Conservative leader Pierre Poilievre won a parliamentary seat after a by-election victory in rural **Alberta**. Mr Poilievre secured 80% of the vote in the safe Conservative riding. He had lost his seat in Ottawa, a constituency he had represented for more than 20 years, when the Conservatives suffered a general-election defeat in April of this year.

Hamas said it had accepted a ceasefire deal under which it would release ten living hostages and the bodies of 18 more in exchange for a **60-day halt** in the fighting. Israeli officials say they will accept a deal only if it returns all of the 50 remaining hostages, around half of whom are thought to be alive. Hundreds of thousands of Israelis took to the streets to protest against the government's decision to continue the war and its failure to secure the release of the hostages. Israel says it has begun the first steps of its planned offensive in Gaza City. The Israel Defence Forces called up 60,000 reservists ahead of the plan, which has been met with widespread international condemnation.

Bezalel Smotrich, a far-right Israeli minister, said a controversial settlement plan has been approved. The E1 project would split the **occupied West Bank** in two and in effect cut it off from East Jerusalem. Mr Smotrich said "the Palestinian state is being erased from the table".

A UN commission said it was likely that members of **Syria's interim government** forces as well as fighters linked to the former regime had committed war crimes during an outbreak of sectarian violence in March. Around 1,400 people were killed, most of them were civilians, said the report.

M23, a rebel group backed by Rwanda, killed at least 140 people in eastern **Democratic Republic of Congo** in July, according to a new report by Human Rights Watch. The report is a reminder that violence in the region continued despite peace agreements brokered by America and Qatar.

Choguel Kokalla Maiga, the former civilian prime minister of **Mali**, was charged with embezzling public funds and jailed awaiting trial. Mr Maiga, who was appointed by the military junta following a coup in 2021, was dismissed in November last year.

In America the Justice Department is expected to begin providing documents to a congressional investigation related to the deceased child-molester **Jeffrey Epstein** by August 22nd. The scandal will probably continue to cause headaches—many congressmen who returned home during the summer recess have faced questions from constituents, and Democrats plan to force it onto the agenda when they return in September.

Six Republican governors promised to send **National Guardsmen** to Washington, DC, to aid President Donald Trump's crackdown on crime and homelessness. As many as 1,900 troops have been mobilised to patrol the capital, including the 800 guardsmen that America's president called up on August 11th.

J.D. Vance, **America's vice-president**, was heckled by protesters while visiting troops in Washington, DC. The Justice Department is reportedly investigating the city's official statistics, which suggest that violent crime spiked in 2023, but then fell dramatically.

Closing arguments began in **Hong Kong** in the trial of Jimmy Lai, a pro-democracy media tycoon. Mr Lai is accused of colluding with foreign forces and sedition; he denies the charges. The 77-year-old faces life imprisonment if found guilty.

More than 300 people were killed in floods that swept through **north-west Pakistan**.

With friends like these

Wang Yi, China's foreign minister, met Narendra Modi, India's prime minister, on a visit to **Delhi** amid warming relations. Mr Modi hailed "steady progress" and said he "looked forward" to seeing Xi Jinping in China this month.

Kim Jong Un, **North Korea's dictator**, said the country must rapidly boost its nuclear arsenal in the wake of "hostile" joint American-South Korean military drills. Mr Kim called the exercises an "obvious expression of their will to provoke war", according to state media.

SV BLACK EDITION

Model shown: 26MY Range Rover P615 SV Black with optional features. Official Fuel Consumption for the 26MY Range
The figures provided are as a result of official manufacturer's tests in accordance with EU legislation with a fully charged
to factors such as driving styles, environmental conditions, load, wheel fitment and accessories fitted.

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RANGE ROVER

Rover SV Black range in mpg (l/100km) (weighted combined): 24.0 - 23.6 (11.7 - 12.5). CO_2 Emissions in g/km: 266 - 271.
battery. For comparison purposes only. Real world figures may differ. CO_2 and fuel economy figures may vary according

The world this week Business

Source: LSEG Workspace

Howard Lutnick, America's commerce secretary, confirmed that the Trump administration was considering taking a 10% stake in **Intel**. Mr Lutnick said the deal would convert the grants allotted to the firm under Joe Biden's CHIPS Act into equity. Meanwhile SoftBank, a Japanese tech investor, announced it would invest $2bn in Intel. Shares in the floundering American chipmaker, which had risen on early reports of the government's plan, climbed higher following SoftBank's announcement.

Other American **tech stocks** slid amid worries about high valuations and low returns from artificial intelligence. The NASDAQ, a tech-heavy index, dropped by 2.5% in the week to August 20th. Shares in Nvidia, a maker of AI chips, fell by 2.8%. Those of Palantir, a software firm, fell by nearly 12%.

Mr Trump extended his campaign against the **Federal Reserve**. America's president called for Lisa Cook, one of the governors on the Fed's board, to resign after Bill Pulte, the head of the Federal Housing Finance Agency, accused her of falsifying bank documents and property records to obtain a mortgage. Ms Cook said she had "no intention of being bullied to step down". Mr Trump has urged the Fed to cut interest rates and lambasted its chairman, Jerome Powell.

The bosses of **Rio Tinto** and **BHP**, two mining companies, met Mr Trump to discuss Resolution Copper, a long-delayed project in Arizona. Rio says the mine would provide 25% of America's copper demand for 40 years. On August 18th, a day before the meeting, an appeals court temporarily blocked its development. Mr Trump slammed the ruling, writing: "our Country, quite simply, needs Copper—AND NOW!"

A Japanese startup, JPYC, said it had won regulatory approval to issue a stablecoin pegged to the **yen** this autumn. Like dollar stablecoins, which are usually backed by Treasuries, the tokens will be backed by assets such as Japanese government bonds. JPYC plans to issue tokens worth ¥1trn ($6.8bn) over the next three years.

Wide of the mark

Target posted a 22% drop in net profit, year on year, in the second quarter. The ailing American retailer said that Michael Fiddelke, a company insider, would take over as its boss next year. That did not reassure investors. The company's shares fell by nearly 10%.

Novo Nordisk halved the price of Ozempic, its weight-loss drug, for Americans who cannot obtain it through their health-insurance schemes. The Danish drugmaker reckons 98% of Ozempic's American users get the drug through their insurers. But the firm is under pressure from cheap competitors. Shares in Novo, which have plunged over the past year, rose on the news.

Annual inflation in **Britain** rose to 3.8% in July, up from 3.6% in June. That is the highest figure since January 2024. Traders trimmed bets that the Bank of England, which lowered its key interest rate to 4% on August 6th, will cut rates next month.

Flight attendants ended a three-day strike after union leaders reached a deal with **Air Canada**, the country's largest carrier. The action grounded hundreds of flights, affecting around 500,000 travellers. Air Canada will start paying attendants half their hourly rate for boarding passengers, which was previously unpaid.

BlackRock struck an $11bn deal to lease natural-gas facilities from **Saudi Aramco**. The American asset manager will lease them back to the state-owned energy giant for 20 years. In recent years BlackRock has poured cash into infrastructure deals in Saudi Arabia, which is eager to attract foreign capital.

Indonesia's central bank lowered its main interest rate from 5.25% to 5%. It attributed the decision to low inflation and the need to boost growth. In the second quarter the economy grew at an annual rate of around 5.1%, the fastest in two years.

Xiaomi's revenue rose by 31% year on year in the second quarter. The Chinese tech firm's earnings from its smartphone business dropped slightly over the same period. Its electric-vehicle unit narrowed its losses to 300m yuan ($42m), down from 500m yuan in the previous quarter. Xiaomi expects its EV business to turn a monthly or quarterly profit by the end of the year.

Grinning from ear to ear

Sales of Labubu dolls pushed **Pop Mart's** net profit up by 400% year on year in the first half of 2025. Collectors outside the Chinese toymaker's home market have gone crazy for the smiling, elvish trinkets. Some 40% of sales were abroad. The firm, whose shares have risen by nearly 250% since the start of the year, is worth more than three times as much as Mattel and Hasbro, America's biggest toymakers, combined.

The Economist

All-American silicon

The fantasy of home-grown chipmaking

HOW LOW mighty Intel has fallen. Half a century ago the American chipmaker was a byword for the cutting edge; it went on to dominate the market for personal-computer chips and in 2000 briefly became the world's second-most-valuable company. Yet these days Intel, with a market capitalisation of $100bn, is not even the 15th-most-valuable chip firm, and supplies practically none of the advanced chips used for artificial intelligence (AI). Once an icon of America's technological and commercial prowess, it has lately been a target for subsidies and protection. As we published this, President Donald Trump was even mulling quasi-nationalisation.

More than ever, semiconductors hold the key to the 21st century. They are increasingly critical for defence; in the AI race between America and China, they could spell the difference between victory and defeat. Even free-traders acknowledge their strategic importance, and worry about the world's reliance for cutting-edge chips on TSMC and its home of Taiwan, which faces the threat of Chinese invasion. Yet chips also pose a fiendish test for proponents of industrial policy. Their manufacture is a marvel of specialisation, complexity and globalisation. Under those conditions, intervening in markets is prone to fail—as Intel so vividly illustrates.

To see how much can go wrong, consider its woes (see Business section). Hubris caused the firm to miss both the smartphone and the AI waves, losing out to firms such as Arm, Nvidia and TSMC. Joe Biden's CHIPS Act, which aimed to spur domestic chipmaking, promised Intel $8bn in grants and up to $12bn in loans. But the company is floundering. A fab in Ohio meant to open this year is now expected to begin operations in the early 2030s. Intel is heavily indebted and generates barely enough cash to keep itself afloat.

The sums needed to rescue it keep growing. By one estimate Intel will need to invest more than $50bn in the next few years if it is to succeed at making leading-edge chips. Even if the government were to sink that much into the firm, it would have no guarantee of success. The company is said to be struggling with its latest manufacturing process. Its sales are falling and its plight risks becoming even more desperate.

The Biden administration failed with Intel, but Mr Trump could make things worse. He has threatened tariffs on chip imports, and may try to browbeat firms such as Nvidia into using Intel to make semiconductors for them. These measures might buy Intel time but they would be self-defeating for America. Chipmaking is not an end in itself but a critical input America's tech sector requires to be world-beating. Forcing firms to settle for anything less than the best would blunt their edge.

What should America do? One lesson is not to pin the nation's hopes on keeping Intel intact. It could sell its fab business to a deep-pocketed investor, such as SoftBank, which has reportedly expressed interest in buying it and this week announced a $2bn investment in Intel. Or it could sell its design arm and pour the proceeds into manufacturing. Intel may fail to catch up with TSMC even then. Either way, the federal government should not throw good money after bad. Taking a stake in Intel would only complicate matters.

That leads to a second lesson: to look beyond Intel and solve other chipmakers' problems. TSMC is seeking to spread its wings (see Briefing). It is running out of land for giant fabs in Taiwan and its workforce is ageing. It has already pledged to invest $165bn to bring chipmaking to America. A first fab is producing four-nanometre (nm) chips and a second is scheduled to begin making more advanced chips by 2028. Samsung, a South Korean chipmaker that is having more success than Intel, is setting up a fab in Texas. But progress has been slow: Samsung and TSMC have both struggled with a lack of skilled workers and delays in receiving permits.

The last lesson is that, even if domestic chipmaking does make America more resilient, the country cannot shut itself off from the rest of the world. One reason is that the supply chain is highly specialised, with key inputs coming from across the globe, including extreme-ultraviolet lithography machines from the Netherlands and chipmaking tools from Japan. The other is that Taiwan and its security will remain critical. Even by the end of this decade, when TSMC's third fab in America is due to begin producing 2nm chips, two-thirds of such semiconductors are likely to be made on the island. TSMC's model is based on innovating at home first, before spreading its advances around the world.

To keep America's chip supply chains resilient, Mr Trump needs a coherent, thought-through strategy—a tall order for a man who governs by impulse. No wonder he is going in the wrong direction. On Taiwan he has been cavalier, confident that China will not invade on his watch, while failing to offer the island consistent support. His tariffs on all manner of inputs will raise the costs of manufacturing in America; promised duties on chip imports will hurt American customers. He thrives on uncertainty, but chipmakers require stability.

A sensible chip policy would make it attractive to build fabs in America by easing rules over permits and creating programmes to train engineers. Instead of using tariffs as leverage, the government should welcome the imports of machinery and people that support chipmaking. Given the bipartisan consensus on the importance of semiconductors, the administration should seek a policy that has Democratic support—with the promise of continuity from one president to the next.

Economic nationalists should also see the progress of chipmakers in allied countries as a contribution to America's security. Samsung is aiming to start producing 2nm chips in South Korea later this year. Rapidus, a well-funded chipmaking start-up in Japan, is making impressive progress (see Asia section). Both countries have a tradition of manufacturing excellence, and may have a better shot at emulating Taiwan.

The chipmaking industry took decades to evolve. It is built for an age of globalisation. When economic nationalists build their policies on autarky, they are setting themselves a needlessly hard task—if not an impossible one. ■

Syria

Come together, right now

Ahmed al-Sharaa needs to bring his critics closer

DURING MUCH of the first half of this year, things were looking up for Ahmed al-Sharaa. Syria's new president was basking in Donald Trump's decision to lift sanctions on his country. After more than a decade of civil war, Damascus and other cities had begun to hum again. Investors from the Gulf and Turkey piled in. Our polling showed that the public mood was buoyant. After ousting Bashar al-Assad's regime, Mr Sharaa, a former jihadist, had not imposed the Taliban-style rule that some had feared. The vast majority of Syrians said they were optimistic for the future.

Unfortunately, as the euphoria fades, Syrians are growing increasingly frustrated. Mr Sharaa has disappointed them by failing to ease the sectarian divisions that have long made their country a tinderbox. He exhibits creeping authoritarianism. Now civil-society activists are building an organised opposition (see Middle East & Africa section). How Mr Sharaa responds to this political challenge will define both his presidency and his country's future.

The president has often acted pragmatically. But there have been terrible lapses. In March, when Sunni militias linked to Mr Sharaa's forces slaughtered around 1,400 people in coastal Latakia, he was slow to respond. The region is the heartland of Syria's Alawite minority, the sect from which Mr Assad and many of his loyalists came. Four months later clashes in Suwayda, a province dominated by the Druze, a mystical religious minority, ended with massacres, some by troops loyal to the government. Again Mr Sharaa was unable—or unwilling—to stop the violence. The atrocities there gave Israel, which has a Druze minority, an excuse to interfere. It launched strikes on the province and on Damascus.

Signs of authoritarianism are hard to miss. When Mr Sharaa ruled Idlib province during the final years of the Assad regime, he ran a competent government that oversaw a flourishing economy. But he also became increasingly brutal, imprisoning many of his critics. He has brought some aspects of that leadership to the presidency, centralising power among a small group of loyalists, leaning on Sunni tribes (he is Sunni) and sidelining minorities. His supporters sometimes argue that broad representation is a luxury in a country ravaged by war, and that narrow rule is the price of efficiency. Centralisation, however, has not brought good governance, let alone security.

A loose coalition of activists, some of them veterans of the anti-Assad era, has now begun pressing for urgent political reform. They have called for Mr Sharaa's hastily drafted constitutional declaration to be rewritten so as to allow the formation of political parties and to give more scope for civil society to operate. It is the first stirring of co-ordinated opposition to the regime.

Mr Sharaa has yet to lock up any of his new opponents. But he should do more than tolerate critics; he should welcome them and bring them into his government. Syria needs an open constitutional process, a deal with the Kurds, broader leadership in the security forces and an electoral framework to ensure that the committees choosing members of an interim parliament in September do not opt overwhelmingly for hardline Sunnis.

Towards the end of Mr Sharaa's rule in Idlib, protesters chanted for his downfall. His critics have not yet gone that far. He has no replacement, and a power vacuum in a country hollowed out by civil war would be dangerous. Yet, in a functioning polity, the opposition can be a stabilising force rather than a threat. For fragile, divided Syria, that is the best chance of avoiding another descent into civil war. ■

Ukraine

The war for Donald's ear

Who will America's president listen to next?

IN FEBRUARY VOLODYMYR ZELENSKY lasted less than an hour inside the Oval Office before he was ordered to leave the building. When he returned to the scene on August 18th, many feared something even worse. Donald Trump had, three days earlier, rolled out the red carpet for Vladimir Putin in Alaska. On his way back he announced that he was no longer pressing for a ceasefire, but now favoured a comprehensive "peace" deal that could see Ukraine hand over a big chunk of fortified territory in return for a promise from Mr Putin that—cross his heart—he would not invade Ukraine for a third time.

In the sense that Mr Trump can cause Ukraine harm that it cannot protect itself against, America's president is even more dangerous to Mr Zelensky than Mr Putin. Many feared that at Monday's meeting he would force a terrible one-sided deal on America's supposed allies. Thankfully, that did not happen. Amid profuse thanks and ego-stroking, Mr Trump did not talk about territory. He even said that America would consider backing new security guarantees for Ukraine.

By contrast with the diplomacy, the battlefield is leaden. The war in the south and east of the country grinds on. Russian drones and missiles pummel Ukraine's cities nightly, demoralising its citizens, crippling its economy and poisoning its politics. Russia is losing men at several times the rate that Ukraine is, though it has a great many more men to lose. Although Ukraine is slowly ceding ground, without a collapse of its lines Russia will not take the land Mr Putin wants to gain ▸▸

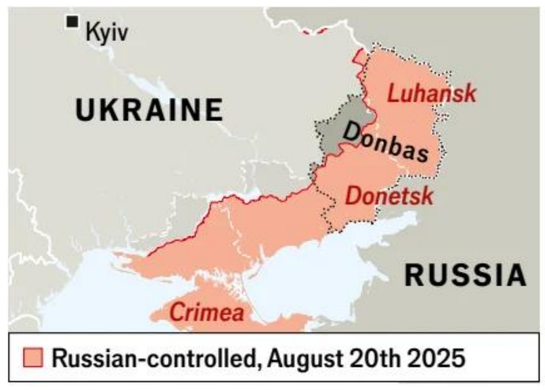
through a peace deal—at least not without sacrificing tens of thousands of troops a month over many months or years.

That is why Mr Trump's diplomacy, much faster-moving and less predictable, remains so threatening. During the meetings on Monday, the president broke off to call his Russian counterpart, and all the indications are that he still dreams of a deal that might win him a Nobel prize. He wants Mr Zelensky to sit down with Mr Putin in the next week or two. If land swaps are Mr Putin's price, the likelihood is that Mr Zelensky will again come under huge pressure to give up ground.

That would put Ukraine and Europe in a quandary. If Mr Zelensky and Europe refuse, Mr Trump could cut off the supply of weapons and crucial military intelligence at any time; he has done it before. A furious American president could impose tariffs on Europe. He could threaten to withdraw American support for NATO.

However, more than 250,000 people live in the part of the Donbas that Russia seeks. Freezing a war along contact lines has happened many times in the past. But the lines are there for a reason: they mark where Ukraine has fallen back to defensible positions, and vast amounts of effort and treasure have been expended on securing them with trenches, "dragon's teeth" and elaborate fortifications. If Russia is allowed to take them over, it will become far harder for Ukraine to resist another advance. That would be an incentive for Mr Putin to attack again.

The only territorial concession Ukraine can sensibly make would be some form of de facto recognition of Russia's existing occupation of around 19% of its territory. That would mark a victory for Mr Putin; deeply unpalatable, but arguably worth conceding in the interests of stopping a war that has already cost hundreds of thousands of lives on both sides. But what should Ukraine get in return? Mr Trump's answer, and indeed that of the Europeans, is "security guarantees". The problem is that Mr Trump is evasive about what they mean.



The most solid form of security guarantee—a commitment to use a large army to resist a Russian attack—is not on offer. Europe's leaders have been trying to assemble a "coalition of the willing" that would deploy inside Ukraine, so that Russia could not violate a peace deal without risking direct conflict with Western countries. Unfortunately, the numbers committed are too puny to put up a fight against Russia (see Europe section). Also, to establish true deterrence, any force would depend on the certainty of American support.

Mr Trump has suggested that the Europeans will have his backing, though no troops, for these guarantees, but can he be relied on? On the face of it, not really. He threatened Mr Putin with "crippling" sanctions if he would not agree to a ceasefire, but when they met he meekly dropped all talk of them. He declines to say what sort of support he will provide to the reassurance force, or even whether the supply of defensive weapons to Ukraine will be guaranteed.

A better way to achieve a degree of deterrence would be ironclad pledges to equip and fund Ukraine's own army, which is far larger and tougher than anything the Europeans can muster. By contrast, it is hard to imagine anything more destructive to European security than a peacekeeping force that is not backed up if it is attacked. That would be the victory Mr Putin most longs for. ■

Health and climate change

A newborn danger

Hotter days are a risk to pregnant women. Not enough is known about why

CONSULT THE internet on what to avoid while pregnant, and the answer seems to be: everything. Worried women can find advice suggesting that they abstain from sex, spicy foods, swimming and sunscreen (in fact, all are fine; it might be wiser to avoid Google). Other things such as smoking, drinking alcohol and eating mercury-rich seafood, though, are rightly regarded as dangerous. Heat should be on that list, too.

Being too hot for too long is bad for anyone. But physiological changes in pregnancy—such as a faster metabolism, greater heat production, and heavier demands on the heart—make expectant women particularly vulnerable to higher temperatures, with worrying consequences for mother and child. Improvements in maternal and newborn health, once a key concern for governments and humanitarian agencies, have stalled in recent years. That is due, in part, to attention shifting to other issues, including climate change. But it turns out the problems are related (see International section).

Studies from every part of the world now provide unassailable evidence that women are more likely to give birth before the 37th week of pregnancy as temperatures rise. A recent meta-analysis of 198 studies across 66 countries found that the odds of pre-term birth increase by 4% for every 1°C rise in temperature in the month before birth, and more over longer periods. Being in a locally defined heatwave—be it in Sweden or Senegal—increases the odds by more than a quarter, though the risks are predictably highest in the hottest, poorest places. Complications from pre-term birth cause 40% of all newborn deaths worldwide; survivors are far more likely to suffer from disabilities and disorders. Hotter weather has also been linked to stillbirths and certain congenital defects, and to gestational diabetes and pre-eclampsia, which can be fatal for the mother.

The problem is growing as global warming increases temperatures in general, and makes dramatic spikes more frequent and extreme. Already, climate change has at least doubled the annual number of hot days that can increase pregnancy risks in 222 out of 247 countries, according to Climate Central, a research group. It is deemed responsible for around a third of all heat-related newborn deaths in some countries, and more than a quarter of the pre-term births caused by heatwaves each year in China. Even if the world cuts emissions precipitously, modelling indicates that such impacts will continue to worsen.

But things can be done to help. The first is simply to make pregnant women aware of the risks, so they can take protective action. Though the link between heat exposure and negative

outcomes is evident, the underlying mechanisms are unclear. So the advice is fairly broad: try to keep cool; stay hydrated; plan activities to avoid hot periods and heatwaves; and seek medical help at the first sign of heat stress. Yet such choices are constrained by circumstance, so efforts must be made to support those with the fewest resources. In America, for example, several states now let Medicaid, which provides health cover to poorer people, contribute to the cost of air-conditioning for the most vulnerable. Yet being poor and pregnant isn't enough to qualify; it should be. In worse-off places, interventions such as adding awnings to homes can reduce temperatures. Health workers everywhere should be taught about the dangers of heat exposure in pregnancy and ways to reduce it, as should officials in charge of responding to heatwaves.

Newly knowledgeable pregnant women will no doubt want more information. Good. That demand will drive funding for research to work out exactly how and why hot weather harms pregnancies, and what interventions work best. The first large-scale studies are now under way. Much is still unknown, including which biological systems are most implicated, or when in pregnancy the risk is greatest. Filling those gaps will help inform practical policies and allow treatments to be developed. Governments should start collecting the data needed to track progress. But recognising the problem is the first baby step. ■

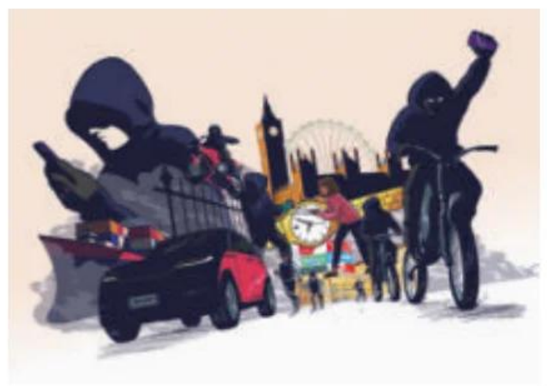
Grand Theft Global Inc

Rogue Britannia

Britain has a new world-leading international enterprise. Unfortunately, it's a criminal one

WALK DOWN the street in London and you might notice two things. First, although many pedestrians are glued to their phones, a few will periodically look over their shoulder, scanning for an assailant arriving at high speed. Second, some of the fancy cars, particularly SUVs, will have a steering lock. This does not mean that Britain is "lawless", as the government's critics complain. But both are signs of something worrying: a criminal enterprise that spans the world, but is flourishing most in Britain. We call it Grand Theft Global Inc.

Expensive consumer goods are, increasingly, being stolen in the rich world and exported to distant markets (see Britain section). The idea is hardly new. In the 1990s European cars and electronic goods headed east to former communist countries. "Visit Albania," ran one joke. "Your car is already there." What is novel is that the enterprise is globe-spanning, and underpinned by a sophisticated supply chain. London is the best place to see how it works, though other places should watch out. Grand Theft Global's business model is spreading.



Roughly 70,000 phones were snatched in London last year—almost one for every 100 people. Britain accounts for 40% of phone thefts in Europe. (Phone-snatching is also growing elsewhere: 40,000 Parisians said *adieu* to their devices last year.) British thieves' favoured method is to approach from behind on an electric bike, grab an unlocked phone and put it in a "Faraday bag" to prevent tracking; most of the nicked phones end up in China. Meanwhile, around 130,000 cars were stolen in Britain last year, a rise of 75% in a decade. SUVs are popular targets, for export to the Gulf and Africa, where they can handle poor roads.

Behind all this is a criminal enterprise that has all the trappings of a regular global business, including specialist service providers and seamless communications. Moving goods around the world adds cost, but distance is a feature, not a bug: Grand Theft Global depends on getting goods to places where they cannot easily be found. African countries have little capacity to check for stolen cars. China does not make it hard to sell stolen phones. The market is remarkably efficient. In April 2024 flooding in the UAE damaged many cars, and dealerships faced delays in replacing them. In the following months, Britain's police saw a sharp uptick in SUV thefts.

Grand Theft Global seems destined to grow. As Africa and Asia become wealthier, demand for expensive goods will only increase—and the streets of rich-world cities offer a ready supply of nickable goods. In addition, many rich countries hardly monitor their exports at all. Moral hazard further complicates matters. The cost of Grand Theft Global is broadly spread among consumers via higher insurance premiums. That means no one has a really strong interest in tackling it.

But it needs to be tackled. Some suggest pressing countries where the stolen goods end up. That is unlikely to work: they have little reason to curb the trade, even if they could. A better idea is to stop Grand Theft Global at the border. Hampering exports would have a cost, but freight companies could be asked to know their customers, as banks must to help fight fraud, money-laundering or sanctions-busting. Booking a container, for example, could require a face ID.

What about squeezing manufacturers? In the past, regulation has forced them to prioritise security, for example by adding immobilisers that make it harder to steal cars. But the rapid evolution of technology for breaking into vehicles suggests that a simple regulatory fix does not exist. The same is true for phones. Apple-bashing British MPs are wrong to think a quick tweak could end the blight of snatching.

That leaves policing, which has been left in the dust. Victims pull their hair out when they manage to track down their stolen car or phone and still the police do nothing. No Grand Theft Global kingpins have been caught. Authorities should clamp down on their latest tricks, for instance by making it illegal to possess break-in tools, and by seizing electric bikes that are not restricted to legal speed limits, which for now can serve as ideal getaway vehicles for urban wrongdoers.

Most of all, police need to understand what they are facing. Currently forces do not see these thefts as "high-harm", yet the thieves' impunity is corroding trust in law and order, and the same gangs are also involved in violence and drugs. Crimes are left to stretched local officers, with little to go on. To get to grips with Grand Theft Global, police must recognise it as the organised criminal enterprise it has become. ■

Letters *fraudulent science, higher education in Britain, AI security, greeting colleagues at work*

Fake science

Your article on the rise of fraudulent scientific papers drew on the work of a recent paper in *PNAS* that looked at the issue ("Inside job", August 9th). We must indeed weed out fraudulent "paper mill" companies that produce this stuff.

However, both the original paper and your coverage rely on language and a figure that greatly overstates the scale of the problem. In 2020, the last year with actual data, paper-mill products were estimated at approximately 0.7% of all scientific articles. Tackling misconduct is vital, but misleading representations and exaggerated projections risk undermining trust in science and lend weight to sceptics, rather than fostering effective reform.

GUILLÉN FERNÁNDEZ
Scientific director
Radboud University Medical Centre
Nijmegen, Netherlands

As an editor of *Neurology* I oversaw the publication of an article (by Mark Bolland et al in 2016) that uncovered scientific misconduct on a large scale. Although this helped correct the literature, some of the papers that were retracted had been published years before, making it possible that their retraction may not have affected subsequent citations or inclusion of the data in guidelines or policy.

The study in *PNAS* is another strong effort to focus attention on unreliable scientific literature. Although this study could not distinguish between fraud (whether by authors, editors, or both) and poor adherence to scientific standards, it underlines that a reader cannot always believe all the findings. The identification of the networks at the core of this less reliable data is a service to science. It will take years of training programmes, at journals and at publishers, to bring rigorous standards to bear that will ensure the integrity of scientific literature.

DR ROBERT GROSS
Professor of neurology, emeritus
University of Rochester Medical Centre
Rochester, New York

Traditional education

You rightly observe in your article that Britain's universities spend a lot on research and campuses ("Leaner learning", July 19th). There certainly is an arms race on the latter—however, the financial problem for most universities is research. Britain does not need 157 research-active universities, most of which are not producing any significant volume of world-leading or internationally excellent research.

Academics derive little or no prestige from teaching, and are therefore driven into research. Huge amounts of money are wasted in the system that produces little or no new useful ideas. The government needs to concentrate research funds on the core research-active universities: the Russell Group and what used to be known as the red-bricks. The others should stop or only do applied research they can get the private sector to pay for. There are many other problems within the sector related to the rankings, but getting it financially stable is the priority.

HENRIETTA ROYLE
Former chief operating officer
City St Georges
University of London

I noted the "bold" proposal to split Britain's bankrupt universities into "national" and "local" institutions. National universities, such as Oxford and Cambridge, would focus on research and attracting the brightest minds. Local colleges "would offer the best possible training at the best possible cost". Are the authors of this "radical" thinking aware that they have just reinvented the polytechnic? I agree with the prescription, but the thinking behind it is scarcely bold, more a reversion to a model of higher education that worked.

SARAH TRAVERS
London

Making sure AI is secure

Your briefing on the prospects for economic growth from the adoption of artificial intelligence ("Eureka all day long", July 26th) explored a variety of AI-related risks and correctly highlighted the risk from bio-hazards as a particular concern. The actions you listed that labs could take to mitigate the risks omitted a critical component: security. Even if AI labs achieve overwhelming success in all the mitigations you mentioned, and even if they solve accidents and structural risks to boot, this would still be insufficient to prevent irreversible harms.

Models that are capable of causing a deadly man-made epidemic can be perfectly obedient (or "aligned"), closed-source and behind interfaces with aggressive guardrails, but if the model itself can be stolen by malicious actors and used outside a company's data centre the epidemics will still happen. If we incorporate AI systems into critical infrastructure and national-security operations, as many governments are rushing to do, a single malicious modification of the behaviour of that system could endanger national safety. Good security is a prerequisite. Alignment of AI models is only helpful if they're aligned to actually benefit society rather than harm it.

Many frontier AI companies seem to be on a worse trajectory for security than they are for safety. OpenAI recognises that its models could lead to a significantly increased likelihood and frequency of biological or chemical terror events, but it makes no commitments to any concrete security measures, benchmarks or processes.

In our report, "Securing AI Model Weights", we outline 167 security measures that frontier AI labs can deploy to protect themselves. AI can't be reliable and sustainable without being safe, but it also can't be safe without being secure.

SELLA NEVO
Director
Meselson Centre
RAND
Santa Monica, California

Bow do you do?

Bartleby's agony uncle, Max Flannel, tackled the question of how to greet people at work (August 9th). Just before the beginning of the pandemic, when social distancing was proposed but not yet enforced, we got to grips with that question down at the pub. Some of us thought that fist bumps, elbow bumps or ankle bumps might be acceptable. I disagreed. I thought the Imperial Chinese custom of shaking hands with oneself would be far better. But although I would have preferred the Imperial, I knew that *namaskar*, the Hindu tradition of pressing one's hands together and bowing the head, would be more widely recognised, so I adopted it. I still use it as a greeting or farewell. I probably shall for the rest of my life. To date, no one has queried it.

RICHARD LARKIN
London

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BY INVITATION

Margaret MacMillan

Leaders' summits have become more common, but not more productive

IF ONLY HE had thought of it in time. President Donald Trump could have used his favourite colour to turn the American base in Anchorage into a 21st-century Field of the Cloth of Gold as Henry VIII of England and Francis I of France did near Calais in 1520. There were meetings, sumptuous banquets, jousts and a solemn mass. It was a marvellous spectacle and produced very little. Two years later Henry aligned with Francis's great rival, the Holy Roman Emperor.

Summits so often promise more than they can deliver. The Russians have spun the Anchorage summit as a great victory, and perhaps it is for them, but the Americans can make no such claim. There will, of course, be more jaw-jawing—Mr Trump met Ukraine's President Volodymyr Zelensky and a host of other European leaders at the White House three days after Anchorage, and Mr Zelensky may yet get a bilateral summit with Vladimir Putin followed by a three-way one involving Mr Trump, too. But if this is a peace process, it has not had the most auspicious of starts.

Even the best-planned summits—and Anchorage was not—depend heavily on the personalities and chemistry of the leaders. With powerful leaders, feelings matter. An assumption of superiority, or conversely wounded pride and a desire for revenge, can lead to future trouble. Joseph Stalin treated Mao Zedong like a subordinate after the communist victory in the Chinese civil war and kept him hanging around in Moscow for months before offering some grudging aid to China. It left a lasting mark on the Chinese and contributed to the Sino-Soviet split. At their Vienna summit of 1961 Nikita Khrushchev humiliated President John Kennedy. Khrushchev concluded that Kennedy was a weakling and later took the hideous gamble of stationing nuclear weapons in Cuba. Kennedy vowed he would never be pushed around again.

The staging of summits can signal contempt—Adolf Hitler summoning the hapless Austrian chancellor to Berchtesgaden to threaten his country, for example—or friendship, as with Mr Trump applauding the arrival of Mr Putin on the tarmac in Anchorage. But if a summit only papers over differences it can lead to war rather than peace. Napoleon and Alexander I of Russia met on a raft on the River Neman near Tilsit in 1807 to negotiate peace and an alliance. They also divided up Prussia, infuriating the Prussians, whose king, uninvited to the raft, wandered sadly along the river bank. Yet the two great powers never resolved their underlying differences. Five years after Tilsit Napoleon invaded Russia.

In their first meeting during the second world war, off Newfoundland in the summer of 1941, Winston Churchill and Franklin Delano Roosevelt made formal visits to each other's warships and prayed and sang hymns together with their sailors to underline their countries' friendship. They and their military top brass had serious conversations about the war in Europe, their new ally the Soviet Union, the worsening conflict with Japan and the shape of the post-war world. The meeting was a milestone in a deepening relationship without which the war could not have been won.

Summits work when they are underpinned by shared goals, trust and a commitment to work together. It also helps to be well-prepared. At a critical meeting between Churchill and Roosevelt in Casablanca in January 1943 to decide on the overall strategy for the war in the following months, the British, who had brought detailed papers and a shipload of experts, persuaded the Americans to delay a landing in France until 1944. As an American general complained, "We came, we listened, and we were conquered."

The same could be said of Anchorage. It was a Russian triumph and an American embarrassment. Mr Putin conceded nothing, not even a ceasefire—and for the Americans to claim getting the big deal is more important is wishful thinking, since Mr Putin will surely spin out the talks if he can keep fighting and grabbing more land. Mr Trump's suggestion in subsequent meetings with European leaders that America could support security guarantees for Ukraine will have done little to ease concerns across the continent about the dependability of his administration.

Anchorage may yet produce something useful—by raising the question of whether summits are the best way to conduct international relations. So often, they are heavily choreographed and all the real work has been done already. Or, as has happened with Mr Trump, the leaders can ignore their advisers and briefing papers and pride themselves on getting through to their opposite numbers to make deals. Such freelancing, as Mr Trump has shown, can be unproductive or unpredictable.

Summits have increased in frequency since 1945 partly because leaders, whether of democracies or dictatorships, like them. They are a welcome distraction from domestic politics: Richard Nixon once mused about leaving all that to his cabinet while he dealt with the global issues that interested him. Leaders like to feel that they are making history.

Yet often the results are much less than advertised. Neville Chamberlain brought back a piece of paper from Munich signed by himself and Hitler that symbolised, he said, the desire of their two peoples never to go to war again. A year later Britain and Germany were at war.

It remains to be seen what Anchorage and this week's follow-on summits will produce, apart from yet more meetings and, probably, a continuing war. Pressure from America on Ukraine to give up even land Russia hasn't taken? Resistance from Ukraine and the European powers? A Trump visit to Moscow? Perhaps not the Nobel peace prize for him just yet. ■

Margaret MacMillan is emeritus professor of history at the University of Toronto and Oxford University, and the author of "War: How Conflict Shaped Us" (2020).

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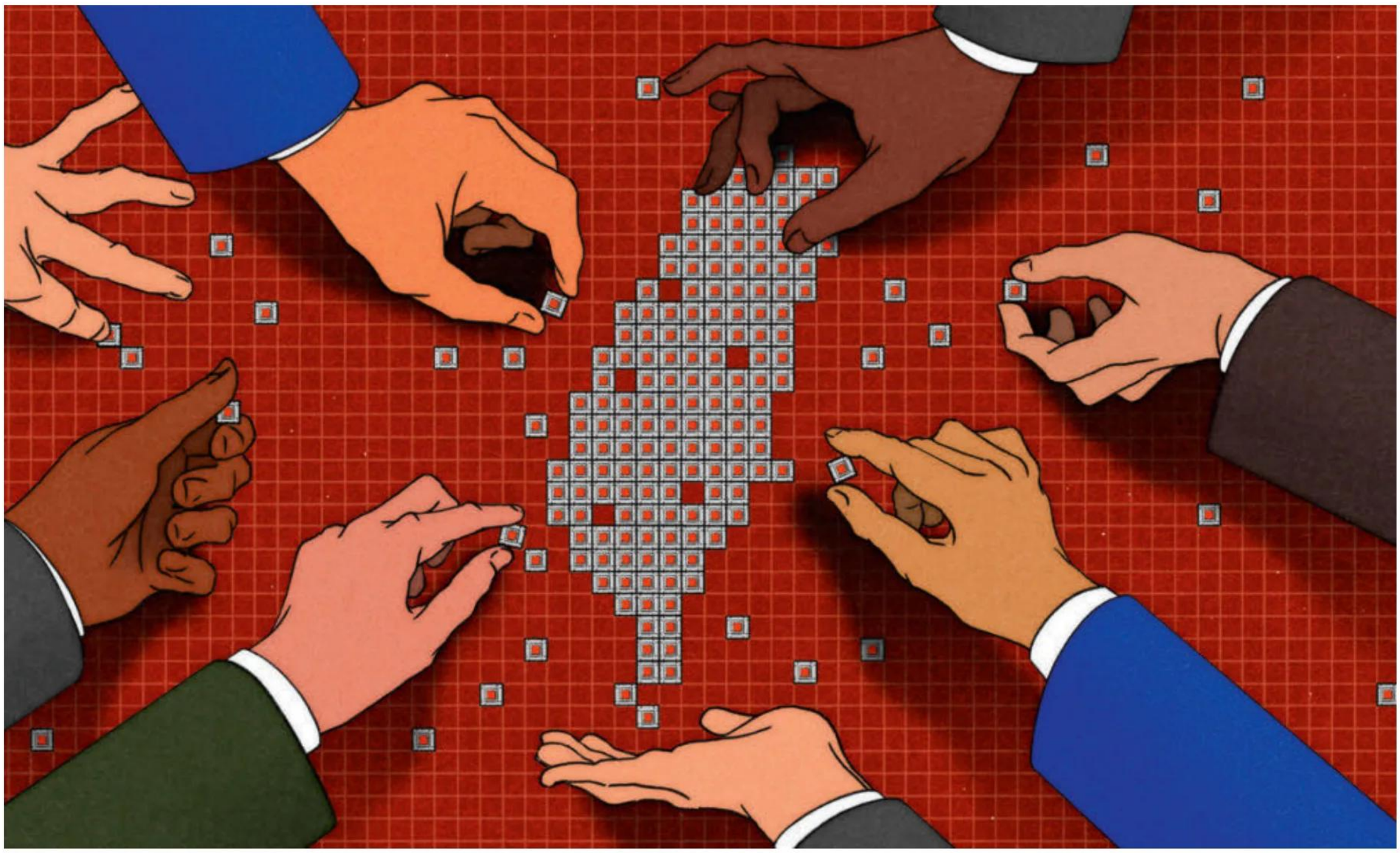
Briefing TSMC's foreign adventure



Beyond the sacred mountain

TAIPEI

Everyone wants the world's biggest chipmaker to move beyond Taiwan. But it is a culture, not just a company

TAIPEI, A CITY of over 2m people, stopped moving at 1.30pm on July 17th. Sirens rang out across the capital as residents rehearsed a civil-defence drill for a Chinese invasion. Half an hour later, as phones buzzed to mark the end of the drill, the top brass of TSMC, the world's largest chipmaker, gathered in a hotel in the city centre for their quarterly earnings call. They brought good news: record profits, good progress on global expansion, a confident forecast of more.

The disjuncture was hard to miss. As an island contemplated war, its most important company carried on with business as usual. TSMC has fared exceptionally well in Taiwan, growing into a giant of the global technology industry. But, for reasons both internal and external, it has embarked on a tricky expansion beyond its home.

In terms of revenue, TSMC produces two-thirds of all chips made by foundries—firms that manufacture semiconductors designed by others. In the most advanced segment, including processors for smartphones, laptops and data centres, the company's share exceeds 90%. The artificial-intelligence boom is powered by the AI accelerator, a type of chip designed to train and run large language models. Almost all of them are made by TSMC. Nvidia, the world's most valuable company, relies entirely on the Taiwanese firm. So does its closest rival, AMD, another chip designer. Big tech firms like Alphabet, Amazon, Apple and Microsoft, each designing their own bespoke silicon, also turn to TSMC.

Swelling demand from tech firms has pushed TSMC to extraordinary heights. Between 2014 and 2024 its annual revenues rose from $24bn to $88bn. TSMC's market value has reached $1trn, making it the eleventh-most valuable company in the world (see chart 1). Since the launch of ChatGPT in November 2022, TSMC's share price has more than doubled. Unfortunately, the larger and more dominant the firm grows, the more it looks like a problem.

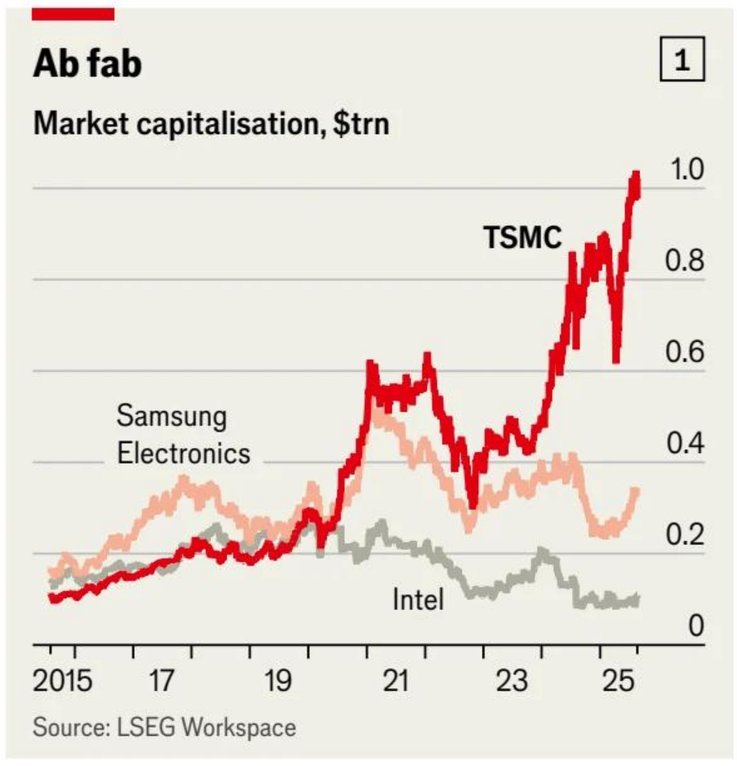
For most of its history, TSMC made all of its cutting-edge chips in Taiwan. Although the firm has long operated a few overseas plants making less sophisticated chips, it has only recently begun shifting some of its most advanced manufacturing abroad. Over the past five years it has embarked on a $190bn global expansion. Of that, $165bn is going to the American state of Arizona, where the firm plans to operate six leading-edge factories or "fabs". Replicating TSMC's precision on American soil will be difficult. Shielding its core operations from geopolitical risk may prove harder still.

Despite its size and importance, TSMC avoids the spotlight. In an interview with *The Economist*, Wendell Huang, the firm's finance chief, admitted it prefers to "stay low profile" and is "still adjusting" to the more intense scrutiny it receives these days. That aversion to publicity is woven into its culture. TSMC was built to let customers shine while it stayed in the wings. ▸▸

When Morris Chang founded the firm in 1987, chipmakers like Intel, AMD and Texas Instruments designed and produced their own semiconductors. Mr Chang made a contrarian bet: that a firm focused on manufacturing could outperform vertically integrated rivals. By specialising, TSMC could create manufacturing processes that others could not equal. By serving many customers, the company could achieve economies of scale and cut costs.

Its bet paid off, and an industry was transformed. Evercore, an investment bank, estimates that in the first decade of this century more than 20 firms made leading-edge logic chips. By 2012 only three remained: TSMC, Intel and Samsung, a South Korean electronics firm. Today only TSMC is thriving. Samsung has struggled with manufacturing issues at its most advanced fabs. Intel, once the standard-bearer of the industry, has fallen behind in chip technology and is trying to build a foundry business as its sales dwindle (see Business).

The presence of foundries like TSMC made it easier for upstart "fabless" technology firms to focus on chip design and not worry about the manufacturing process. That shift unbundled the industry, triggering an explosion of chip startups. Jensen Huang, the boss of Nvidia, has said that his firm "would not be possible without TSMC". Many rivals tried to copy TSMC's pure-play foundry model, but none of them managed to survive at the technological frontier.



Chips with everything

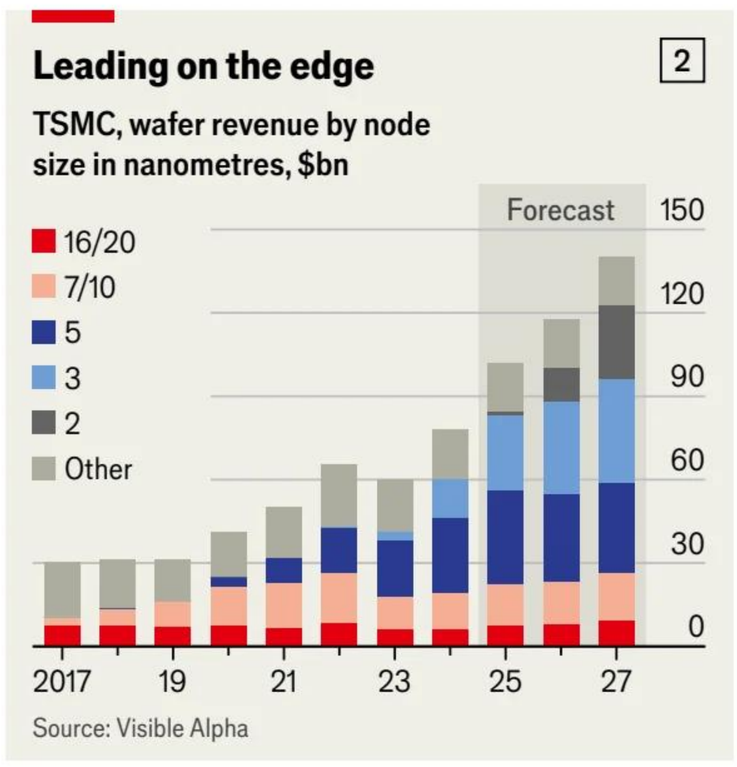
To understand why TSMC is so dominant, peer inside the fabs. Moore's law, the idea that computing power doubles roughly every two years, relies on shrinking the transistor, a microscopic electrical switch. In 1971 a typical processor held 200 transistors per square millimetre. Nvidia's B200 AI chip, released in 2024, squeezes in about 130m—making for smaller, more energy-efficient computing. Manufacturing such devices, with features measured in nanometres (nm, millionths of a millimetre), requires factories that cost $20bn apiece and are capable of producing around 25,000 silicon wafers, each containing many chips, per month.

TSMC's fabs are enormous. In Taiwan, it operates four "gigafabs", each with at least four times the capacity of a typical factory. Fab 18 in Tainan alone spans 950,000 square metres. Its cleanroom, the sterilised factory floor where chips are etched layer by layer, occupies one-sixth of that area and is cleaner than an operating theatre. Few other firms can match TSMC's scale or precision. Its yields, the share of chips on a wafer that meet quality standards, are exceptionally high.

Its employees are even more formidable. Sassine Ghazi, chief executive of Synopsys, a maker of chip-design tools, says that TSMC's manufacturing discipline is "unbelievable". That discipline is shaped by how the firm sees itself: as a manufacturer first and a technology company second. Insiders describe a culture where employees are pushed to find efficiency gains even when systems are running smoothly. Any improvement in one fab is swiftly replicated across all others. Failures are hunted down obsessively.

The company's finances reflect its rigour. In 2024 TSMC's net profit margin was 40%, more than three times the average for rival foundries. Given its dominance, could it charge more? Mr Huang of TSMC says the firm is often asked that. His reply is that it succeeds only when its customers do. What he does not say, but is true, is that the firm is paranoid about losing ground to rivals. Pushing too hard risks driving clients away eventually.

Staying ahead is costly. TSMC outspends its rivals by a wide margin. TrendForce, a research group, estimates that in 2025 the company's capital expenditure will amount to between $38bn and $42bn. Samsung plans to spend around $3.5bn on its foundry arm, Intel between $8bn and $11bn. TSMC directs spending where it matters most. In 2025, 52% of revenue is expected to come from chips produced on its most advanced nodes—typically "5nm" and below, although that is a marketing term rather than a precise measurement. By 2027 the share is expected to reach about 70% (see chart 2).



For years the firm's growing dominance in chipmaking was hardly noted. Few outside the technology industry had even heard of TSMC. That began to change in 2019, when the first Trump administration sounded alarms over America's reliance on Taiwanese chips. Then came the pandemic. Covid-19 closed factories, causing a global chip shortage that halted production in industries from electronics to cars. As supply chains faltered, governments fretted. TSMC was no longer a mere manufacturer. It had become strategic infrastructure.

In 2022 President Joe Biden signed the CHIPS Act, a $50bn package of subsidies and tax credits designed to boost chipmaking in America. TSMC, which announced it would spend $12bn on a factory in Arizona in 2020, tripled that amount by late 2022. The AI boom made American politicians even keener to bring more fabs to their country. President Donald Trump, who derided the CHIPS Act as wasteful, has pushed TSMC to make more chips on American soil by threatening tariffs. In response, the firm pledged to invest another $100bn in Arizona. C.C. Wei, TSMC's boss, explained that a smaller sum "wouldn't even make Trump open his eyes".

Res in Arizona

Perhaps sensing that the firm can be swayed, some American officials have floated the idea of TSMC partnering with Intel to help jump-start the American firm's foundry business. Mr Huang responds, frankly, that the company is not interested. He compares such a deal to pouring gasoline into a diesel engine. TSMC's processes are not compatible with Intel's fabs, nor could the firm help run them. The American government is now considering a stake in Intel.

Attempts to entice and bully TSMC to manufacture more chips outside Taiwan happen to align with the company's thinking. Increasingly, the firm seems too large for its island home. S&P Global, a research firm, estimates that in 2023 TSMC accounted for 8% of the island's electricity use. By 2030 its share could rise to nearly a quarter.

Power is not the only limitation. Stephen Su of the Industrial Technology Research Institute, a tech incubator in Hsinchu, points out that competition for engineers will grow fiercer as the working-age population shrinks. Taiwan has few immigrants and a fertility rate of just 0.9, whereas a rate of 2.1 is necessary to sustain the population. Land is another constraint. TSMC's newest fab in Kaohsiung, which spans 79 hectares, was built on a former oil refinery and required a good deal of soil

reclamation. Finding sites for future fabs is becoming harder.

Expansion abroad brings fresh challenges. The company is constructing new fabs in Japan and Germany, though its biggest bet is in Arizona. One fab has begun production; two more are under construction, with another three to follow. All told, Arizona could house as much as a third of TSMC's most advanced capacity. The arid environment has taken some getting used to. Mr Huang admits the company was surprised by delays in the local permit process. In Taiwan, he says, managers know what permits are required and "how to handle it". In Arizona, they assumed that, with Intel already operating plants nearby, local authorities would be familiar with fab construction.

Things have since improved. The first Arizona fab is reportedly producing chips for Apple at yields comparable to those in Taiwan. They are not cheap, though. Lisa Su, the boss of AMD, estimates that chips made in Arizona may cost up to 20% more than those from Taiwan. The hope is that customers will be willing to pay a premium for supply-chain resilience.

A bigger worry is the difficulty of importing an engineering culture. An executive at a chip-design firm likens TSMC's operations in Taiwan to a machine with "its own heartbeat" and suggests that workers elsewhere do not possess the same rigour. Stories of an intense, self-sacrificing work culture abound. After a powerful earthquake hit Taiwan in 1999, employees quickly filled TSMC's car park to assess the damage. In the mid-2010s the company created a "nightingale programme" with engineers working the night shift as it raced to close the gap with Samsung and win Apple's phone business.

Mr Chang has long maintained that transplanting such a work ethic across borders would be difficult. The company is trying. Around 1,000 Arizona-based engineers were sent to its "mother fab" in Tainan for 12 to 18 months of training. A similar number of Taiwanese engineers later joined them in Arizona. Over time, the number of transplants ought to fall. Growing automation may help, too. Jon Yu of Asianometry, a YouTube channel on business history, notes that TSMC still requires a pool of skilled technicians to operate its fabs. Given higher labour costs and different work norms abroad, the firm may be more willing to automate.

Silicon shield

Geopolitics adds other pressures, which are harder to anticipate and respond to. In Taiwan, TSMC is more than just a company. Locals refer to it as "the sacred mountain that protects the country", and in hard-to-measure ways it contributes to national security. As long as China relies on TSMC for its chips, goes the theory, it will hesitate to attack the island. That makes the firm's global expansion politically delicate. Becca Wasser of the Centre for a New American Security, a think-tank in Washington, says that Taiwan faces a difficult balancing act. It needs to keep enough of TSMC's operations at home to remain strategically indispensable, while accommodating allies who are eager to reduce their dependence on the island's fabs.

The events of the past few years may have made the task harder. Since 2019 ASML, a Dutch firm that supplies technology to chipmakers, has been barred by that country's government from exporting its most advanced tools to China. That has hobbled Chinese firms' ability to produce semiconductors at the 7nm level and below. In November 2024 the American government tightened restrictions further, prohibiting TSMC from offering its most advanced services to Chinese customers. Some analysts warn that cutting China off from the technological frontier could increase the risk of military action.

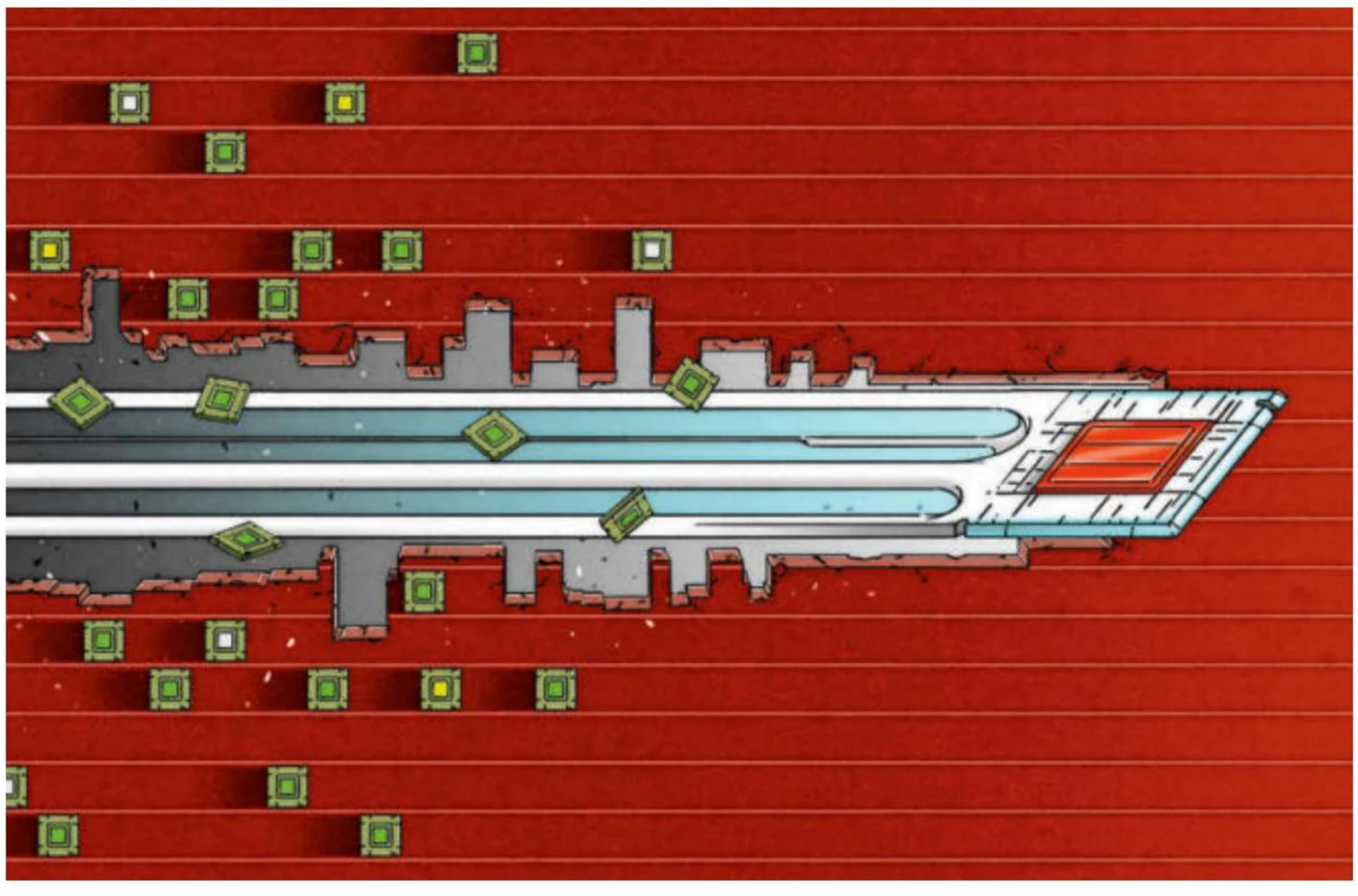
The stakes of this balancing act are immense. In 2022 Mark Liu, then TSMC's chairman, warned that a Chinese invasion would render the company's fabs inoperable, since they depend on a "real-time connection with the outside world". Elbridge Colby, the Pentagon's current policy chief, has gone further—suggesting that the fabs should be destroyed if China invades. Either way, the result would be the same: a global supply chain in chaos.

TSMC sees little value in dwelling on hypotheticals. Mr Huang believes markets are more pragmatic now. Though he does not say it outright, the message is that investors have already priced in geopolitical risk and are less anxious about it. He suggests that if war were to break out, it would not be confined to Taiwan but would engulf its neighbours too. In that case, there would be much more to worry about than chip production.

That view may be too sanguine. Even if the Arizona fabs function as well as expected, two-thirds of the world's most advanced chips will still be made in Taiwan. The firm's most advanced manufacturing technology will remain there, as will nearly all its research and development. Its overseas fabs, by design, will lag at least one generation behind.

Beyond geopolitics, other risks loom. As TSMC pushes the limits of process technology, it could stumble. The firm pulled ahead of Intel in 2015 when the American firm faltered on newer nodes. Its rivals, though bruised, remain formidable. Samsung recently signed a $16.5bn deal to supply advanced chips to Tesla, a lift to its foundry ambitions. The AI boom, which has fuelled much of TSMC's recent growth, could slow down. Tariffs may sap demand for consumer electronics, which account for 40% of the firm's revenue. And the semiconductor industry is notoriously cyclical. Firms tend to overbuild in good times, only to face a glut when demand slows. TSMC's current expansion is bigger than anything in its history.

TSMC's greatest challenge may be the least tangible. Mr Huang says outsiders often assume that chipmaking success is simply about money. Yet, he notes, there are examples where governments have "poured money into a certain company" and still failed. What they lack is TSMC's edge, its resilience, discipline and relentless drive to improve. For the company to keep growing, it must succeed abroad. That will depend on whether it can export its exacting culture. For a firm that has weathered typhoons and earthquakes, and lives under the shadow of war, going global may prove the harder test. ■



Britain

Globalisation, but for crime

Grand Theft Global Inc

FELIXSTOWE

How Britain became a leading exporter of stolen goods

THE *MSC RUBY* is almost ready to leave Felixstowe. Seven remote-controlled gantry cranes are still at work, stacking containers in the ship's bays. Some 11,000 containers pass through this port each day, making it Britain's primary conduit to the arteries of global trade. The *Ruby*'s next call is Gran Canaria—then, the long run down the coast of Africa. Watching the scene Adam Gibson, the lone police officer at the port, whose job is finding stolen cars, sounds rueful: "There's no way in hell I can search even a small fraction of them. We could be standing here now and there could be three or four boxes of stolen cars just there in those stacks. They could be manifested as teddy bears."

Without many people noticing, Britain has become a leading exporter of stolen goods. In the past decade the number of vehicles stolen in the country has risen by 75%. Most end up on container ships; the top destination is west Africa. More recently London has become known as the "phone-snatching capital of Europe". If the victims manage to track their devices, the goods are most likely to turn up in China. British farmers are plagued by raiding gangs. Their tractors and GPS kits usually head east, to Russia or eastern Europe.

For centuries criminals have nicked valuable products and smuggled them across borders, beyond the reach of the law. Britain today shows how this model has evolved in new and alarming ways. Encrypted communications have enabled criminal gangs to operate and co-operate more freely than ever before, and establish global supply chains. As countries in Africa and Asia have become richer, demand for the products common on the streets of the rich world is growing. This combination has spawned a flourishing criminal enterprise. Call it Grand Theft Global Inc.

Britain is a "perfect place" for this business, says Elijah Glantz of RUSI, a think-tank, because of its saturated consumer market and weak export controls. There are lots of expensive cars and phones to steal, and it is easy to get them away. There is also almost no deterrent: Britain's police solve only 5% of crimes (and 2% of vehicle thefts). In continental Europe and America such criminal enterprise is growing, too, though America has stronger scrutiny of exports because it fears fraud and tax evasion. Canada has been hit by a rash of vanishing vehicles. But for now, Britain has the dubious title of world leader.

Cars show how the model has evolved. Like other rich countries, Britain experienced a sharp drop in vehicle crime in the

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1990s, thanks to immobilisers and other technology. In 2013 Britain had only 2.7 thefts for every 1,000 privately owned cars, according to RUSI. Now it is 4.4. Thefts have risen from 90,000 in 2020 to 130,000 last year. That has fed into a 45% real-terms rise in the cost of car insurance (in the EU it has risen only in line with inflation). Vehicle crime is "my number-one issue", says Dan Tomlinson, the Labour MP for Chipping Barnet, a leafy north London suburb.

The method is typically as follows. To defeat sophisticated security systems, thieves use specialised equipment (see next article). Once in, they mask the car with fake number plates and use jammers to override GPS tracking. Then they move it, usually across county lines (collaboration between police forces is often poor), where it will be sold to a group that handles logistics. Sometimes the car is hidden in a shipment of other goods, under a false manifest. More often, the gang employs a third group to give the car a "new identity"—not only paperwork but markers including the vehicle identification number, a unique code stamped on the chassis.

Uncontained

This whole process—from theft to container—often takes less than a day. That is partly because Grand Theft Global is not one outfit but a sophisticated supply chain. It is also lucrative. Consider a Toyota Hilux, which when new costs around £40,000 ($54,000). The group that steals one might be paid £1,500 for a night's work. If another gets it to west Africa, where Hiluxes are sought after, they can sell it for more than it fetches in Britain.

In his large inspection tent at Felixstowe, Mr Gibson provides a guided tour. The cars are all shiny SUVs, though most have been dented by ratchet straps (the thieves don't mind, because that can be fixed cheaply at the other end). Shelves are piled with engines, batteries and sundry parts from cars taken to a "chop shop", a freelance operator who will break them up without asking questions. Some are literally sawn into thirds. Gangs have also begun to target rental companies using fake documents. On the day your correspondent visits, Mr Gibson opens a container, following a tip-off. Inside is a Porsche 911 Carrera S that was rented in Germany two weeks ago: somehow it has found its way into a box in Britain, bound for Africa.

Between 2021 and 2024 almost four in ten stolen cars intercepted at Britain's ports were heading for the Democratic Republic of Congo, according to the National Vehicle Crime Intelligence Service (NaVCIS). The DRC seems to be acting as an entry point to a wider African market. One in five was heading for the United Arab Emirates. From there gangs reach customers across the Gulf. Most thefts in Canada follow the same two routes. Buyers largely want SUVs that can handle poor roads. The elite also want sports cars, which often stick out on the streets of Kinshasa (not least, because many are right-hand-drive). Sometimes, says Mr Gibson, thieves seem to work to an "order".

Grand Theft Global works in a similar way for phones. Some 70,000 phones were stolen in London last year, a rise of more than a third on the year before. Britain accounts for 40% of the stolen phones in Europe. As with cars, low-level thieves sell them on to a fence (a thief might get £100-200 for one that is unlocked, or £30-60 for one that isn't). Again, third-party services have popped up, such as shops that specialise in overcoming security features. Large batches of phones are then wrapped in tinfoil to prevent tracking, and exported, often via container ships.

Investigations have found that most end up in one place: Huaqiangbei market in Shenzhen. Demand in China for second-hand phones is huge; those that cannot be unlocked are broken apart and rebuilt. And there is no better place to do that than Huaqiangbei, the world's largest electronics market. Because Shenzhen is where many of the phones were made in the first place, there is a ready supply of skilled workers. According to a study by Zituo Wang of the University of Southern California, the primary source of stolen phones identified in China is Britain.

British farms have been targeted since Russia's invasion of Ukraine led to sanctions on legal trade. In 2023 the value of claims for stolen GPS kits rose by 137%.

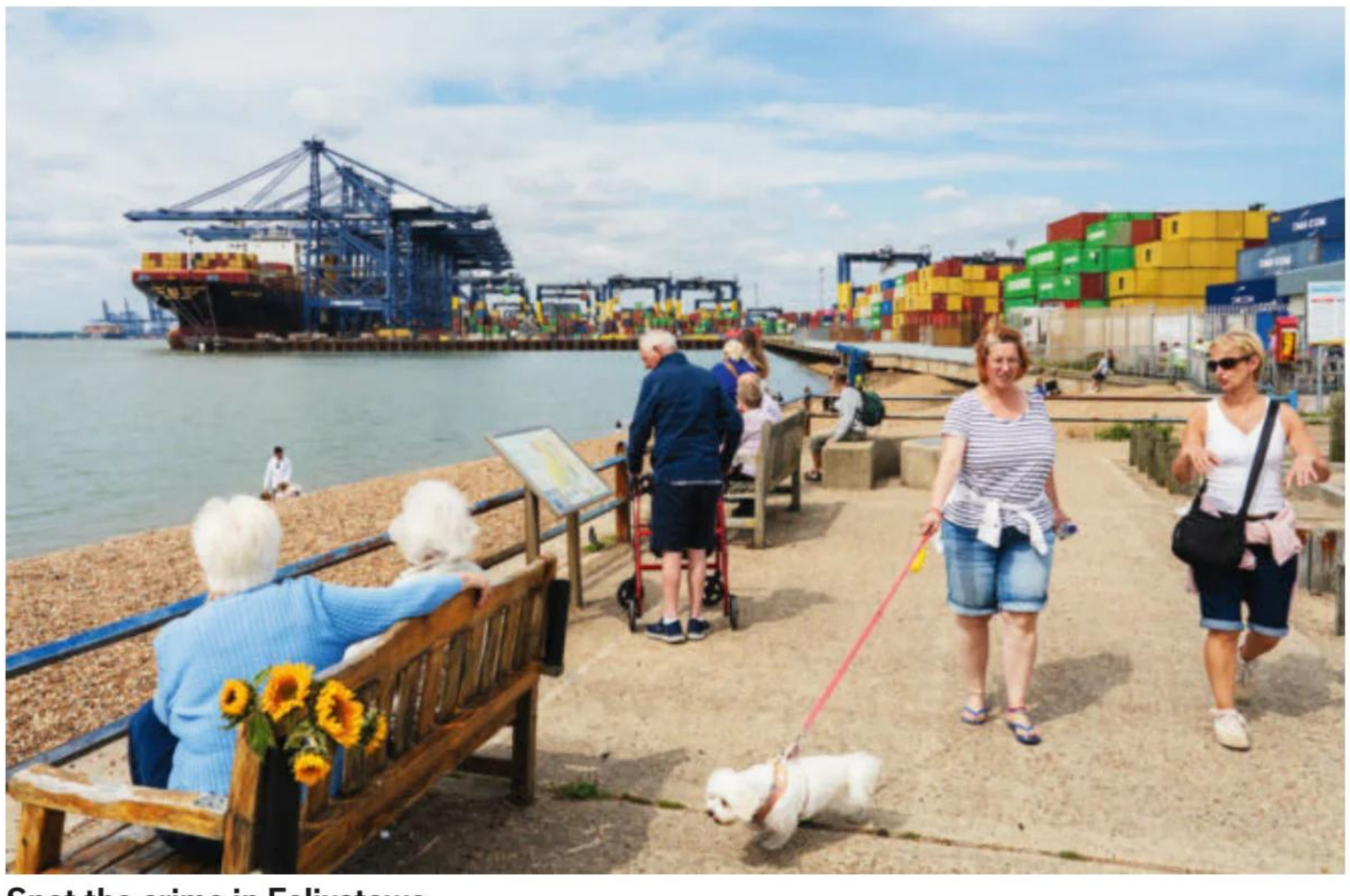
It may be that Grand Theft Global is thriving in Britain because the country has particular vulnerabilities. Or perhaps criminals there have just been quicker to pick up on them. London is, after all, often a city where innovative methods in criminality first emerge. There is little reason to think this one will not be exported, too.

To see why, consider four factors. First is the way containerised shipping works. Around the world, border agencies overwhelmingly focus on imports, hunting for people and drugs. In many countries, exports are hardly checked at all. Anyone can book a container. The way ships are filled—tiers of "freight forwarders" buy batches of containers and sell them on—makes auditing hard. Only a tiny proportion of containers will ever be opened up, let alone X-rayed; typically only when authorities receive a tip-off. For each container Mr Gibson holds up and searches, the police must pay the port a fee of £200.

Today London, tomorrow the world

Second, the ability to covertly communicate, sell goods and transfer money online has favoured criminal groups. Until recently, even highly professional outfits found it hard to do this (case files abound with drug kingpins struggling to make themselves understood on clunky satellite phones). Now someone who wants a Porsche in Kinshasa can be linked seamlessly, via intermediaries, with someone prepared to steal one in Kent. "These groups are just doing business in a very modern way," says Ruggero Scaturro of the Global Initiative against Transnational Organised Crime, a think-tank. In Britain Grand Theft Global is seen as so low-risk that many drug gangs are shifting into it.

That links to the third factor: supply and demand. As cars and phones have become more sophisticated, they have become more expensive in relation to incomes. That alone has made stealing them more attractive. And most middle-class consumers in China cannot afford a new



Spot the crime in Felixstowe

iPhone. Many Africans want better vehicles, but the used-car market remains dominant, legal dealerships scarce, and premium cars have not yet reached the economies of scale that bring costs down. These gaps will continue. As the market for stolen goods becomes more efficient, prices will fall. Once a particular model is sold, there will be demand for parts.

Fourth, police forces largely remain in the dust. NaVCIS has enjoyed some success, intercepting 550 cars in the past year. But that is a small fraction of those getting through. Mr Gibson is one of three officers at ports in the south of the country. Britain's police have yet to catch any high-ups in the business. European forces do not even have dedicated investigation teams. Across the rich world, resources tend to be directed towards "higher harm" offences.

In some ways the success of Grand Theft Global is a story of globalisation. It uses the infrastructure of global commerce, designed for frictionless trade. Identifying stolen goods amid so many containers is like finding "needles in haystacks", says Tim Morris of the Association of British Ports. Globalisation created the supply chain that allows each iPhone—with nearly 3,000 components—to reach the hands of a consumer. The same forces inverted see that phone yanked out of them, re-exported and broken apart again.

Yet Grand Theft Global can also thrive in a world that is increasingly fragmented. Tariffs just make stolen goods more competitive. Sanctions, like those on Russia, boost demand for criminal activity. When countries are less co-operative, it is easier to ship goods to places where they are unlikely to be recovered.

The gains to trade

Indeed, while Grand Theft Global hurts the rich world's consumers, the countries benefiting from the trade have little incentive to curb it. Unlike those in Europe, authorities in China do not make it hard to sell stolen phones. The country is not part of the Central Equipment Identity Register, a global database that networks use to block stolen devices. "China really doesn't care about this problem," says Mr Wang. Even if African countries wanted to clamp down, says Mr Glantz, they would struggle. "Enforcement capability in Cameroon or the Congo is almost none."

In theory sending goods halfway round the world is an added cost. But a container is paid for only when it reaches its destination. If it is intercepted, the cost is borne by the freight forwarder. Extra distance can also reduce the willingness of insurers to pursue recovery. One officer says French police have shown her videos of stacks of stolen cars in Senegal that cannot be repatriated. Once the *MSC Ruby* leaves port, its contents are as good as gone. ■

Criminal innovation

Makers v takers

The arms race is speeding up

IMAGINE MEETING a seasoned British car thief in 2013. They would probably have cut a sorry figure. Every year of their career, the grind had got harder. The tools of their trade, such as a coat hanger or "slim jim" (a flat metal strip) for bypassing locks and strippers for manipulating ignition wires, had, slowly but surely, been rendered obsolete, thanks to improved security technology. Business had dried up.

Not any more. The recent boom in car theft offers a window into an ever-shifting battleground. On one side are manufacturers, who make and sell products. On the other are thieves, who try to nick them. As the technology for providing security, and defeating it, has become better and cheaper, the battle has speeded up.

Modern cars are sometimes called "computers on wheels". That brought benefits, but also vulnerabilities that carmakers were slow to grasp. The first was "relay attacks", which became popular in Britain in 2016 after manufacturers introduced keyless ignition. A thief stands on a street and uses a device to "bounce" the electronic signal from a house to the car.

Manufacturers have designed that out in newer models. Now thieves are more likely to get in by plugging a device directly into one of the car's electronic components, which tricks the car into thinking it is being contacted by a smart key. Adam Gibson, a police officer at Felixstowe port, points to several cars he has recovered that have been broken into using this technique: one via the tail-light, another via a component next to the bonnet latch.

The kit for this can be easily bought online. Videos on YouTube even explain how to use it. Most thefts are carried out by organised criminal groups, which will invest as much as £20,000 ($27,000) on a single piece of equipment. A police force says that, when it confiscated such a device, it bought only a quiet couple of weeks.

One challenge for manufacturers is the speed of criminal innovation. The timeline for designing and making cars is long; once criminal groups have found an entry point, they might have years of easy business. Another is cost. At the top end of the market, companies invest heavily in fixing vulnerabilities, partly because they worry that a rash of thefts will hurt their brand. For mid-market cars, price competition is fiercer, and drivers are less likely to blame the manufacturer if their car is stolen.

Criminals have similarly had to adapt their techniques when it comes to phones. The introduction of biometric locking and face identification made it harder for thieves to get into locked phones, rendering them less valuable. The response was a surge in "snatch thefts", whereby thieves yank an unlocked phone from someone's hand, and then disable tracking before the victim can report it lost.

Manufacturers have, in turn, developed motion-based theft-detection measures (a phone will lock in response to a jarring movement) and stolen-device protection (it requires a passcode when moved to an unfamiliar place). Yet the security of any system depends on humans. Many phone users do not turn on such features. Criminals have become adept at phishing for the personal information needed to unlock a phone. If all else fails, a locked phone can always be sold on for parts.

Manufacturers are often accused of dragging their feet. MPs have argued, for example, that Apple could easily undermine the business model of phone-snatchers by introducing a "kill switch", but it won't because of "strong commercial incentives". That oversimplifies things. Manufacturers design security around passwords and locks, and already allow users to remotely "kill" their phone when it is locked. Introducing a kill switch for a phone that appears to have been legitimately transferred to a new user would create a host of new problems. A second-hand seller could, for example, try to extort money from a buyer by threatening to kill a phone post-sale. Manufacturers would struggle to design an infallible process for distinguishing thefts from legal sales.

A fairer conclusion is that—because its costs are socialised, via higher insurance premiums—theft is often a problem that no one has a strong incentive to fix. ■

Asylum hotels

For whom the Bell tolls

A court ruling threatens to disrupt the government's asylum policy

THE BELL HOTEL in Epping is a drab 80-bedroom coaching inn 27km as the crow files from Westminster. Since April it has housed up to 138 male asylum-seekers on behalf of the Home Office. Epping Forest District Council, which is controlled by the Conservative Party, contends that doing so constitutes a "material change of use" and the hotel's owner should seek planning permission to convert it to a hostel. The owners of the hotel, on the advice of the Home Office, disagree. As there is a fine line between a hotel and a hostel it is for a court to decide, in the legalese, the "balance of convenience".

On August 19th a High Court judge, Mr Justice Eyre, sided with Epping council. He granted an interim injunction against the hotel, which means that all asylum-seekers will have to leave by September 12th. The injunction will be in place until a final judgment, which will consider the merits of the case more thoroughly, is given in the autumn. The decision in Epping, a sleepy town of 12,000, will have ripple effects on law, government policy and politics.

The case is not the first of its kind to be heard. The Home Office's use of hotels for asylum-seekers over the past three years has irked plenty of local planning authorities. In May 2023 the High Court granted an injunction to Great Yarmouth Borough Council in Norfolk against a seafront hotel. Requests for other injunctions in Fenland, Stoke-on-Trent and Ipswich—all in 2022—were dismissed. Although Mr Eyre said that there is "simply no general rule" to apply to these cases, the Epping case will give like-minded councils hope.

Andrew Fraser-Urquhart, a barrister at Francis Taylor Building, says the judge cited several factors that are "pretty readily transferable to other situations". First, that owners were forewarned by the council in 2020 that housing asylum-seekers constituted, in their view, a change of use. Second, that the owner's decision not to seek planning permission "sidestepped the public scrutiny and explanation which would otherwise have taken place". Finally, the judge thought the underlying merits of the case were strong.

The hotel could now seek planning permission, yet the council's position is abundantly clear: Chris Whitbread, its leader, has called the hotel's usage for asylum-seekers "totally unsuitable". That is, in part, because on July 8th a 41-year-old Ethiopian resident of the hotel was arrested after he allegedly tried to kiss a 14-year-old girl on the high street (he denies this). Protesters—some of whom were violent—amassed outside the hotel for a number of weeks. The council's strand of argument that housing asylum-seekers "poses a clear risk of further escalating community tensions" was dismissed by the judge.

The case has given encouragement to Nigel Farage, the leader of Reform UK, who has championed the protesters' cause. Writing in the *Telegraph*, Mr Farage said that "Epping has shown the way to win." Reform says it will now seek similar legal action against hotels across the ten councils that it controls. Kemi Badenoch, the Conservatives' leader, encouraged other Tory-run councils to follow Epping's example "if your legal advice supports it".

For its part, the Labour government has pledged to end the use of hotels for asylum-seekers, but only by 2029. Of the 106,000 asylum-seekers being housed by the government at the end of June, 32,000 were staying in hotels. As well as being political dynamite, there is a robust fiscal case for ending their use: hotels house about a third of asylum-seekers but account for three-quarters of accommodation costs. In July there were 210 hotels in use, just three fewer than a year ago.

While the government tries to work out where to house the stock of asylum-seekers already in the country, it also has a problem with the flow. Small-boat migrants, the most visible source of new claimants, have increased by 50% over the past year to 45,000 and are soon likely to reach an all-time annual high. Labour has spent much of its first year promising to fix the "broken planning system"; now the planning system, via the courts, has bitten back where the government least expected. ■

A message from Epping

Exam results

Flunking it

The government bemoans the performance of poor white kids

FOR TEENAGERS, August is make-or-break time. On August 21st, 700,000 16-year-olds in England received their GCSE exam marks, joining the 300,000 18-year-olds who got their A-level grades a week earlier. The results show that the gap in attainment between pupils in London and the rest of the country remains wide. In 2019 the average GCSE grade in the capital was 6% above the English average. It is now 9% (see chart). The same trend is true for A-levels.

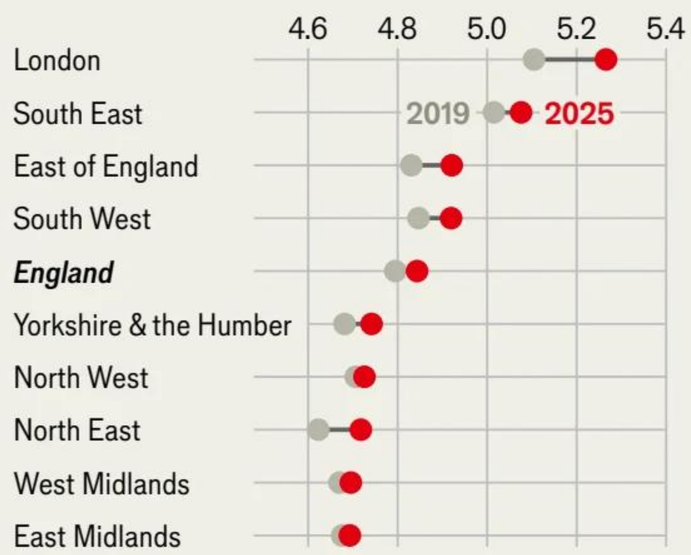
Bridget Phillipson, the education secretary, frets about the "lack of progress for children from white working-class backgrounds". Detailed data for this year are still to come, but the attainment gap at 16 between white children in England on free school meals (ie, from low-income families) and all others rose by four percentage points in the five years from 2018-19.

The government wants to narrow that gap. Other poor children on free school meals have not fallen behind in recent years. At 16 ethnic Chinese children who are also disadvantaged are 39 months ahead of their white British peers in England.

Turning up for class would help. Fully 23% of white British children were persistently absent last year, compared with 4% for ethnic Chinese. The Education Policy Institute, a think-tank, finds that the rising attainment gap since 2019 among disadvantaged children can be entirely explained by increased absenteeism.

Capital progress

England, average GCSE grade awarded
9=highest



Sources: Ofqual; *The Economist*

The poor me's lament

The moral of "The Salt Path"

THE SOUTH WEST COAST PATH

On the trail of a literary scandal

IF LIFE IS a spin on fortune's wheel, Raynor Winn always seems to lose. In her bestselling 2018 memoir "The Salt Path", Ms Winn recounts a journey she and her husband, Moth—recently homeless and reeling from his diagnosis with a terminal illness—made around Britain's rugged south-west coastline. In May her "unflinchingly honest, inspiring and life-affirming true story" became a box-office hit, starring Gillian Anderson and Jason Isaacs. And then some pesky journalists pointed out that many details, big and small, seem to have been invented or exaggerated. Alas, poor Ms Winn has since had "vitriol poured on me from all quarters".

What explains the book's success? And what is the moral of its unravelling? To explore, your correspondent set off, copy in hand, to retrace the first 30km of the walk, from Minehead to Lynmouth.

The journey begins with a climb out of Minehead. It is "excruciatingly steep", says Ms Winn, leaving her with a "huge blister two inches across", which soon halts progress. There are many grassy spots but, inexplicably, the duo decide to pitch their tent on heather (like "lying in the fork drawer"). Ms Winn's thin sleeping bag is "bone-aching cold". Moth's pills mean he doesn't want to have sex. He snores.

The adjective most often applied to "The Salt Path" is "uplifting". Yet what strikes the reader most is constant grumbling, which surely accounts for part of the book's success. In "The Wild Places", Robert Macfarlane, perhaps Britain's finest nature writer, happily nestles down in his bivouac with some cheese and rye bread for dinner; a few sonnets are enough to keep him warm. The book sold around 100,000 copies. Ms Winn's moan-fest sold 2m and was translated into 25 languages. Its message: you too could be redeemed by nature, even if you find it annoying.

Ms Winn finds everything annoying. After making it down to Bossington—a pretty descent that Ms Winn spends mulling whether she dislikes uphills or downhills more—the couple stop for a cream tea they can't afford. Here they admit to a family that they are homeless, whereupon "the man reached out and pulled his child towards him and the wife winced and looked away". Ms Winn finds such pathos in this scene that she repeats it twice later, almost word for word. Elsewhere, complete strangers call the couple "disgusting".

Really? The *Observer* alleges that Ms Winn lied about the cause of her and Moth's financial woes (she actually stole £64,000 from a former employer), their homelessness (the couple own a house in France) and the severity of Moth's illness (he has none of the usual symptoms of corticobasal degeneration, or CBS). Ms Winn has rebutted these claims, unconvincingly. And more fabrications have emerged.

A few miles on, in Porlock, locals have mixed views. "It's all a load of old nonsense isn't it," says Lesley Thompson, buying her morning paper in SPAR. Her main gripe is that a scene in the film featuring a local beach has led to streams of confused tourists looking for a path that does not exist. Paul McGee, the owner of the Lorna Doone Hotel, is more chipper, crediting Ms Winn with a slight uptick in business. Next year he expects a surge, when Ms Anderson's fans stream over from America.

One question raised by the scandal is whether publishers should be more sceptical. On the hill out of Porlock, the Winns encounter a blind man practising yoga, who catches them up at a picturesque church. "We're just walking the path," they tell him. "You are, and you'll travel many miles," he replies. "You'll see many things, amazing things, and suffer many setbacks," he continues, before laying his hand on Moth's. "But you will overcome them, you'll survive, and it will make you strong."

Perhaps one far-fetched scene could be overlooked ("I've been in that church many times and I've never been spoken to by any blind man," says Tony Richards, the churchwarden). But most of the reported speech in the book sounds like a Hollywood script rather than real life. Industry figures have noted that many publishers have no fact-checkers. A book billed as a "true story" is subject to far less scrutiny than this article.

In 2003 James Frey published "A Million Little Pieces", a memoir about his life as an addict caught up in crime. When it was exposed as a fake, readers successfully sued the publisher for compensation. But the book remained in print, marketed as a novel, with an apologetic note from Mr Frey, claiming his mistake was "to write about the person I created in my mind".

Ms Winn insists her book is true and says she "can't allow any more doubt to be cast on the validity of those memories". But it will be, in part because the scandal itself is such a good story. "The Salt Path" is a morality play in which the protagonists—homeless, dying, poor—endure a callous world, indifferent to their suffering. Not only does that tale now appear fabricated, it has caused suffering of its own, including to CBS patients who took false hope from Moth's recovery.

What, then, is the moral of this story? It could be, as Ms Winn would put it, the power of keeping going. The journey has brought her riches, though it seems unlikely she will be counting her good fortune. Perhaps it is that the truth will always catch up with you. Yet Ms Winn's book will remain in print; while some readers are angry, others seem not to mind. "I've heard all that stuff and I don't care," says a woman inspired to walk the trail, a few miles before Lynmouth. "It's about the theory." ■

Fact meets fiction

BAGEHOT

The meaning of "Bosh"

A desperate political class is out of ideas

TOM SKINNER is a typical reality-television star. The market trader from Romford found fame in the British version of "The Apprentice", ending every other sentence with the word "bosh". From there, Mr Skinner cemented a niche celebrity by posting motivational messages on Instagram while eating odd breakfasts (such as lasagne and baked beans) and through appearances on daytime television, where he would cheerily debate any topic ("Pub Bosses Fear They May Have To Hire 'Banter Bouncers'"). This month he reached the pinnacle of any self-made celebrity: a slot on "Strictly Come Dancing".

Mr Skinner has carved a less likely role in politics. Right-wing thinkers invited him to a seminar, "Now and England", at the Roger Scruton Legacy Foundation where Boshman declared: "England is the absolute guv'nor". He admitted he was thinking of "giving it a go in politics". Dominic Cummings, the brains behind the Brexit campaign and Boris Johnson's 2019 general-election victory, offered to help him run for mayor of London. When J.D. Vance, America's vice-president, visited Britain this summer, doyens of the British right recommended that Mr Skinner should be on his itinerary. "When the vice-president of the USA invites ya for a BBQ an' beers, you say yes," said Mr Skinner. "Bosh."

How does a mattress salesman from Romford bag a meeting with the man who is a choked Big Mac away from being the most powerful on Earth? To his fans, Mr Skinner is an amusing presence in their smartphone; to Westminster, he is a guide to a country politicians struggle to understand. Partly it is what he symbolises. Mr Skinner makes class less complicated. He is a wheeler-dealer. When not on telly or on TikTok eating an entire Christmas dinner for breakfast, he buys things at one price and then sells them for slightly more. It is a simple, tangible living. What can politicians offer downwardly mobile workers, whose precarious job prospects are being annihilated by artificial intelligence? Good question. And one that politicians can avoid if Mr Skinner acts as a cipher for the entire working class.

If class confuses Westminster, so does gender. Politicians cannot decide whether young men are incorrigibly woke or dangerous, porn-addicted misogynists. Pollsters, in general, have no idea what they think. Only the crudest caricatures survive, which Mr Skinner happily plays up to. What do men like? Football? Saying bosh? Saying bosh at the football? Reform UK has launched a football shirt for £39.99 ($54). Mr Skinner, a West Ham fan, was an early guest on "Talking Pints", Nigel Farage's show on GB News, which helped keep the Reform leader front of mind while ostensibly taking a break from politics. "Talk to us about the word 'Bosh'," suggested Mr Farage.

Perhaps the time of the celebrity politician has arrived. After all, politics is an attention game, and those in Westminster are losing it. Mr Farage is the biggest British politician on TikTok, with 1.3m followers. That is just over half as many as The Famileigh, a suburban family who do silly dances. It is easier to teach an internet poster about politics than it is for a politician to become a successful poster. Cannier politicians know that traditional media have already sunk. In their desperation they cling to whatever digital flotsam they can grab, even if it is a white-van man who eats spicy Korean noodles for breakfast on Instagram.

So far, no one in British politics has come close to harnessing the full power of social media, three decades after their invention. Marshall McLuhan, the media theorist who said "the medium is the message", argued that people cannot comprehend their current media environment, even though it shapes everything about them. Instead people "look at the present through a rear-view mirror", meaning they "march backwards into the future". Nowhere is this more true than Westminster. In July Sir Keir Starmer hired a former editor of the *Sun*, a once-mighty tabloid, to gee up the government's comms. By contrast, Mr Skinner is a prophet for the present. Dyslexic, he happily admits he uses ChatGPT to turn garbled Essex prose into synthetic poetry, in order to convert internet fame into political power. McLuhan would have loved it.

There is, in general, a dearth of charisma in British politics. Kemi Badenoch, the Conservative Party leader, is not charismatic but she is captivating, like a motorway pile-up. Sir Keir has never pretended to be exciting. Promise made, promise delivered. And so the politicians turn to Mr Skinner, in the same way pilgrims head to Rome to rub St Peter's foot. Downing Street sought Mr Skinner's views on apprenticeships. Robert Jenrick, the shadow justice secretary, filmed a short video with Mr Skinner calling for a crackdown on tool theft. "Bosh?" squeaked Mr Jenrick. "AHHH, BOSH," roared Mr Skinner in reply, blessing the wannabe Tory leader with the spirit of Bosh.

Cry God for Tom, England and Saint George! Ahhh, bosh!

Mr Skinner is the latest beneficiary of Westminster's habit of monomania. It can focus on only one type of voter at a time. At the moment, Mr Skinner is treated as Albion incarnate, as if he is John Bull with an Insta. Yet he is not even the only man from Romford famous online for saying "Bosh". Big John, a cheese wholesaler, has found a similar level of fame by ordering large Chinese meals, signing off with "bosh". While Mr Skinner rails against the "woke brigade" and says "London has fallen", Big John offers a more optimistic message. Bosh Britain contains multitudes.

Westminster knows something new is needed, although it does not know quite what. Every party's polling is only a small swing from catastrophe. Everyone is looking for someone or something to save them. Mr Skinner's rise in Westminster is a symptom of desperation more than anything else. If Bosh is the answer, what exactly was the question? ■

Europe

The view from the Kremlin

Pretend to negotiate while grinding down the enemy

RIGA

Vladimir Putin's wish to destroy Western unity as well as Ukraine is as fierce as ever

ON AUGUST 16TH, a day after his summit with Donald Trump, Vladimir Putin summoned Russia's grandees to the Kremlin's Hall of the Order of St Catherine. Built in tsarist times to show off the glory of the Russian empire, the hall was the setting for Mr Putin's account of his achievements during the visit to Alaska, a former Russian imperial possession. He praised Mr Trump's "sincerity" and efforts to end the war. "It moves us closer to making necessary decisions," he said.

In the same hall, three and half years ago, Mr Putin had gathered his terrified courtiers and ordered them, one after another, to make the case for recognising the separatist-held territories in eastern Ukraine. That bizarre televised spectacle signalled the start of the invasion of Ukraine. His post-Alaska gathering, however, indicated that the war might now end—on Russia's terms, of course. The message reflects both Russia's exhaustion from war and Mr Putin's confidence of winning it, through fighting or by favourable negotiation. His peace initiatives and military actions align to the same goal: more power.

Mr Putin's tone was emollient: "We respect the US administration's position, which wants the hostilities to stop as soon as possible. So do we." One person who seems to take Mr Putin's words at face value is Mr Trump, who, over the months, has displayed an almost clinical dependence on the Kremlin's strongman, and has recoiled every time Ukraine and its European allies have urged him to apply pressure on Russia's leader.

During the follow-up summit in Washington with Volodymyr Zelensky and seven European leaders, a hot mic caught Mr Trump whispering to Emmanuel Macron, the French president: "I think he [Mr Putin] wants to make a deal for me, you understand that? As crazy as it sounds." Despite earlier promises, Mr Trump has not imposed sanctions and no longer demands a ceasefire as a precondition for talks.

Mr Putin is unlikely to be bothered by the smiles, shoulder-slapping and assurances of support for Ukraine at the White House. As far as he is concerned, the meeting produced little more than general talk of security guarantees that will apply only if Mr Putin agrees to peace. Mr Trump's call to Mr Putin, in the middle of his meeting with European leaders, offered him reassurance: Mr Trump will do nothing about Ukraine without consulting Russia.

Mr Putin's own summit with Mr Trump, on the other hand, was much more of a success. Branded a murderous criminal by ▸▸

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Mr Trump's predecessor, he got a red-carpet reception and applause from Mr Trump, who ended Mr Putin's diplomatic isolation and restored his position as a power player in Europe.

"I congratulate all of us on a perfect summit. It was grand. To win everything and lose nothing—only Alexander III could do that," enthused Alexander Dugin, an ultra-imperialist philosopher and proponent of war, nodding to one of Mr Putin's favourite tsars. It is still unclear what the two summiteers agreed: Mr Putin went to Alaska not to negotiate, but to preen.

Recent polls suggest that 70% of Russians think their country is prevailing on the battlefield, yet 60% favour peace talks. Fear of defeat is long gone, but there is not much appetite for more war. One well-informed businessman sums up the elite's attitude: "Nobody gives a fuck how it's going to end, as long as it does. Putin can sell anything as a victory." At a minimum, though, he wants this to include the recognition, by America at least, of Russia's occupation of Crimea and the corridor, seized in war, that connects it to Russia; Ukraine's permanent exclusion from NATO; and presidential elections in Ukraine. "No deal is likely while Zelensky is in power," says a Russian insider.

Mr Putin's new enthusiasm for diplomacy reflects his constraints. Russia's economy is heading into recession. In the first seven months of this year its budget deficit has overshot the target for the whole of 2025—unsurprising, considering a 20% increase in public expenditure in those seven months. At least 5% of all government spending now goes to maintaining a contract army that is mostly fighting in Ukraine, according to Re:Russia, a Vienna-based think-tank.

This does not make Mr Putin's position critical: he can always impose yet more pain on the economy. But "this will increase risks and internal tension, which will radically change Russians' perceptions of the costs of war," says Kirill Rogov of Re:Russia. Moreover, for the third summer in a row, Russia has failed to break Ukraine's front line. It still controls only a percentage point of Ukrainian territory beyond what it held at the start of 2023.

Mr Putin does not want to risk mass mobilisation, or to carry on the war for another year. The vast human and economic cost would highlight his army's failure to defeat Ukraine's. "Everybody understands that [carrying on] the war is senseless and it's time to end it," says a Russian magnate. But this does not mean Mr Putin is about to stop. As Mr Rogov says, he still craves a breakthrough in the next two months: Ukraine is short of manpower; desertion is common. "He is opening the diplomatic door as a contingency, in case his offensive does not yield the desired effect."

For Mr Putin endless negotiations are simply another part of his war plans. They keep Mr Trump on his side and further the broader aim of sowing dissent in the West and in Ukraine. As a Russian blogger puts it: "The main thing to understand is that the war has not stopped. Our president will consider the [diplomatic] options, and in the meantime the military keeps working to liberate our territories." Mr Putin's demand that Ukraine hand over territory in the western Donbas that he has not won on the battlefield is meant to trigger a political crisis in Ukraine. He knows Mr Zelensky has pledged not to cede an inch of land, and that Mr Trump may dump him if he does not cave in.

To achieve his goal of dismantling the post-cold-war security order, Mr Putin wants to unravel Ukraine politically, drive America out of Europe and undermine Europe's support for Ukraine. He is yet to achieve any of this. But even if the war's active phase winds down, his struggle to destroy Western unity will persist. ■

Ukraine

Is it safe?

Security "guarantees" for Ukraine are plagued by woolly thinking

ONE OF THE most important unresolved questions surrounding any peace deal for Ukraine is about security guarantees—how to ensure that Russia will not break its word and invade again. A nightmare scenario for Ukraine is that Russia will use peace and the lifting of sanctions to rebuild and retrain its army, and re-emerge as a more formidable force to attack Ukraine again and finish the job. On August 18th Mr Trump said that Russia had agreed to accept security guarantees, repeating a claim made days earlier by Steve Witkoff, his envoy to Russia, that "Article 5-like protection" was on the table. What would that mean in practice?

Article 5, the clause enshrining NATO's mutual defence, specifies that an attack on one member is seen as an attack on all, and that each ally will help with "such action as it deems necessary". On August 19th Mr Trump explicitly ruled out NATO membership for Ukraine, describing Ukraine's bid as "very insulting" to Russia. Mr Trump, like Barack Obama and Joe Biden before him, is unlikely to commit to go to war against Russia to protect Ukraine.

Nor is it clear what, precisely, Mr Putin and his team told the Americans when they met in Alaska on August 15th. The details are important. In 2022, during talks with Ukraine, Russia did indeed agree that Ukraine's partners could provide guarantees as part of a peace deal. But the Kremlin later inserted a poison-pill clause that would have allowed it to veto any activation of those guarantees. On August 20th Sergei Lavrov, Russia's foreign minister, said that any new deal would need to be based on those proposals, with China included among the guarantors.

There are also mechanisms that fall well short of Article 5. One would be security "assurances", rather than guarantees, like the Budapest memorandum of 1994, in which America, Britain and Russia promised to respect Ukraine's integrity and, feebly, to "consult" if it was violated. Plainly, those did not work. In the middle, says Samuel Charap of the RAND Corporation, a think-tank, would be something like the pact America signed with Israel in 1975: a promise to take remedial action if Egypt violated a ceasefire, such as a snapback of sanctions, for example.

All of this is also tied up with the question of a "coalition of the willing", spearheaded by Britain and France, that could deploy troops to Ukraine and planes to its skies. The coalition, which could include non-European countries like Australia, has been engaged in detailed military planning for months, with some countries considering where in Ukraine they would place their forces. One sticking-point has been whether Mr Trump would enable such a force, for instance with logistics and intelligence, and "backstop" it by promising to step in if it were to be attacked.

In recent days Mr Trump appeared to suggest that he would. On August 18th he said that Europeans would be the "first line of defence", but America would "help them out with it", though he gave few clues as to what that might mean. The next day he re-

iterated that he was willing to help, possibly with air power, "because there's nobody [with] the kind of stuff we have...I don't think it's going to be a problem." Marco Rubio, America's secretary of state, is leading a working group to examine this, along with broader guarantees. Russia has reaffirmed that it is opposed to the idea.

At the heart of the Trumpian vision of a peace deal is a contradiction: Russia, the aggressor, would have to consent to any security guarantees given to Ukraine, a state whose legitimacy it denies. The unknowable factor is Mr Putin. If he has indeed come to the opinion that it is time to make strategic decisions to stop, he may bend. If not, the impossible issue of squaring serious security guarantees with a Russian veto will be a convenient stumbling-block.

What is also not clear is what precisely a European force would do. One aim is for it to train and develop Ukraine's own armed forces. Another is to offer reassurance by the mere presence of foreign troops, who left in a rush in 2022. But if the force were attacked, or if Russia were to break a peace agreement and reinvade, how would the coalition respond? A formal pledge to fight Russia would amount to Article 5 by other means. A vague mandate with woolly rules of engagement could tempt Russia to test European resolve. One worry of the Biden administration was that if a European force were embarrassed inside Ukraine, it could undercut the credibility of Article 5 on NATO soil.

In practice, Ukraine, scarred by experience, will put only limited faith in outside pledges and foreign troops. Speaking in the White House, Emmanuel Macron, France's president, acknowledged that the ultimate guarantee was Ukraine's own armed forces. That made it all the more important, he noted, that a peace deal should include no limits on the size and capability of those forces, as Russia has also sought. Mr Zelensky cannot sign a deal that would leave his country defenceless. Mr Putin still seeks to turn Ukraine into an enfeebled vassal state cut off from its allies. ■

Germany's chancellor

The Aussenkanzler

BERLIN

Friedrich Merz cuts a smart figure abroad but struggles at home

FRIEDRICH MERZ never enjoyed the honeymoon customary for a new head of government. When he stood for election to the chancellorship in the Bundestag on May 6th, he fell short of the required absolute majority on the first round. He got there on the second attempt, but it was a sign of things to come. His majority is wafer-thin. Worse, he cannot count on the loyalty of all the deputies in his coalition, made up of his centre-right Christian Democrats (CDU), their Bavarian sister party the Christian Social Union (CSU), and the Social Democratic Party (SPD).

Immediately after taking the oath of office Mr Merz embarked on a series of trips, first across Europe (Paris, Warsaw, Brussels and Kyiv) and then to America. His enthusiasm for travel quickly earned him the tag *Aussenkanzler* (foreign chancellor). He has succeeded in his ambition of establishing Germany as a leading voice in international politics, playing a prominent role in this week's Ukraine peace talks, and seems to get on well with Donald Trump. But at home he is stumbling. After 100 days in office Mr Merz was less popular than Olaf Scholz, his unloved predecessor, had been at that point, according to a poll by ARD, a German public broadcaster. Only 32% were satisfied with Mr Merz, compared with 56% for Mr Scholz and 74% for Angela Merkel, Mr Scholz's predecessor.

Recently, and even more worryingly, some polling suggests the hard-right Alternative for Germany (AfD) may be ahead of the CDU. And according to a survey by Insa, 68% of Germans expect that next year's regional elections will for the first time return a state premier from the AfD. The states holding elections next year are Baden-Württemberg, Rhineland-Palatinate, Saxony-Anhalt, Berlin and Mecklenburg-Western Pomerania. It is a sign of the times that mainstream parties will consider it good news if the AfD comes first but fails to win an absolute majority in Saxony-Anhalt, and becomes the biggest party in just one or two of the five states.

Less honoured in his own country

What went wrong? "Merz is not an experienced politician, he acts more like a CEO," says Holger Schmieding, chief economist of Berenberg, a bank. In foreign policy his top-down leadership works well, but at home his management style ruffles feathers. Many parliamentarians from his own party were angered after he rammed through a loosening of Germany's balanced-budget rules before even taking office. Since then, his peremptory style has led to a number of domestic storms that have clouded his debut.

In July his troubles centred on nominations to the country's powerful consitutional court. Mr Merz had to cancel a vote in parliament on three appointments after some of his own party's deputies rebelled against the nomination of Frauke Brosius-Gersdorf, a law professor. Several Christian Democrats took offence at her liberal views on abortion. Mr Merz said their attacks against her amounted to a campaign of personal defamation. Ms Brosius-Gersdorf has since withdrawn her candidacy.

Then on Augut 8th Mr Merz decided to halt German exports to Israel of weapons that could be used in Gaza, without consulting anyone but his closest advisers. This upset both CDU and CSU lawmakers, as well as some state premiers. Markus Söder, the leader of the CSU and second-term premier of Bavaria, was particularly miffed not to have been sounded out.

To some extent Mr Merz gets a bad rap. His government has done reasonably well at implementing the four big changes he promised for his first months in office: cutting red tape, more frequent border checkpoints, a reform of *Bürgergeld* (Germany's minimum income) and corporate-tax cuts. Construction permits have sped up, minimum-income reform is in the works, and companies can write off more capital investment; a lower corporate-tax rate will take effect in 2028. But the media have focused on a jump in corporate insolvencies, a rise in unemployment (though the rate is just 3.6%, low by international standards) and on a broken promise to lower electricity prices for consumers.

The stakes for Mr Merz's chancellorship are high. He has described it as Germany's last chance to stave off a government run by the AfD. It is early days, but so far the *Aussenkanzler* has not managed to seize the opportunity. ■

Wildfires

A continent ablaze

FLORENCE

This summer has set new records for devastation

METEOROLOGICALLY, EUROPE is a middling sort of place. Hurricanes, monsoons and sandstorms pass it by. But in one increasingly alarming way, Europe stands out. It is warming faster than other continents. Since the mid-1990s its average temperatures have risen by 0.53°C per decade, which is more than double the global land average of 0.26°C. This summer the effects have been dramatically apparent.

Heatwaves roasted northern Europe in June, and the south in August. According to the European Forest Fire Information System, wildfires in the European Union had burnt almost 10,000 square kilometres by August 19th. That compares with an average over the same period since 2006 of 2,440 sq km. Blazes have swept across swathes of the Balkans, Cyprus, France, Greece, Portugal and Spain. Some of them have come scarily close to big cities including Madrid, Porto, Podgorica and Patras, Greece's third-largest. At least eight people have died, probably many more. Countries that are struggling to cope have sought help a record 17 times through the EU's civil-protection mechanism, a system for co-ordinating disaster response.

Relative to its size, Portugal has been hardest hit. Fire has consumed 2.9% of the country's entire territory: 2,600 sq km, more than was burnt in the whole of the EU in the same period last year. Another 4,000 sq km have been ravaged in neighbouring Spain. Around 30,000 Spaniards have been forced to leave their homes. Some of the wildfires are of explosive intensity, a new trend. "There are areas where there's no way the fires can be controlled by human means," said Margarita Robles, Spain's defence minister. "Only the weather will allow us to have that control."

With temperatures dropping and rain forecast, the corner may have been turned. But plenty of questions remain as to whether central and regional governments need to do more. In Spain, total public investment in fire prevention fell by more than half between 2009 and 2022, according to a lobby group of forestry companies.

Global warming turns large parts of Europe's countryside into kindling. But it does not apply the match. Ignition comes from either natural events, usually lightning strikes, or human intervention. The most recent study of the causes of wildfires in Europe used data from 2016. Of the blazes with known causes (more than half the total), a mere 4% were found to have started naturally. Accidents and negligence explained 39%. But the main reason, accounting for 57% of outbreaks, was that the fires were lit deliberately.

Why? In the early 2000s, Italy's forestry police, the Corpo Forestale dello Stato (CPS), a body that has since been absorbed by the semi-militarised Carabinieri, carried out a detailed study based on data from 2001. The proportion of fires attributable to arson was 60%, almost identical to the figures in the later, EU-wide survey. The CPS found only about one in ten of the fires had been lit by pyromaniacs or others who were mentally disturbed. The most common reason was that an attempt to clear land for pasture had got out of hand. Other wildfires were deviously lit so that the area burnt could subsequently be reclassified for construction.

Clearly there is a case for stiffening the penalties for starting fires and ensuring that land devastated by blazes cannot subsequently be used for grazing or building. It might also be worth thinking hard before ending the autonomy of specialised forces like the CPS. ■

Turkish football

Sublime sport

Istanbul's clubs are newly flush with cash and talent

FOUR OF THE five priciest transfers in European football this summer involved England's cash-soaked Premier League. The fifth was more unusual. Victor Osimhen, a Nigerian striker, left Napoli, the Italian champions, for Galatasaray in Turkey's Super Lig. The €75m ($87m) transfer fee was the biggest in Turkish history, more than triple the old record. Mr Osimhen will earn €15m a year after taxes, comparable to top players in England and Spain. Nor was it a one-off. Galatasaray and their crosstown rivals, Fenerbahce and Besiktas, have signed loan deals for high-profile players from Europe and even Saudi Arabia. Continental clubs are tightening belts. What is happening in Istanbul?

The Super Lig has long been popular among European players near the end of their careers. Turkey's football-mad president, Recep Tayyip Erdogan, has lured them with a tax exemption: they pay a flat 20% rather than the normal progressive rates. But the average age of those signed this summer by Galatasaray, Fenerbahce and Besiktas is just 26.

Paradoxically, one reason the clubs can afford prime players may be linked to Turkey's economic troubles. Mr Erdogan long kept interest rates low despite spiralling inflation, which peaked at 85%. The lira fell from ten to the euro in 2021 to almost 40 in 2024. But Turkey's biggest teams bring in lots of euros. Analysts estimate Galatasaray earned €32m from the Champions League in the 2023-24 season, and that the three Istanbul sides collectively made €45m from Europa League matches last season. Bayern Munich paid Galatasaray €30m for Sacha Boey, a French defender.

The weak lira helped teams inflate away domestic debt and costs. In euro terms, Turkish clubs' debts fell by 19% between 2019-23; those of European teams rose by 40% on average. Economic policy has since improved, and the clubs were left with euros to invest. Signing elite players on year-long loans, even on high wages paid in euros, is smart. It should help the clubs progress further in European competitions, which earns more euros, without adding long-term liabilities. If the lira falls again, they can unload expensive players.

But not Mr Osimhen. Galatasaray have signed him for four years. To be sure, they tried before they bought. They took Mr Osimhen on loan in the 2024-25 season. He scored 26 goals in 30 matches, and Galatasaray won the Super Lig.

Reaping top players from Europe

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CHARLEMAGNE
Nobel or bust

How Europe should use Trump's Nobel obsession to aid Ukraine

FOREIGN DIGNITARIES invited to the White House know a thoughtful gift can help lubricate the wheels of diplomacy. Volodymyr Zelensky, Ukraine's president, went the safe route as he arrived in Washington this week, offering a golf club to his golf-mad host, Donald Trump. Past gifts from abroad have included a presidential private jet from Qatar, a posh set of Mont Blanc fountain pens from Angela Merkel (no match for the presidential Sharpie) and a portrait of one Donald J. Trump made with gemstones, courtesy of Vietnam. As a parade of European leaders set out for Washington to support Mr Zelensky, what memorable trinket from their home continent could they possibly bestow upon the president who has everything? Mr Trump, as it happens, no doubt had something in mind. For there is one bauble from Europe he has alluded to repeatedly of late: the medal awarded to recipients of the Nobel peace prize. His pining for the acclaim granted every year by a committee appointed by the Norwegian parliament is turbocharging American diplomacy in a way that might both encourage Europe and cause it to panic.

An obvious plot offers itself to the deft diplomat: could Europe, the continental home of the Nobel prizes, dangle the prospect of a shiny medal and an Oslo banquet as a sort of carrot to lure Mr Trump onto their side when it comes to Ukraine? Alas, the committee that decides on the prize, comprised of five obscure Norwegian grandees drawn from politics and civil society, seems above such antics. Repeated assurances from Mr Trump that he is not campaigning for the gong, nor thinks he will ever get it, are taken as sure signs he desperately wants it. (A recent phone call to the Norwegian finance minister, in which the matter of the Nobel reportedly came up alongside threats of tariffs, is another clue.) Mr Trump wants his dealmaking skills to be recognised in endeavours beyond the building of gaudy skyscrapers, and there is no greater arena than diplomacy. The global elites sneer at mere moneymaking. But recognition from Oslo is worth much more than the medal's weight in gold (about 200 grams, or $20,000).

The prospect of joining Teddy Roosevelt, Mother Teresa and Martin Luther King as a Nobel laureate (best not to mention Barack Obama) has sent Mr Trump into "peacemaker-in-chief" mode. In recent months he has boasted of spreading harmony faster than the world's baddies can spark strife. Somewhat improbably he has claimed credit for ending six (or sometimes seven) wars in as many months. Where does the fellow find the time? At least in his own mind, amity now prevails between the Democratic Republic of Congo and Rwanda; there is nothing but fraternal love between India and Pakistan; the guns will forever be silent in the conflicts between Azerbaijan and Armenia, Iran and Israel, Thailand and Cambodia. The repentant warmongers, among them Binyamin Netanyahu of Israel (not so repentant when it comes to Gaza), have backed Mr Trump for the Nobel.

Yet to secure the gong Mr Trump knows he will have to tackle the thorniest war of all: Russia's full-scale invasion of Ukraine. The president campaigned on a promise that peace could be brokered in just 24 hours. Even Hillary Clinton, once Mr Trump's arch-nemesis, says delivering a deal that doesn't involve Ukraine making fresh land concessions would be worthy of the prize.

This presents an opportunity for Europe. The American president has at times seemed bored by the war in Ukraine. After a quick deal proved elusive, he appeared ready to dismiss the conflict as "Biden's war" and move on. If the shimmering mirage of the Nobel can repurpose his messianic vanity towards greater engagement, so much the better. Europeans hope a newly invested Mr Trump will come to realise that Russia is in fact the obstacle to a realistic deal—and thus to Mr Trump's white-tailed trip to Oslo.

There are downsides to Mr Trump's Nobel lust. His get-peace-quick schemes might come at the expense of the tiresome legwork needed to stop the fighting for good. Mr Trump, never a man for details, will instinctively seek the headline of an ended war, leaving Vladimir Putin in charge of the fine print. But a mere photo-op in the Rose Garden won't do for Mr Zelensky. Above all he needs security guarantees America would have to at least support, but the offer of which remains infuriatingly vague. If talks drag on, as no doubt they will, Mr Trump may find it easier to push Ukraine to accept a shoddy peace than to force Russia into a durable one.

Truce or dare

Beyond his pining for a gold medal, Mr Trump seems to genuinely loathe wars (and has joked that ending them may be his way into heaven). If nothing else, Trump-as-peacemaker is more pleasant to deal with. European leaders visiting the White House received obsequious praise from the president, in contrast to past encounters. Will that endure after October 10th, once the peace prize is bestowed, inevitably to someone else? For Charlemagne will happily wager there are no sane Norwegians who would plump for Mr Trump to receive any prize, let alone one for peace. The man has, after all, threatened to invade countries, slashed American foreign aid and deployed troops in his own capital.

If it is not in European leaders' gift to get Mr Trump the Nobel, they should do the next best thing: loudly proclaim they are backing Mr Trump for the prize, with letters of endorsement to boot, and drop hints of "Oslo having been spoken to". Such nominations have zero value; well over 100,000 worthies, including history professors at fourth-tier universities, can put forward whomever they choose for consideration. Several hundred make the cut each year; even Adolf Hitler, of all people, was nominated once. But the gesture will go down well in Mar-a-Lago. If Europe can find a way to channel Mr Trump's prize-winning delusions to its advantage, a little Nobel tomfoolery may be worth it. ■

United States

20 years after Hurricane Katrina

Muskrat ramble

NEW ORLEANS

Does it make sense for America to keep subsidising a sinking city?

STAND ON THE rim of the grassy levees and you can see New Orleans's dilemma: rising water on one side, a sinking city on the other. The people who call this place home have learned to live with water. Storms punctuate time as birthdays and holidays do in other parts of America.

Twenty years after Hurricane Katrina tore through the Gulf coast and shattered New Orleans, the city remains as defiant—and precarious—as ever. In its aftermath the federal government spent $125bn, in today's dollars, to rebuild a region that is home to just 1.4m people, making Katrina America's costliest storm. Had the government not invested so much, the city would have probably followed the path of Galveston, Texas, which ceded its place as the state's ocean-side economic engine to Houston and fell off the national radar after a devastating hurricane in 1900.

New Orleans was spared that fate by federal money. But it could not be described as thriving. Its three biggest industries—tourism, shipping, and oil and gas—are losing jobs. It is bleeding residents faster than any other city of its size in America. Last week the mayor was indicted on corruption charges. Those could be dismissed as short-term problems. Rising water cannot. Even the levees, some of which doubled in height after Katrina, are slipping into the sea. The city is a project that begets more projects. To preserve it will cost much more. How long can this carry on?

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35 Making rain
36 Lexington: Washington, DT

Problems have been brewing since New Orleans was settled by French colonists. Jean-Baptiste Le Moyne de Bienville convinced his colleagues in Paris that the capital of French Louisiana should sit on the swampland where the Mississippi river met the Atlantic. The port gave the French an edge in commerce and defence. But, in 1719, a year after New Orleans was founded, it flooded. For the next century the city fought against water, as French rule gave way to Spanish and then American. By 1840 New Orleans had become the biggest city in the South and the fourth-busiest port in the world. The political heroes of the day were the "drainage kings" who engineered dry land. In 1914 the mayor went on a national tour to advertise the extraordinary feat of reclaiming New Orleans.

Around that time an architect noticed cracks in St Louis Cathedral, the city's grandest church. New Orleans was sinking below sea level. The levees that engineers had built to stop the flooding prevented the river depositing sediment to replenish the land as it always had. The city was also losing its natural defences against tropical storms. In the 20th century oil and gas companies carved 10,000 miles of canals through the marshes of coastal Louisiana. That killed the cypress groves that slowed the rush of water towards the city, and 2,000 square miles of land sank into the ▸▸

ocean. "The paradox is that the very devices that made New Orleans possible had sowed the seeds for its undermining," says Richard Campanella of Tulane University.

Locals knew the city was vulnerable, but relished living in a place where food fused the cultures of three continents and deaths were honoured with jazz parades. When Katrina breached the levees on the morning of August 29th 2005, they paid a price. Flooding killed 1,800 people and caused $200bn worth of damage. Hundreds of thousands of people fled. Parts of the city filled up like a bathtub. Yvonne Blue sat in her attic in the Lower Ninth Ward with her grandchild in her arms and her feet in the water. When a boat came to rescue her ten hours later she held her breath and swam under to unlock the door.

Katrina sparked a ferocious partisan argument about who was to blame for failing to prepare: the city (whose Democratic mayor botched the evacuation and stoked panic about violence in shelters) or the federal government (which was ultimately responsible for the levees). Democrats blamed President George W. Bush and won a thumping victory in the national mid-term elections of 2006.

The destruction also raised existential questions. Was draining the swamps a mistake? While first responders were picking bodies out of homes, Russel Honoré, the army general in charge of the recovery, briefed Washington politicians aboard a warship at the port. During his update Dennis Hastert, then the speaker of the House of Representatives, interrupted to ask whether New Orleans should be rebuilt. He was not alone in thinking: perhaps not. Religiously inspired pundits drew parallels to the biblical story of Sodom and Gomorrah; environmentalists were arguing for moving the city up the river. Nancy Pelosi, then the minority leader, stood up and struck the map before them in anger. "We're going to rebuild this damn city," Mr Honoré remembers her saying. President Bush agreed.

And so they did. The decision to rebuild went back to Bienville's economic argument: most of the country's agricultural exports flowed through the port and a robust military industry had built up around it. But there was also something about the culture of the city that people near and far wanted to protect. New Orleans was like a funny-shaped piece in the American puzzle—without it there would be a hole. Robert Carlisle, a construction worker who rebuilt 300 homes after the storm, remembers plastering over mouldy wood to get people back in quickly. "Some of those houses—we were just patching them up," he says, but "it made sense because of the way the people felt about this city."

Some found better, or easier, lives elsewhere and did not return. Franklin Avenue Baptist Church, the biggest in New Orleans, lost 3,000 congregants. Neighbourhoods like the Lower Ninth Ward started to resemble the teeth of a jack-o-lantern: houses interspersed with empty lots where the grass now grows waist-high. Despite the shrunken population, the federal government doubled down. In the decade that followed it spent $14bn to build a system of levees and floodwalls to withstand another storm as strong as Katrina. This time the government promised "risk reduction", not "protection". "It's an American adage that we're not going to abandon one of our great cities," says Michael Hecht of Greater New Orleans, an economic-development group, "but the humbling of Katrina made people understand that we are never going to defeat Mother Nature."

On the 20th anniversary of Katrina, New Orleans is a city of even more paradoxes. Some good has come from its overhaul. After switching to a fully charter-school system, educational results in New Orleans dramatically improved. Its flood-control system is now the envy of other vulnerable places like Houston and New York. The West Closure Complex, its largest pumping station, could empty an Olympic swimming pool in five seconds. The system works remarkably well. Residents on the western bank pay around $150 a year for it to be maintained and their homes rarely flood. South of the city, where the fingers of the bayou stretch into the ocean, houses now sit on stilts. A group of volunteers there, who call themselves the "Cajun Navy", travel to other parts of the country to help when it floods.

The place is nonetheless in peril. In the next 50 years Louisiana is expected to lose as much coastal land as it did in the past 100. The probability of huge storms will more than double. Since 2020 the feds have declared four times the number of weather disasters in all Louisiana parishes as in the average American city, and far longer blackouts. Kasey Sullivan, a shrimp seller, says she gets panic attacks whenever her phone buzzes with a weather alert: "you can't breathe and you gasp for air, and you're like, 'What's my next move?'"

Preparing the city to withstand future shocks will take more colossal investment, and New Orleans is a poor city in a poor state. Locals do not see retreat as an option. "If we stop investing in New Orleans, where would we ask people to move?" asks Allison Plyler of the Data Centre, a research firm. She is right that other American cities have become more vulnerable, too. Saltwater is threatening Miami's drinking water, Los Angeles periodically goes up in flames and extreme heat in Phoenix is giving people asphalt burns. When Hurricane Helene destroyed North Carolina's mountain towns last year, it became clear that places once seen as climate refuges are now susceptible to the deadliest storms. But because Congress appropriates funds, spending in one place comes at the expense of another. Louisiana already takes far more money from the government than it sends back in taxes.

Ms Blue, who swam to safety during Katrina, reckons that New Orleans will "go down" in the next 50 years, regardless of how much money is poured in. These days she spends hours watching storm clouds from her porch, just blocks from where her old house once stood. Because of how damp the soil is, the small patch of grass in her front yard grows so fast that she has to mow it twice a week. She considers that a sign of what will become of her city. "I may not be here to see it," she says, "but it's nothing but swamp and it will go back to being swampland." ■

And the waters assuaged

Housebuilding in Washington, DC

The YIMBY capital

WASHINGTON, DC

Meet the fastest-growing neighbourhood in America

PERSUADING YUPPIES to move to "Swampoodle" was always going to be an uphill battle. So when the ex-industrial zone next to Washington, DC's main railway station was slated for redevelopment in the 1990s and 2000s, the authorities ditched the neighbourhood's original 19th-century name, which had already fallen into disuse. Instead, they christened the wider area "NoMa" ("north of Massachusetts Avenue"), a syllable or two away from trendy locales like NoMad (in New York) and Soho (in each of New York, London and Hong Kong).

And come the yuppies have, in their thousands. The zipcode that encompasses NoMa has had more new apartment units added than anywhere else in the country since 2017, according to data from Yardi, a real-estate software company (see chart). Long Island City, just across the East River from Manhattan, is in second place. Not far behind is Navy Yard, a nearby Washington, DC, neighbourhood with a similar feel, though with a reputation for housing a slightly Trumpier crowd.

A visitor disgorged from the NoMa metro stop, which is now the sixth-busiest in the city, will almost immediately be barraged by "now leasing" signs, boasting rooftop pools, full-featured gyms and one-month-free rental offers. The buildings around were generally put up only five or, at most, ten years ago. Most have a blocky, plastic-clad look, that telltale feel of late-2010s and early-2020s American apartment developments. Café chains like Blue Bottle and Maman sell their residents $8 lattes and $5 chocolate-chip cookies.

NoMa is, in short, not far off the stuff of YIMBY dreams. "Yes in my backyard" activists—often 20- or 30-somethings radicalised by the high cost of rent in big cities—want to make it easier to build more, and denser, housing to raise the supply of homes and ultimately pull down property prices. Many YIMBYs have flocked to NoMa; the Institute for Progress, an influential YIMBY think-tank, has its headquarters there.

Aesthetics aside, then, has the flood of new apartments in NoMa made a difference to housing affordability? Very possibly. Home prices in the Greater Washington area rose roughly in line with other big American cities in the 1990s and 2000s, but have lagged behind them over the past decade or so–just as the building boom in areas like NoMa and Navy Yard got going. That has hardly left the city cheap, but has made it at least less exorbitant than east coast peers like New York or Boston.

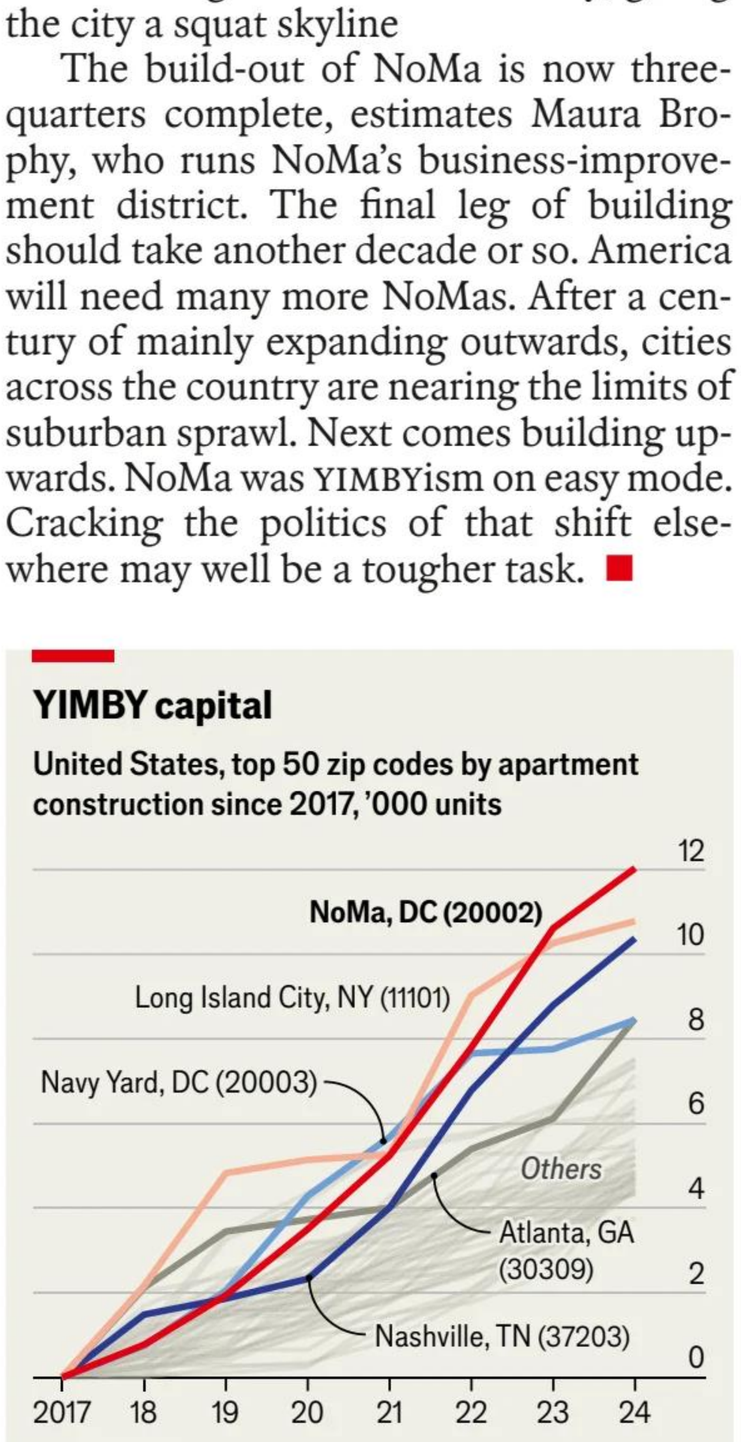
The political bargain that has allowed NoMa to deliver all those units quickly, and cheaply, was a relatively unusual one. For a start, very few people had lived in the area since the original residents of Swampoodle were turfed out in the early 20th century to make way for Union Station. That meant no local NIMBYs to complain about new construction ruining their surroundings. Serious residential development in the area became viable only after a new metro station for the neighbourhood was added in 2004, jointly funded by local government, the federal government (keen on new office space near Capitol Hill) and housing developers.

Washington's government was also in dire financial straits in the 1990s, when NoMa's redevelopment was conceived, making the extra tax revenue particularly appealing. Salim Furth, an economist at George Mason University, also points out that unlike many other big cities, Washington, DC, proper is dwarfed by its suburbs. That fosters a virtuous sort of competition: if Washington fails to house people who work there, they can move to Maryland or Virginia and take their tax dollars with them. Even then, zoning codes in much of Washington remain highly restrictive. Tall buildings are banned entirely, giving the city a squat skyline

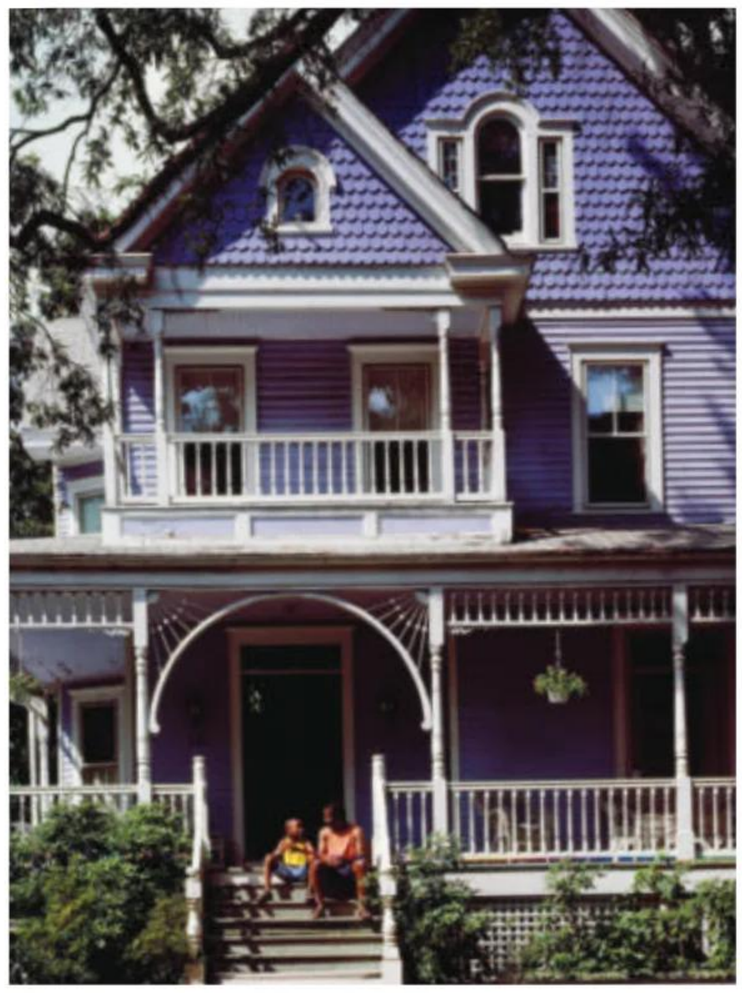
The build-out of NoMa is now three-quarters complete, estimates Maura Brophy, who runs NoMa's business-improvement district. The final leg of building should take another decade or so. America will need many more NoMas. After a century of mainly expanding outwards, cities across the country are nearing the limits of suburban sprawl. Next comes building upwards. NoMa was YIMBYism on easy mode. Cracking the politics of that shift elsewhere may well be a tougher task. ■

YIMBY capital

United States, top 50 zip codes by apartment construction since 2017, '000 units



Source: Yardi



Suburbia

Conservative lefties

MONTGOMERY COUNTY, MARYLAND

Meanwhile, among NIMBY Democrats

THE DEMOCRATIC PARTY needs a makeover. Donald Trump's victory in November showed that the party can no longer rely on bashing him to win elections. The Republican president is trusted more than Democrats, whose approval rating is the lowest it has been in 35 years. Democrats are searching for a positive vision to inspire voters, and leading the pack, at least among party elites, is the brand of "abundance". Popularised in a recent book by Ezra Klein and Derek Thompson, two journalists, abundance types advocate overhauling a decades-old liberalism of bureaucratic red tape with one that builds clean energy, infrastructure and, above all, affordable housing. Even Zohran Mamdani, the socialist Democratic nominee for New York City mayor who wants to freeze rents, has given the abundance wing of the Democratic Party a few nods. But the high-powered Maryland suburbs outside Washington suggest the politics of abundance can be treacherous.

Montgomery County is one of the 30 richest counties in America. Nearly 75% of its 1m residents voted for Kamala Harris in the 2024 election. When the Democrat-controlled county council entertained a plan last autumn to rezone large swathes of exclusively single-family-home neighbourhoods—allowing for multi-unit dwellings, townhouses and apartment buildings—liberal suburbanites rained hell. "This is a radical change that will be the ▸▸

death of single-family communities," said one man, as hundreds gathered to mock and boo council members in a high-school auditorium. "There was massive resistance," recalled Will Jawando, a council member. "People were apoplectic." That backlash helped whittle down the proposed rezoning to little more than 1% of single-family homes along main thoroughfares, which the council passed this July, over more boos and groans.

Left-leaning suburbanites have many reasons to oppose rezoning, from concerns about overcrowding their high-performing schools to parking, wastewater management and traffic. But they boil down to one: they like the suburbs. "There is always a reason for why housing shouldn't be built," says Andrew Friedson, the council member behind the rezoning reform.

"When it comes to housing, expanding the supply of homes will reduce the rapid acceleration of housing values. That is what abundance is supposed to do," says Richard Kahlenberg, author of the book "Excluded" and director of housing policy at the Progressive Policy Institute. When Mr Trump took the White House in 2016, yard signs began to pop up with sentiments like "Black Lives Matter", "No Human is Illegal" and "Science is Real". "None of that requires an ounce of sacrifice on the account of progressive elites," says Mr Kahlenberg, a county resident.

Homeowners naturally reject the charge of elitism. They see so-called affordable housing as a Trojan horse—a means by which developers can lay claim to the suburbs. "No developer giveaways at our expense," read yard signs outside quaint million-dollar homes on the drive into Washington. "It's a total scam to benefit developers instead of representing the people that live here," said Gerald Smith, an interior architect, who is among the dozens protesting against the rezoning effort on Connecticut Avenue, a thoroughfare into Washington.

Such Democratic infighting has fuelled a competition for progressive virtue. Kim Persaud, a community activist from the heavily Hispanic town of Wheaton, called rezoning a "racist policy" and "blatant injustice" that would displace black and Hispanic renters so that wealthy white people can live in luxury condos. She said the majority of those for rezoning are "young white kids who come from privilege" and whose parents could give them a down-payment. During a county hearing, one self-described white, privileged young renter said that the rezoning proposal was needed to house "the thousands of queer people, people of colour and immigrants who live in dangerous, conservative states and need to move to our sanctuary county". Among Democrats, this way of discussing zoning remains much too abundant. ■

MilTok

No-man's-land

The young female soldiers of TikTok

BEFORE PETE HEGSETH became defence secretary, it is fair to say that he did not always see the point of women in some parts of the army. "Our military runs on masculinity. It's not toxic at all, it's necessary," he once wrote. To win confirmation by the Senate he moderated his views: all combat roles remain open to women. That is just as well. Finding enough recruits is hard. Strangely, one thing that helps the armed forces do so is an app that Congress has tried to ban on national-security grounds.

Enlist in "#MilTok", TikTok's niche for military content, and you may find a lieutenant doing her skincare routine, a navy officer on a nursery run, or an air-force operator vlogging mid-flight. They command thousands of followers and millions of views, reflecting a broader shift within the ranks.

While the number of male active-duty members has fallen by 10% since 2005, the number of their female counterparts has grown by 12% over the same period. Still, women have had a tough time assimilating. As recently as 2023, 13% of active-duty women experienced gender discrimination compared with 1.4% of active-duty men, according to the Department of Defence.

Some of these women turned to TikTok—a platform which offered recognition when they were overlooked and support when they were isolated. It soon became a place for talking about issues that male counterparts rarely encountered, such as adapting the female uniform or navigating grooming regulations. "Women didn't have other women to look up to or talk to about their struggles," says Monica Smith, a first lieutenant in the army's bomb-disposal unit (pictured above).

But not all attention has been welcome. The comments sections on #MilTok are often littered with lewd or disparaging remarks. Peers and superiors in the Pentagon are also wary, especially since the Chinese-owned app is deemed a security risk. "When my unit heard I had a TikTok, people were really sensitive about it," says Lieutenant Smith. It doesn't help that some servicewomen court controversy, like Hailey Lujan—an influencer known for pairing cutesy antics with graphic references. In one video, she dances in tactical gear to a Charli XCX song while joking about bleeding out in the trenches.

Such posts have fuelled online speculation that these women are "psy-ops": psychological-operations specialists deployed to influence perceptions of the military. Most reject that label. They are not shouting about the institution—they just want to be heard within it. As Ms Lujan wrote (on Instagram), "It's simply a new method of standing up for what I believe in, by all silly means necessary."

Weather

Cloudbusting

The opponents of cloud-seeding come for geoengineering

RAINMAKER, A STARTUP backed by Peter Thiel, a prominent venture capitalist, among others, flew an aeroplane over south-central Texas in early July, depositing 70 grams of silver iodide within two clouds. The technique, known as cloud-seeding, aims to coax more water from the heavens than the clouds would yield on their own. This is done by aeroplanes; Rainmaker wants to do it more cheaply, and, therefore perhaps more frequently, using drones.

Two days later a deadly downpour hit Kerr County, in central Texas, and with it a deluge of theories on social media blaming Rainmaker's technology. Augustus Doricko, the founder and CEO of Rainmaker, says that he was physically threatened and has since hired a security detail. Rainmaker was not the only target. A member of Veterans on Patrol, a vigilante group, vandalised a weather radar system in Oklahoma, believing it to be weather-manipulation technology.

It is not possible for cloud-seeding to have caused the extreme rainfall and flooding seen in Texas, says Andrew Dessler, an atmospheric scientist at Texas A&M University. Meteorologists attributed the downpour to atmospheric water vapour from the remnants of Tropical Storm Barry. But as anyone who has found themselves in a conversation about chemtrails can attest, the combination of government plus aircraft plus altering weather patterns looks like evidence for something conspiracists have always known was true.

Among those who feared a sinister plot are several Republican politicians, including Marjorie Taylor Greene, a congresswoman from Georgia. In the aftermath of the floods Ms Greene published several social-media posts warning of the dangers of weather modification. The congresswoman has form on this. "Yes they control the weather," she wrote on X after Hurricane Helene hit North Carolina particularly hard last September. On July 15th she proposed the Clear Skies Act, a federal ban on weather modification. If passed (which is unlikely), the legislation would make it a felony to release chemicals into the atmosphere with intent to modify the weather.

The bill fits into a broader trend. This year 22 states have introduced bills to ban or restrict weather modification. In Florida, which enacted its law in June, meddling with the weather carries a prison sentence of up to five years. In many states this is a cost-free way for state legislators to signal their hostility to the federal government and openness to conspiracy theories, since only a small number of states in the West actually do it (see map).

Cloud-seeding has been carried out in America since its invention in the 1940s by scientists at General Electric Research Laboratories, New York. Commercial and government cloud-seeding operations spread and by the 1950s about 300m acres (1.2m square kilometres) of land were targeted for cloud-seeding. While the efficacy of the technique remains contested, a study in the *Journal of Applied Meteorology and Climatology* in 2014 found it can increase rainfall by up to 15%. Jonathan Jennings, a meteorologist who directs the cloud-seeding programme in the Utah Division of Water Resources, one of the state's main water agencies, says it is useful as part of a broad water-management strategy. The main use is to cause snow in winter, thickening the snowpack and thus increasing the flow of rivers in the spring and summer, rather than to cause rain when there is a drought.

The federal government does not carry out cloud-seeding, but nine states have active programmes. Rainmaker's operation on July 2nd was contracted by the South Texas Weather Modification Association, an organisation of local water agencies. What had hitherto been practised quietly is becoming tangled up in bad faith and worse science. The Climate Science Legal Defence Fund has provided legal aid to scientists who have been the subject of doxxing (the practice of publishing private information without consent) and lawsuits from weather conspiracy theorists.

Wrapped up in the hostility towards cloud-seeding is a stronger animus towards geoengineering—the idea of deliberately cooling the Earth. The proposed federal ban on weather modification would outlaw research on solar geoengineering, which includes spraying sulphur dioxide into the stratosphere. Solar geoengineering is controversial, but more research is needed to understand its risks. The Florida law prohibits "geoengineering and weather modification"; Ms Taylor Greene's bill includes solar geoengineering and solar-radiation modification as examples of things to ban. That this is how the future of mankind's home planet is being determined is so odd that it might seem like, well, a conspiracy. ■

On top of the world, looking over the edge

LEXINGTON
Capital punishment

Donald Trump's bossing of Washington is part of a long history, and also of a national trend

AMERICA'S CAPITAL city is particularly vulnerable to the dictates of President Donald Trump because of an insurrection against Congress—not the one on January 6th 2021 but a more successful one a couple of centuries earlier. On June 21st 1783 hundreds of mutinous soldiers surrounded Congress in what was effectively the capital, Philadelphia, to demand back-wages that the revolutionary government could not afford to pay. Unlike the insurrectionists of 2021, they did not attack the building or hurt anyone, but they chased Congress out of town.

They also turned the congressmen against not just Pennsylvania, which they concluded could not be trusted to protect them, but against the idea the capital should be part of any state. Without "complete authority at the seat of government", warned James Madison, "the public authority might be insulted and its proceedings interrupted with impunity". The host state might also exercise undue influence. Eventually, the "complete authority" of Congress over the capital was written into the constitution, and after some wandering and wrangling the capital itself fetched up in a swamp at a bend in the Potomac river.

Perhaps to avenge itself, Congress has been insulting the public authority of Washington, DC, and interrupting its proceedings with impunity ever since. Washington has more people than Wyoming or Vermont—about 700,000—and they pay far more federal taxes per head than the residents of any state. But they live a bitter paradox, inhabiting the capital of a great republic in which they have no voting representation. Until Mr Trump came along, notes Michael Fauntroy, a political scientist at George Mason University who has studied the limited home rule Congress granted Washington in 1973, "It's always been the House that's been more problematic for the city." Congress, which kept authority over the district's budget and its laws, has intervened to block domestic partnerships, abortion subsidies, needle-exchange programs and even late-evening hours for a pool (some Capitol Hill staffers lived nearby and objected to the noise, Mr Fauntroy says).

Washington does have a say in the choice of president. The 23rd Amendment, ratified in 1961, gives it the same number of electoral votes—three—as the least-populous state. If Washington cast those votes for Mr Trump, he would no doubt be championing its long-cherished dream of statehood.

Instead, Washington is on the receiving end of another Trumpian manoeuvre: he has correctly identified a problem and then hyperbolised it (Washington is no "shithouse", as he once called it, but a pretty, staid city where crime is coming down but remains a scourge); he is using presidential power in a way no predecessor has (sending in the National Guard over the mayor's objections, temporarily commandeering the police, dispatching masked agents in unmarked cars to arrest people); he is saturating the internet with his own reality (including by sending social-media teams on FBI raids); and, by dispensing more drama than care, he seems likelier to compound tensions than to ameliorate woes. So far the new federal presence is more obvious in safe spaces frequented by tourists than in poor neighbourhoods most victimised by criminals. Restaurants report steep declines in business.

The mismatch of means and putative ends was captured by a slick video, shared by the White House on X, of heavily armed agents swooping in after dark to arrest a man at his home. The man had thrown a sandwich at another federal agent days before. He had previously been arrested in the incident and then released. (He had also been fired from his job in the criminal division of the Justice Department.) He should not have thrown the sandwich. Yet Washington would have to be paradise to be terrorised by such an act. Further: no federal-agent theatrics in the first place, no airborne sandwich—not to blame the victim, of course.

A city dominated by Democrats when the federal government is dominated by Republicans, Washington is experiencing an enhanced version of the predicament confronting Democratic cities in some Republican states. As political power is becoming more sharply distributed geographically and intensified by polarisation, Republican states are increasingly overruling, or "pre-empting", policies in Democratic cities on matters such as environmental regulation and criminal justice. "For about a decade now, there've been much more targeted interventions, clear-cut efforts to prevent or undo local policies by the states," says Richard Briffault, a professor at Columbia Law School.

The urban bungle

Some cities helped bring the trouble on themselves through mismanagement, a record that blights the Democratic Party. But in Washington, at least, the overlords are part of that problem. The Senate has left vacant 13 of 62 judgeships on the court that handles local crime, while the House, apparently out of fecklessness, has blocked Washington from spending $1bn of its own tax revenue, forcing $400m in cuts even as the mayor, Muriel Bowser, is trying to hire 500 more police officers.

But the politics of beating up Washington are irresistible, and so Republican states are getting in on the act. Six Republican governors plan to deploy National Guard troops to the city. The troops lack authority to make arrests and may not have much to do. Outside Washington's Union railway station, an encampment festooned with anti-Trump signs ("rapist" "felon") has stood since the spring. It now shares the plaza with National Guards, who on a recent afternoon posed for pictures and cheerfully exchanged greetings with passers-by. "The troops have been great," one protester says. Yet their presence in the city, in flak jackets and desert camouflage, beside giant armoured vehicles, seemed as jarring as such displays after the attacks of 9/11. May it remain so. ■

The Americas

Canada's Conservatives

Turning over a new leaf?

OTTAWA

Pierre Poilievre has a new seat and a big task

VOTERS OF A conservative persuasion in the riding, or constituency, of Battle River-Crowfoot in rural Alberta clearly now have a good handle on the spelling of Pierre Poilievre's name. In a by-election on August 18th they wrote it on more than 80% of the ballots cast.

Mr Poilievre is not from the riding. The vote was called when a pliant fellow Conservative stepped down, providing Mr Poilievre with a shot at a parliamentary seat. He needs it. In April he led his party to a crushing general-election defeat by Mark Carney's Liberals, one of whom took the Ottawa riding Mr Poilievre had maintained a firm grip on for two decades. Without a seat, he could not continue as Canada's formal opposition leader.

So, along with more than 200 other candidates (hence the write-in ballot), Mr Poilievre contested Canada's second-safest Conservative district. It was, however, far more than a matter of parliamentary procedure. He needed a resounding victory to restore his reputation and consolidate his power over the party. The conditions that sent the Conservatives to their fourth election loss in a row remain in place.

At the end of 2024 the Liberal Party had sunk in opinion polls, with the Conservatives holding a seemingly insurmountable 25-point lead. Yet a mere four months later, the Conservatives were crushed once again by the Liberals, this time led by Mr Carney in place of Justin Trudeau.

What happened? The former central banker bristled against Donald Trump's graceless claim that Canada should become America's 51st state or face hobbling tariffs. No way, said Mr Carney: Canada would restructure its economy and diversify it away from its previous overwhelming dependence on trade with the United States. He has since been diligent in nudging his party back towards the centre on issues such as taxes and energy development. And he has dropped many of Mr Trudeau's policies deemed to be excessively "woke". When, on July 31st, Mr Trump carried out his threat to impose a 35% tariff on Canadian exports, it only added fuel to the nationalist outrage that drove the Liberal surge in April.

At the same time, a swan-dive in support for the socialist third party, the New Democrats (NDP), has for the time being turned Canadian politics into a two-party tussle. But this means that the split vote among progressives is no longer bound to help the Conservatives to victory, as it has in the past.

None of these developments bodes well for Mr Poilievre, who will face his party's verdict on his leadership in January. But there are a few bright spots. His decision to stick to cost-of-living issues did attract support from younger and working-class Canadians. The Conservatives' share of the vote rose to 8m, or 41% of the total—its highest in nearly four decades. Mr Poi- ▸▸

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lievre believes that can be built upon next time round. When he hasn't been campaigning in Battle River-Crowfoot, he has been asking the party faithful, "How do we add another roughly a million votes to get us over the finish line?"

The line may be receding; polling data suggest that backing for Mr Poilievre and his Conservatives is softening. A recent survey by Nanos Research put Liberal support at 45% against 32% for the Conservatives. That may be thanks to a lingering post-election honeymoon. But the poll also asked respondents for their preference for prime minister: 52% opted for Mr Carney and only 24% for Mr Poilievre.

This suggests that quite a few Conservatives prefer the Liberal incumbent to their own standard-bearer, among them some powerful Conservative premiers of provincial governments. Perhaps that is because, like Tony Blair and Bill Clinton decades ago, Mr Carney has junked his party's old leftist dogma to appeal to a broader swathe of centrist voters. He is spending more on national defence and has scrapped consumer taxes on carbon pollution. He is cutting bloated government departments by 15% and is preparing to enact tougher laws against crime. Much of this programme was pinched from Mr Poilievre's platform. Voters do not seem to mind the theft.

Supporters of Mr Poilievre, especially among the 144 Conservative MPs elected in April, say he has earned the right to face down Mr Carney. Mr Poilievre, who is 46, is a good communicator. And under his leadership his party continues to rake in more money than its rivals.

Not good enough, says Regan Watts, a longtime Conservative whom Mr Poilievre has previously consulted: "Measured against Mr Carney's immaculate credentials, Mr Poilievre's résumé looks parochial." And the Conservative leader's insistence privately that he would be prime minister but for Mr Trump's intervention and for the slump in the NDP's vote share, says Mr Watts, evinces a man who refuses to accept responsibility for the election loss. Instead, Mr Watts believes, he should ease the sloganeering and put business luminaries on his front bench: "With no experience beyond the political arena, his best response is to surround himself with heavyweight advisers and candidates."

Mr Poilievre's defenders say Mr Carney's honeymoon cannot last. It will take years for Canada to restructure its economy and diversify exports away from the United States. If the Liberals fail to fulfil their promises of massive infrastructure projects at high speed, voters will soon be disenchanted, his backers say. But that might seem to put the Conservatives' fate in the hands of the Liberals. "Hope", says Mr Watts, "is not a strategy." ■

South American skiing

Not snow sure

LAS LEÑAS

Temperatures are rising as quickly as tourist arrivals are

NICK CHERNEY, a 43-year-old asset manager from the state of Colorado, stands before a bare slope at Las Leñas, a ski resort in Mendoza, Argentina. "Normally that would be great skiing, but now it's just rock. If you go off that, you're dead," he says. Then he begins shuffling farther up the mountain, where slopes are whiter. This year, in the depth of winter in South America's most famous ski resort, the only way to get space for some decent turns is to walk up.

Mr Cherney travelled to Argentina with his children, all of whom are competitive "freeride" skiers (a variant involving steep terrain and eye-catching acrobatics). They are part of a small but fast-growing coterie of serious American and European skiers who cross the equator to continue skiing through the northern hemisphere's summer. This is the family's sixth visit; never has Mr Cherney seen such poor snow.

Commercial skiing in South America goes back decades. The first resort to open was Portillo, in Chile, in 1949, and the industry boomed through the 1970s. But since then investment has flagged. Las Leñas, which opened in 1983, is among the most modern resorts, yet its ski lifts are small, lumbering two-person affairs.

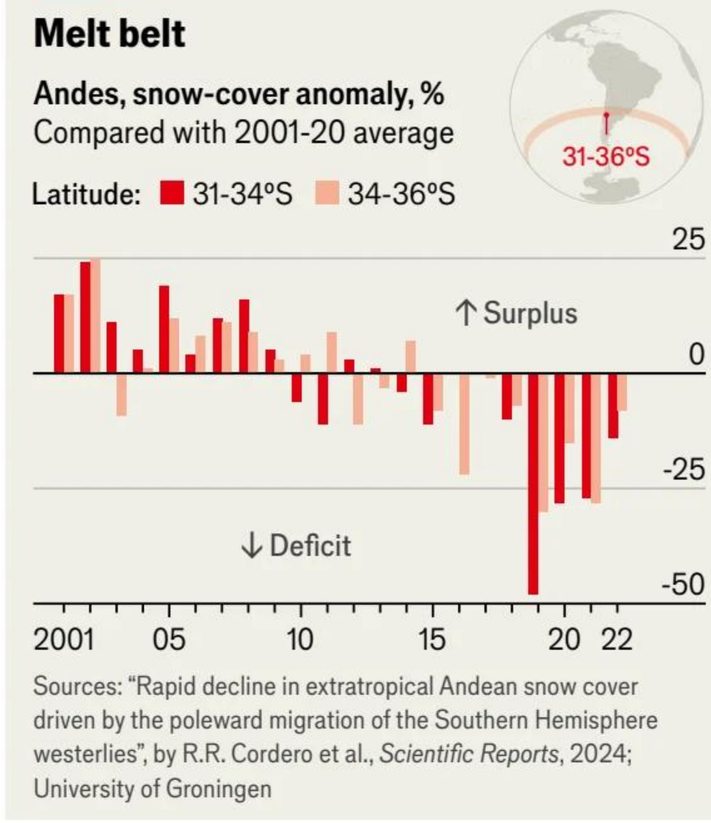
In the past decade or so, however, interest has gone back up a slope. Last year Las Leñas hosted a qualifier for the Freeride World Tour, the highest-level competition for freeride skiers: a sign that its steep slopes are considered world-class. Since 2019 Valle Nevado, a bigger resort in Chile, has been included on the Ikon pass, an American season ticket that gives skiers access to dozens of resorts (the growth of these all-you-can-ski international passes has also sent Americans flocking to resorts in Europe and Japan).

Yet climate change is melting the regional industry perhaps faster than it can grow. Higher temperatures bug skiing fans the world over, but the Andes have been hit harder than most. A study published last year suggested that from 2001 to 2022 the average snow cover in the region declined by 19% per decade. As so often with climate change, the temperature is not the only thing varying. Westerly winds that bring cold air to the mountains have begun to shift southwards, compounding the effects of temperature on the snowpack. And not only is it snowing less, snowfall varies more from one season to the next.

The resorts and the industry's array of ancillary businesses will therefore see variation, too. Lucas Malaret, a Chilean ski instructor who works for Glove Travel, an operator that organises trips for European and American clients, looks at bookings just as much as at thermometers. Last year snow was relatively plentiful, resulting in a surge of early reservations. Bare slopes this year will reverse that. A hunger to keep business steady may have disappointing effects for ski bunnies: Mr Malaret notes disapprovingly that some outfits that deliver skiers to high ground by helicopter have been promoting this season with pictures from last year.

Is there a solution? In July the Malaysian firm that owns Las Leñas said it would expand into a snowier neighbouring valley. As in Europe and the United States, more South American resorts are investing in snowmaking equipment and the like. But beating a changing climate is, not unlike Mr Cherney's, an uphill climb. ■

Next year: perhaps just a luge track



Sources: "Rapid decline in extratropical Andean snow cover driven by the poleward migration of the Southern Hemisphere westerlies", by R.R. Cordero et al., *Scientific Reports*, 2024; University of Groningen

Immigration enforcement in Florida

Cubans sandwiched

MIAMI

After decades of privilege, they now have the same fears as other Latinos

THE FREEDOM TOWER, a Miami museum overlooking Biscayne Bay that honours the history of Cuban exiles, will be unveiled next month after its $65m facelift. Between 1962 and 1974 it was the Cuban Refugee Centre, and through it passed around 400,000 people who fled after the 1959 revolution led by Fidel Castro. They received food, money, medicine and a warm welcome. One of the museum's exhibits notes loftily that "Freedom is not just a dream, but a shared responsibility."

That message is hard to square with the feeling that south Florida's Cubans have today. In the harsh immigration facility that officials insist on calling Alligator Alcatraz, some 95% of detainees are citizens of Latin American countries. Most are from Mexico, Guatemala or Cuba, and most entered the country in the past few years by avoiding official border crossings and airports.

Hundreds of thousands of Latin Americans fear that same fate after the Trump administration ended programmes that gave some of them hope for future residency. Yet it is Cubans who feel most hard done by, because they have in the past enjoyed exceptional immigration privileges.

Under the Cuban Adjustment Act (CAA), passed in 1966, they can apply for permanent residency after a year. Now Cuban arrivals who skirt border points, and increasingly those who do not, receive the same I-220A document—and a court date that could be years hence—that other nationalities do. The I-220A confers a nebulous status: released into the country, but subject to apprehension at the later whim of immigration officials. And it all but precludes Cubans from receiving permanent residency under the CAA.

Further, in June the United States Supreme Court lifted a stay on the Trump administration's termination of the Biden-era Humanitarian Parole programme for Cubans, Haitians, Nicaraguans and Venezuelans. That permitted people of those nationalities to live in the United States for two years, if sponsored by a resident.

Even those Cubans who have had no run-ins with the law since arriving now wait in fear of a knock on the door. "It's a constant worry," says Ricardo, who asked not to reveal his surname for fear it might bring that knock. He is a skilled engineer in his 30s who fled arrest in Cuba during anti-government protests in 2021. Since his asylum claim was denied he has limited his movements between his job and home, barely daring to go to the supermarket. When his wife, a legal resident, gave birth this month to their first child, he sneaked into the hospital in the dead of night.

Miami's downtown immigration court is swamped. Twenty-eight judges wade through a backlog of 312,000 pending cases; about one-third of them are those of Cubans. Merely attending the court is perilous. "People are terrified of going to court hearings," said Wilfredo Allen junior, a lawyer. Two of his clients were detained at court in July and sent to the South Florida Detention Facility. "They both have strong asylum cases and no criminal record," Mr Allen says. His firm has had to hire extra legal staff to handle the 16,000 cases, almost all of them Cubans, on the books. "There's no rhyme or reason as to how they handle these cases. It's totally arbitrary," he says.

They won't have us back, anyway

Deportation was once impossible, because Cuba would not take returning citizens. It remains difficult, for the island's government still chooses whom it will accept. So far in 2025, 833 Cubans have been sent back, according to Cuba's interior ministry.

For the Trump administration the way around that narrow deportation path is removal to a third country. The list of candidate countries is growing, from elsewhere in the Americas to South Sudan. The Deportation Data Project run by the University of California at Berkeley found that at least 731 Cuban nationals had been deported to third countries between January and the end of June, 98% of them to Mexico. Moreover, many migrants from Cuba are skipping the uncertain step of the United States and are instead changing their destinations. In the first six months of 2025 20,900 Cubans sought asylum in Mexico and another 19,400 in Brazil.

For Cubans in south Florida, all this is arousing not only fear but also indignation, particularly as local leaders who had long defended Cuban migrants now stand idly by for fear of drawing Trumpian ire. Cubans were "the darlings of the cold war", says Joe Garcia, a Cuban-American and a former Democratic congressman. Now, he says, "all of a sudden, we're just like Mexicans." For citizens of other Latin American countries who also find themselves in the crosshairs of immigration officials, that may seem right and just; Cubans' special status has rankled for decades.

Now that fear of agents of the state is rattling Cubans in Florida, an uncomfortable parallel is becoming apparent, says Ana Sofia Pelaez of the Miami Freedom Project, a non-profit outreach-and-education outfit. "The crux of the problem is that people are essentially re-experiencing what they fled in Cuba." ■

Bolivia's election surprises

In a general election on August 17th Rodrigo Paz, a centrist senator, chalked up a shock win with 32% of votes; polling had predicted closer to 10%. He will run off against Jorge Quiroga, a right-wing former president who led his coalition to second place, on October 19th. And in third place? Spoiled ballots. Evo Morales, a former president who was forced out of the left-wing Movement to Socialism (MAS) and barred from running by a court ruling, had called for a "null vote" in protest. People listened. Eduardo del Castillo, the permitted MAS candidate, won just 3%—barely enough to maintain the party's legal status. That marks the end of nearly 20 years of MAS rule, and assures a rightward tilt for the country's politics in October.

Mexico

More than manga and microwaves

AGUASCALIENTES

Mexicans cannot get enough of Japanese and Korean culture

OVER BRIGHTLY coloured jelly sodas at Kai Bai Bo, a Korean-themed café in Mexico City, Alejandra Chávez and Adriana Guzmán discuss their shared passion: BTS, South Korea's global pop phenomenon. "It was an instant click," says Ms Chávez, a 23-year-old who discovered the band just before the pandemic. "They make me happy." Ms Guzmán, 24, nods: "They've changed my life. When I stop listening to them, I feel negative."

These two young women are part of the Mexican chapter of the BTS Army, a global fan collective that mobilises like a campaign machine. Together with other volunteers they organise streaming parties, raise funds for murals and explain voting rules to newcomers baffled by the mechanics of K-pop fandom (it revolves around getting out the vote for the band in various polls and awards). Their group has even decorated boats with BTS-themed art. "Sometimes we pay out of our own pockets," says Ms Chávez. "It's how we show love."

That love is in bloom. Millions of Mexicans have developed affection not just for Korean pop, but for Japanese anime (animated films, TV and videos), as well as the languages, food, fashion and values of both countries. There are fan clubs in the capital, Japanese-language schools in Aguascalientes and Korean-cooking classes in Querétaro. What was once a niche taste is becoming a national appetite.

Japan's was the first East Asian culture to find fans in Mexico. That began when dubbed anime shows started airing on Mexican television in the late 1970s, says Edgar Peláez, a Mexican academic at Lakeland University in Tokyo. Real growth began in the 1990s. Japan's asset-price bubble piqued global interest and, later, its government pushed culture as a form of soft power. In Mexico, that coincided with the liberalisation of the economy, the privatisation of state broadcasters and the arrival of Japanese toy companies such as Bandai, leading to a flood of content and merchandise. Mexican dubbing studios became regional hubs in which anime was adapted for Latin American audiences.

Foreign investment also played a role in the boom. Nissan, a Japanese carmaker, opened its first assembly plant in Aguascalientes in 1992. The city is now home to a large Japanese community, part of which has put down roots, giving rise to second-generation *nikkei* families.

More recently, Japanese cuisine has become popular. Takeya Matsumoto, who runs several restaurants in Mexico City, says that when he arrived from Japan in 2007 there were very few. "Now all sorts of Japanese food is available," he says.

These cultural imports seem to have spurred demand for travel to Japan; in 2024 150,000 people flew there from Mexico, the highest tally on record. While small compared with the number of people visiting Japan from other countries, arrivals from Mexico were up by 60% from 2023, the fastest year-on-year growth of any country.

Korea break

Korea's culture has followed that of Japan to become, if anything, even more popular. In 2023 South Korea's global cultural exports—including music, TV dramas, films, fashion and beauty products—were worth a record $12.4bn, according to the country's culture ministry, exceeding even exports of home appliances. Mexico played its part. The Korean Cultural Centre in Mexico City says the number of Mexicans enamoured of *hallyu*, the wave of Korean culture which started sweeping the world starting in the late 1990s, is estimated to have jumped from 6.7m in 2023 to more than 11m in 2024. Korean-language courses are heavily oversubscribed. Korean skincare products, once hard to find, are now sold in boutiques and supermarkets. K-dramas are likely to appear in social-media feeds alongside telenovelas.

Mexicans seem attracted to these cultures for different reasons. Many students of Japanese are learning because they want to work there; others want to read manga or prepare for a trip. Many emphasise the more traditional parts of the culture, such as origami or tea ceremonies. Soraya Aguirre of Cendics México, a language school in Aguascalientes, says demand for Japanese lessons has surged in the past five years. By contrast, students of Korean are often driven by pop culture. They skew younger and female. Many, like Ms Chávez and Ms Guzmán, teach themselves Korean by studying song lyrics and YouTube videos, rather than taking formal classes.

Booming cultural imports are likely to continue as Mexico's relationship with both countries deepens. Japan and Mexico have had a free-trade agreement since 2005. Asian firms have been investing heavily in northern and central Mexico. South Korea and Mexico are exploring new trade ties. Diplomatic efforts—from scholarships to taekwondo parades—are becoming commonplace.

China is also making inroads, albeit of another sort. In cities like Aguascalientes, interest in Chinese is still limited but gradually rising—and driven more by economic pragmatism than popular appeal. Students cite job prospects and business ties rather than fandom and cultural allure. Confucius Institutes have opened at several Mexican universities. But, for now at least, China's soft power in Mexico is more of the boardroom than the bedroom wall.

In the background, Mexican perceptions of Asian cultural fandom have shifted. Being a fan of BTS used to provoke bullying, says Ms Chávez. Now, she says, it is finally cool. ■

Land of the rising sons who do taekwondo

Middle East & Africa

Syria

A critical moment

BEIRUT

A new political opposition may be emerging. Will it be tolerated?

THE OVERTHROW in December last year of Bashar al-Assad, Syria's dictator, brought a fleeting sense of unity to a country fractured by over a decade of war. Despite unease over his Islamist past, most Syrians rallied behind Ahmed al-Sharaa, their new leader. Over the summer, however, the mood has soured. A growing number of Syrians, especially from minority groups, are voicing frustration with his government. And the first shoots of an organised opposition are popping up.

The immediate cause is sectarian bloodshed—and the state's feeble response to it. In July hundreds were killed when government-backed Sunni militias ran amok in Suwayda, a Druze-majority province. It was the second bout of mass killing since Mr Assad's fall. In March Sunni fighters descended on coastal areas and massacred more than 1,400 people, many of them Alawites, the small sect many Sunnis blame for propping up the old regime.

In neither case did the government's response inspire confidence. In March it was slow to halt the killing; in July its own troops were accused of carrying out atrocities. A committee set up to investigate the coastal massacres produced a report that disappointed many. An inquiry into Suwayda is expected to be similarly puny. In Damascus critics say the regime has absolved Syria's military command of any real responsibility for their troops' role in the coastal massacres, preferring to pin the blame on rogue perpetrators. To minorities the lesson is clear: Syria's new rulers do not speak for them, will not listen to them and cannot—or will not—protect them.

That unimpressive response has encouraged others to organise. In July, amid the carnage in Suwayda, a coalition of activists launched the Syrian Centenary Initiative. It looks like the beginnings of an organised political opposition to Mr Sharaa's government. Its first act was to demand an immediate ceasefire. It also called upon the government to rewrite the constitutional declaration that Mr Sharaa signed in March, so that it would allow for the formation of political parties and provide more protection for civil-society groups.

Among its founders are activists who spent decades in the Assads' prisons. George Sabra, a Christian politician who once led a coalition of exiled opposition groups, and Ayman Asfari, a Syrian-British billionaire who was once touted to be Mr Sharaa's prime minister, have joined. It also includes Alawite activists and businessmen from Aleppo. The group's name refers to an uprising led by the Druze against the French mandate in Syria a century ago. Its members say it is responding to urgent threats to Syria's unity.

The government has reacted badly. Officials have ignored the movement's demands and attacked its members. "Instead of addressing the initiative on its merits, we faced organised smear campaigns," ▸▸

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says Hazem Dakhil, a journalist-turned-activist from Idlib, the province once run by Mr Sharaa and his rebels, who has joined the movement. "They accuse us of plotting to replace Sharaa with a military council or minority rule—claims that appear nowhere in our statements."

Such defensiveness is becoming a regime hallmark. Civil-society activists say criticism is treated as treason. "There is no dialogue," laments Mr Dakhil. Reports of Alawite women disappearing from coastal areas—documented by human-rights groups—have been met with Orwellian denials from the government. Journalists who investigate crimes by state security forces are harassed online by pro-regime trolls. Some have been arrested without charge, released only after a public outcry.

Rather than broadening his coalition, Mr Sharaa is narrowing it. Since the Suwayda killings, Druze leaders have rejected government pleas to join the security forces. The March massacres left the Alawites deeply mistrustful. Efforts to weld militias into a national army have stalled; negotiations with the Kurds in the north-east are going nowhere. Integrating minorities into the army and police is key to rebuilding the Syrian state. On this front, Mr Sharaa has made no headway.

Stay close to me

Decision-making is limited to a small circle of officials, from Mr Sharaa's former rebel group, who often bypass the very state institutions they need to rebuild. Many positions are awarded on the basis of loyalty, or tribal and family links. "They are militiamen...They can only see problems in the way militiamen see problems. They are no longer holed up in Idlib fighting Assad and Iran. They need to use politics rather than warfare to solve problems," says Robin Yassin-Kassab, a British-Syrian writer.

Mr Sharaa still deserves credit. Most notably, he persuaded Donald Trump to lift the crushing American sanctions imposed under Mr Assad. Gulf states and Turkey continue to pledge investment. But the Suwayda violence rattled Mr Sharaa's foreign allies. Their patience will not last indefinitely if he governs only for Sunnis.

Ordinary Syrians, meanwhile, have yet to enjoy much benefit. Day-to-day violence has decreased but nine in ten still live in poverty. Minorities feel as excluded as ever. Many Alawites have lost their jobs. Some Druze militias now openly fly the Israeli flag; some are calling for secession. "The more he alienates the minorities, the more he is reliant on a sectarian base," warns one international mediator.

Even so, his critics insist they want to work with him—if he will listen. But their patience is not limitless. As one activist in Aleppo puts it: "We did not throw out Assad to be ignored once again." ■

History and politics

A road by any other name

DUBAI

What's in a name in the Middle East?

THE FIRST road you take after arriving in Lebanon was long named after a foreigner who killed thousands of Lebanese. For decades the airport motorway was known as Hafez al-Assad avenue, after the late Syrian dictator. It struck some visitors as an odd choice, since the Assad regime had been an unwelcome occupier in Lebanon for three decades—a bit like naming the airport road in modern-day Warsaw after Josef Stalin.

It became odder still in December, when Syrian rebels overthrew Bashar al-Assad, the dictator's son. Even as they tore down symbols of the family's rule, Assad *père* clung to a stretch of tarmac in southern Beirut. But no longer. On August 5th the Lebanese cabinet announced that it would rename the street after Ziad Rahbani, a beloved artist who died a week earlier.

Naming controversies are a fixture of modern life. The Biden administration ordered America's army to rechristen army bases named after Confederate officers (though Donald Trump has restored many of the original monikers). British councils have done the same with slave traders. Times change, and sensibilities change with them. But in the Middle East, where the past is not always past, such controversies are often less about reassessments of history than contemporary politics.

In the early 1980s Tehran named a street after Khalid al-Istambouli, the Egyptian officer who gunned down Anwar Sadat, his country's third president. The logic was crass but clear. Sadat harboured the Shah of Iran after he was deposed in 1979. He also made peace with Israel. Naming a street after his assassin was a crude way for the nascent Islamic republic to demonstrate its revolutionary bona fides. Egyptians were unimpressed: the name was a source of diplomatic tension for decades.

Last month, though, the city took down Istambouli's name and replaced it with that of Hassan Nasrallah, the slain leader of Hizbullah, a Lebanese Shia militia. The regime has not reassessed its jaundiced view of Sadat. But it is feeling isolated after its disastrous war with Israel this summer. Iran needs friends in the region; antagonising Egypt no longer serves a purpose.

At other times, names are changed to help people forget. When Bahrainis took to the streets in January 2011 to protest against the monarchy, they built an encampment at Pearl Roundabout, a traffic circle in the capital dominated by a sculpture of the gem (a nod to Bahrain's formerly pearl-based economy). Mobilism.Org

One month later the government bulldozed the monument. Officials stopped referring to the circle by its popular name and insisted on using the official (but little-known) title: Gulf Co-operation Council Roundabout.

A few years later they did away with the roundabout altogether. That stretch of highway is now a junction named after Omar ibn al-Khattab, a seventh-century caliph revered by Sunnis but reviled by Shias, who see him as a usurper. The sectarian overtones were probably no coincidence: many of the protesters in 2011 were Shias.

Egypt has thrown plenty of names down the memory hole since the army overthrew Muhammad Morsi, the popularly elected president, in a coup in 2013. His supporters staged a two-month sit-in to protest against the putsch at a plaza in eastern Cairo. Hundreds of them were killed by soldiers and police in August of that year, the bloodiest day in Egypt's modern history. The name of the square, Rabaa al-Adawiya, became a metonym for massacre. So the government tried to stop people from speaking it. In 2015 it renamed the square after a prosecutor assassinated in a car bombing.

History is written by the victors, but victories in the Middle East can often be tenuous. Though the Syrian army left Lebanon in 2005, the Assad regime retained deep influence in the country for many years. It took Bashar's exile to Moscow to sweep away a trivial vestige of Syrian rule in Lebanon. It may take longer still to rename the other street leading to the airport—named not after a famous Lebanese but after Ayatollah Ruhollah Khomeini, the architect of the Iranian revolution. ■

Gaza

The voices of Gaza

BEIRUT

The stories of Gen-Z Palestinians

AN AMATEUR bodybuilder. A teenager admitted to Dartmouth College in America. A gang of skateboarders. They are not obvious chroniclers of bombs and famine. But they are among Gaza's most dogged witnesses—the Generation-Z Palestinians who have posted online over 22 months of war.

Audiences can be vast: a handful have millions of followers, many of them count hundreds of thousands of followers from around the world. Their role matters all the more because Israel bars foreign journalists from working freely in Gaza, and because hundreds of Palestinian reporters have been killed. For those looking for Palestinians' own stories about life in Gaza, TikTok and Instagram, not cable television, offer the most unfiltered version.

On Instagram Mohammed Hatem, an amateur bodybuilder who goes by the name "Gym Rat in Gaza", documents his muscles wasting away for lack of protein. He has almost 400,000 followers and has appeared on some fitness podcasts in America.

In a recent interview, he described how he was getting just 1,200 calories, on average per day, barely half the 2,400 he calculates he needs to stay fit, he says. "As much as I try to optimise training and nutrition to still make results, my main focus in it was for my mental side. I would like to stay committed to this little bit of my daily routine," he told one podcaster.

Some of Mr Hatem's videos feature witty clips about the lack of chicken in Gaza. Others show him giving fitness consultations to clients outside Gaza or gathering his belongings for yet another evacuation.

Omar Shareed, who won a place at Dartmouth College in America, posts about the bureaucratic struggle to leave Gaza and take up his studies. He pleads with his followers to help him with this.

Ceasefire or not, Gaza's influencers continue to document birthdays, weddings and the daily struggle to stay alive and get enough food. Life goes on—except when it does not. Earlier this year Yaqeen Hammad, an 11-year-old known as "Gaza's youngest influencer", was killed in an Israeli airstrike.

Democracy in Africa

Autocrats without borders

KAMPALA AND NAIROBI

Are east African governments colluding to stifle dissent?

WHEN AGATHER ATUHAIRE, a Ugandan lawyer and journalist, was arrested in Tanzania in May, she says she was held incommunicado, tortured and raped. Three days later she was dumped at the border between the two countries. Her supposed crime? Attending the trial of Tundu Lissu, a Tanzanian opposition leader charged with treason. A Kenyan activist who went with her was also abducted and tortured. Ms Atuhaire says their tormentors warned them never to return and "interfere" in Tanzanian politics again. Tanzania's police denied mistreating them. After the incident William Ruto, Kenya's president, apologised to Tanzania for "anything that Kenyans have done that is not right".

Repression is not uncommon in Tanzania, which has been run by the same party since independence in 1961. With elections due in October, the regime headed by Samia Suluhu Hassan is in no rush to allow her jailed opponent, whose party has been barred from competing, more publicity. (On August 18th a judge banned live coverage of Mr Lissu's latest court appearance.) Yet the alleged brutal treatment of Ms Atuhaire and her colleague and the Kenyan government's response raises the disturbing suspicion that security forces in Kenya, Tanzania and Uganda may be colluding to crush dissent.

It is just one of several recent cases. The most prominent example is Kizza Besigye, a Ugandan opposition leader who was kidnapped on a visit to Kenya in November and now stands accused of plotting to overthrow Uganda's government by force. Because Mr Besigye was unlawfully rendered to a military jail in Uganda, "there has to have been a high level of co-ordination" between the two countries' security agencies, says Roland Ebole of Amnesty International, a rights group. Kenya's government has since admitted that it co-operated with the Ugandan authorities, saying Mr Besigye's treatment may have been "different" had he claimed asylum.

Other cases suggest collusion at a lower level. Mwabili Mwagodi, a Kenyan critic of Mr Ruto, whose rule is increasingly authoritarian, was seized in July by unknown assailants while working at a hotel in Tanzania. He was handed over to the Kenyan authorities, battered and bruised, several days later, and admitted to hospital.

In January Maria Sarungi Tsehai, a Tanzanian democracy activist, was kidnapped by masked men on the streets of Nairobi, Kenya's capital, which until recently was a relatively safe haven for dissidents. She is sure at least one of her abductors was Tanzanian. "Either Ruto doesn't control the security services, or he is assenting to it," says a former American official. "Neither scenario is remotely reassuring." Mr Ruto and the Kenyan government have not commented on the allegations.

Even where there is no evidence of collusion, leaders scratch each others' backs. Ms Atuhaire notes that although the Ugandan authorities may not have asked Tanzania to arrest her and her Kenyan colleague, none objected to their treatment.

Jeffrey Smith, founder of Vanguard Africa, a pro-democracy outfit in Washington, sees a "convergence of authoritarian tactics across east Africa". Mr Ruto is said

to have a personal bond with Yoweri Museveni, Uganda's president since 1986. The Kenyan leader's harsh response to recent anti-government protests feels familiar to Ugandans. Mr Museveni is "an example and encouragement" to his regional peers, says David Lewis Rubongoya of the National Unity Platform, a Ugandan opposition party. The Ugandan president in turn may have been influenced by the ruling party in Tanzania when he lived there, first as a student and later as a rebel leader, argues Erick Kabendera, an exiled Tanzanian journalist.

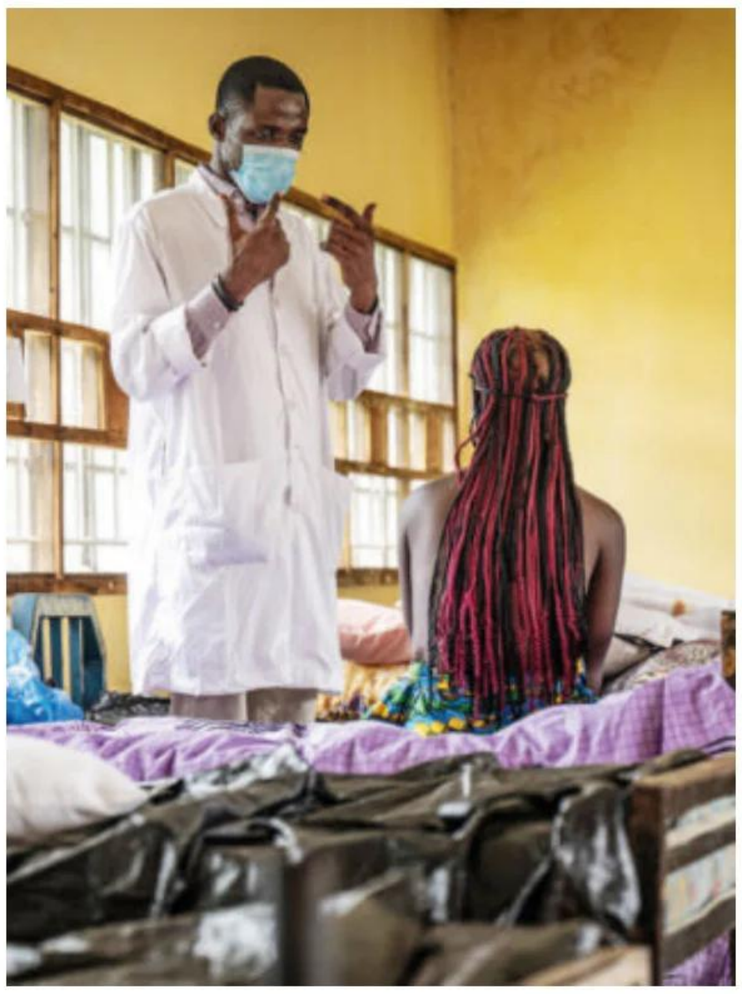
Why might these governments be tempted to team up against their opponents? For one, they share a common predicament. Though only Kenya has recently had mass protests, leaders in Uganda and Tanzania are also unpopular with their young and increasingly restive voters. Mrs Samia, who took office after the death of her predecessor in 2021, will face them for the first time in October. Mr Museveni, who is 80, is planning to run again in January. But his authority is beginning to slip. Some observers reckon that fear of an uprising is what prompted the regime to go so hard after Mr Besigye.

Meanwhile the international order has grown more permissive. Last month Marco Rubio, secretary of state in the Trump administration, told American officials to avoid opining on the credibility of elections overseas. Diplomats who might once have spoken out when regimes threaten or even kill opponents are increasingly staying mum. "A single statement from Washington can make people here very fearful," says Godwin Toko, a lawyer in Uganda. "But now you don't have any."

Britain's foreign office wants its diplomats to spend less time lecturing African governments about democracy and human rights. A European ambassador in Nairobi says that "three generations after independence, I think we're done telling them what to do." Donors are slashing funds for election monitors and civil-society groups. Chapter Four, a human-rights group in Uganda, says its budget has halved since the Trump administration closed USAID.

Western efforts to boost democracy in Africa were never consistent or faultless. Still, Western diplomats sometimes used to push for tweaks to draconian laws or help endangered dissidents get to safety. "The West was actually a strong restraining hand on the government here," acknowledges Andrew Mwenda, a Ugandan journalist with ties to the government.

Now, though, authoritarians across the continent are discovering just how much they can get away with. "I fear it is going to get worse," says Marion Kirabo, a lawyer who plans to stand for parliament in Uganda's polls next year. "We are basically on our own now." ■



Mpox in Sierra Leone

Going viral

FREETOWN

The country's public-health messaging is a model for the rest of Africa

PICTURES OF SORE, blistered genitals have gone viral in Sierra Leone in recent months. The gruesome photos showing symptoms of mpox have helped persuade Sierra Leoneans that the virus, which spreads mainly through close physical contact and causes fever, chills and skin blisters, is a real public-health threat. That has made them more willing to follow government advice on how to avoid it. "When we had Ebola, I was one of the people saying I don't believe it is real," says Moses Lavalie, a 32-year-old in Freetown, the capital. "But mpox? Mpox is very real."

Ever since the UN's World Health Organisation (WHO) declared mpox a "public-health emergency of international concern" a year ago, African countries have been worst affected. The continent has suffered a surge in the spread of two mpox strains, with the newer one, known as clade Ib, believed to be more lethal. The rollout of vaccines has been slow. More than 2,000 people are confirmed to have died from mpox since the beginning of 2024, many of them children. The Democratic Republic of Congo, Uganda and Sierra Leone between them account for almost 80% of cases and deaths.

Yet among the three countries, Sierra Leone stands out for its management of the disease. Congo's mpox burden is likely to be much higher than reported, with many cases from last year only now being confirmed. Uganda has recorded a large number of deaths among people living with HIV. Meanwhile, following a spike earlier this year, Sierra Leone's caseload has been falling rapidly.

Sierra Leonean authorities have done some key things well since the country recorded its first case in January. Messaging has been widespread and effective. The government has used radio jingles, posters and daily texts to tell people where to go for testing and how to avoid close bodily contact. That has improved understanding of how the disease spreads and what its risks are (and possibly encouraged people to be open about their symptoms on social media, generating the viral images). The public-health agency has sent workers to poorly connected areas to identify suspected cases and offer treatment, paid for by the government.

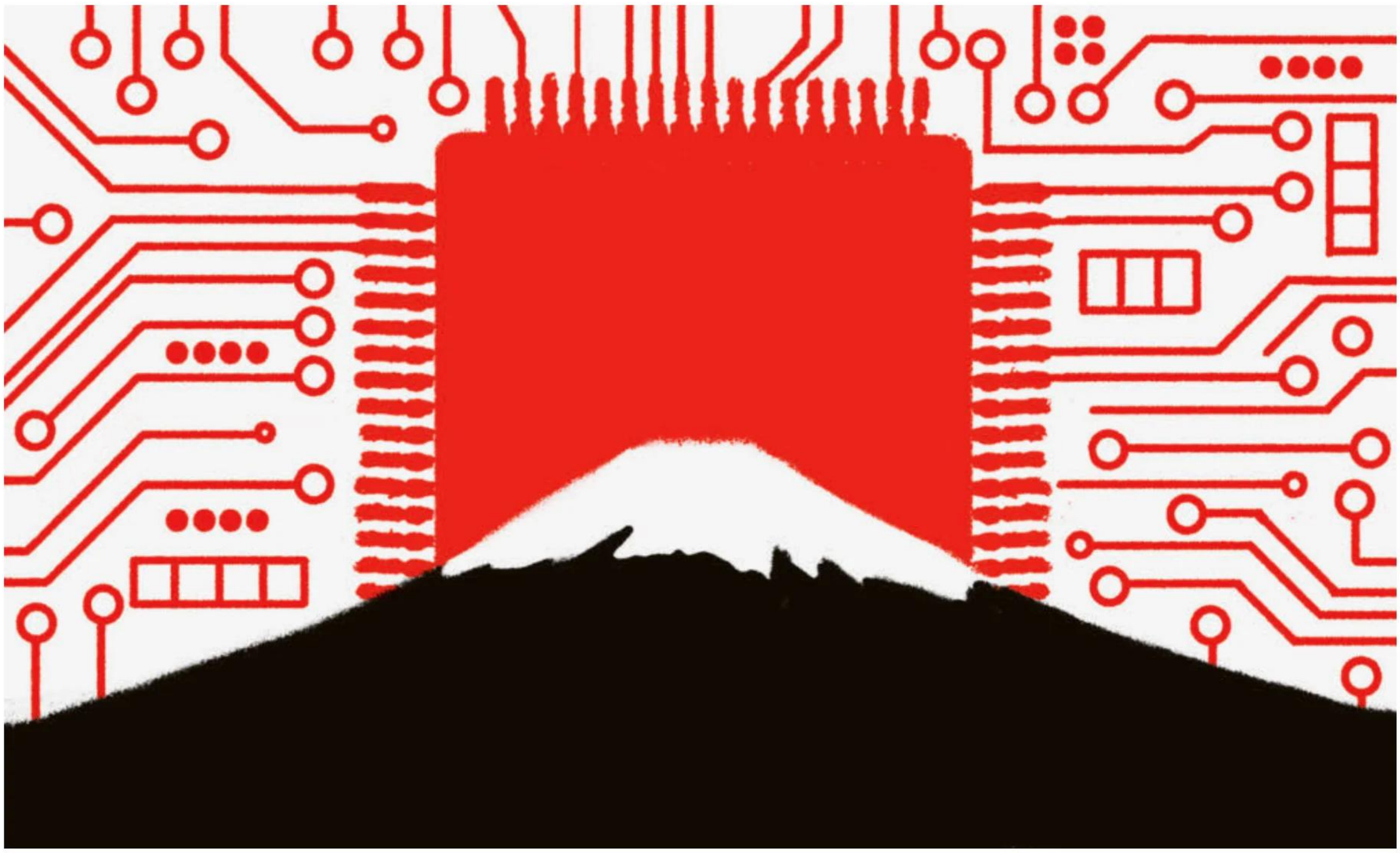
Despite limited resources, the country treats mpox as seriously as outbreaks of Ebola and covid-19. As you get off the plane in Sierra Leone, staff offer hand sanitiser. Office buildings conduct temperature checks, as an early symptom of mpox is a fever. Military and police hospitals have been converted into isolation centres. Mild cases, where blisters are restricted to intimate areas, are allowed to be treated at home, freeing beds for more serious cases, such as in people living with HIV.

Things are not perfect. Hospitals are still crowded, with long wait times for tests and treatment. Enforced isolation at home is hard to police in crammed urban areas like Freetown. Mr Lavalie had to wait three days for an answer from an emergency line when he began to show symptoms. Cuts to foreign aid, which has historically helped Sierra Leone pay for lab equipment, contact-tracing and genomic sequencing for epidemiological research, could weaken defences against future outbreaks.

A year into the most recent epidemic, too little is still known about the virus. The strain that accounted for most of Sierra Leone's cases beginning in May is thought to be the older one, known as clade IIb. But it spread faster than expected and has infected both sexes equally, rather than mainly men. That makes it more like the newer clade Ib strain, puzzling scientists.

Thankfully data from the African Centres for Disease Control and Prevention, based in Ethiopia, show that the number of cases across the continent is shrinking. Yet progress is hampered by rises in infections in countries that are responding less effectively than Sierra Leone. Not all lessons from Freetown are transferable. Sierra Leone is a small country dealing with its first outbreak. Congo is massive and embroiled in conflict across much of its east. Nigeria has battled mpox for at least three years, which has made it harder to treat the latest outbreak as a more urgent emergency. The fight is far from over. ■

Asia



Japan's semiconductors (1)

Roaring back?

CHITOSE

The country used to be a chipmaking powerhouse. Can it be one again?

KOIKE ATSUYOSHI likes to go fast. The 73-year-old semiconductor engineer is a motorcycle aficionado. He brings the same tempo to his latest company, Rapidus. Founded in 2022, the firm opened its massive semiconductor factory, or "fab", last year in Chitose, a small city on Hokkaido, Japan's northernmost main island. In December Rapidus became the first Japanese entity to acquire an extreme ultraviolet lithography (EUV) system from ASML, the Dutch company that makes the unique devices; Rapidus had the complex up and running within months. In mid-July, Mr Koike announced the successful pilot production of two-nanometre (2nm) transistors, the thinnest, most advanced chips yet. "A company that's been around less than three years managed to do it," he boasts. "It's an incredible pace."

Rapidus is the most ambitious element of a broader effort to revive the semiconductor industry in Japan. In the boldest industrial policy push in a generation, the Japanese government ploughed ¥3.9trn ($27bn) into support for semiconductors between early 2020 and early 2024. As a share of GDP, that amounts to a bigger commitment than America made to its semiconductor industry through the CHIPS Act. Japan wants both to revive its domestic champions and to attract foreign ones, such as TSMC, the Taiwanese semiconductor giant, which now makes chips in southern Japan. At the launch of its fab there last year, Morris Chang, the TSMC founder, spoke of a chip "renaissance".

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Japan once dominated the semiconductor industry. In the 1980s, Japanese firms accounted for more than half of the global market, and an even bigger share of the cutting-edge chips of the time. But trade friction with America led to limits on Japanese chip exports, creating an opportunity for rivals in Taiwan and South Korea. Japanese companies also struggled to shift to an era of increasing specialisation in semiconductor production. Whereas some Japanese firms retained strong positions in the materials and equipment necessary for making semiconductors, from coating chemicals to silicon wafers themselves, they fell behind in cutting-edge manufacturing. By 2019, Japan accounted for less than 10% of the world's semiconductors.

The Japanese government came to see this state of affairs not only as a commercial disaster, but also as a national-security risk. Supply-chain disruptions during the pandemic helped raise public awareness of the crucial role chips play in modern life. The war in Ukraine fuelled fears of Chinese designs on Taiwan—and highlighted the risk of depending on a single firm there for most of the world's high-end chips. The emergence of generative artificial intelligence (AI) has only heightened the strategic importance of semiconductors. Japan's latest National Security Strategy, released in 2022, explicitly sets a goal of strengthen-

ing "next-generation semiconductor development and manufacturing bases".

Japan's semiconductor strategy consists of two main pillars. First is indispensability, which means, in effect, "being influential over others", says Mireya Solís of the Brookings Institution, an American think-tank. The idea is that if Japan can control parts of a long supply chain it can leverage that interdependence to keep others (ie, China) from weaponising their control over certain inputs.

The second pillar is autonomy, or having domestic production capacity. "The world will be divided into two groups: countries that can supply semiconductors and countries that buy them," says Amari Akira, a former lawmaker with the ruling Liberal Democratic Party (LDP) who led semiconductor policy. "The countries that supply will be the winners, and the countries that buy will be the losers."

The government has refreshed its industrial-policy toolkit to meet the challenge. The LDP passed a series of new laws in recent years enabling broader and longer-lasting government support for chip firms like Rapidus. While such measures involve taking sizable bets with taxpayer money, they have broad political support. "Of course there are risks involved—but there are also risks of doing nothing," says one LDP bigwig involved in the policies.

The measures have begun to bear fruit. Big subsidies helped entice TSMC to set up shop in Kyushu. Its first fab there produces chips of 12-28nm—the most advanced type of semiconductor to be produced in Japan so far, but still well behind its state-of-the-art models. The firm has already announced plans to build a second facility for even higher-end logic chips there; talks about a potential third fab are reportedly under way. TSMC's arrival has enticed suppliers and partners to expand on Kyushu, which has positioned itself as "Silicon Island" (see next story).

Micron, an American memory chipmaker, has also received more than $1bn in subsidies to expand its chipmaking facilities in Hiroshima. Meanwhile Samsung, a South Korean electronics giant, is building a cutting-edge research facility in Yokohama, south of Tokyo.

Another nascent ecosystem is emerging around Rapidus. The firm is the highest-risk and highest-reward bet of the bunch. Born of a partnership with IBM, which developed a new method for making next-generation transistors, a type of electrical component, Rapidus hopes to leapfrog across a generation of semiconductor engineering and catch up with global pace-setters. It has attracted investment from a consortium of eight blue-chip Japanese firms, including Sony, Toyota and SoftBank. The government has also bankrolled much of the initial cost, to the tune of ¥1.72trn ($12bn) through early 2025.

The success of Rapidus hinges on meeting three big challenges, says Ota Yasuhiko of Hokkaido University. First is cultivating enough talented cadres. Universities across Japan are launching programmes to train a new generation of semiconductor engineers. But in the meantime, Rapidus has had to rely largely on older specialists who came of age during Japan's first chip boom; the average age of its recruits was initially over 50. Roughly 150 top engineers were sent to train at IBM's research facility in New York.

Another challenge is developing a sustainable business model. Samsung and TSMC are advancing towards 2nm chips of their own, and have established relationships with the buyers of high-end semiconductors. Rapidus is positioning itself as a boutique option, able to make smaller lots of specialised chips, rather than large batches of one-size-fits-all offerings. "We have no intention of directly competing with TSMC—the markets are different," Mr Koike says. He is counting on generative AI becoming a tailwind, boosting overall demand for chips and increasing interest in offerings that can improve efficiency and reduce power consumption.

But first Rapidus must make the leap to mass production, which the firm aims to begin in 2027. While the successful pilot wafer is an encouraging sign, the true test will be whether Rapidus can make lots of them of the quality necessary to be commercially viable. The production process for such semiconductors is closer to handmade crafts than to assembly-line widgets: engineers must constantly adjust equipment to maintain correct parameters. For Mr Koike, motorcycles offer another lesson here. A lifetime of riding, he says, has taught him "about how a machine and a human being can work together closely". Japan's chip renaissance depends on it. ■

Japan's semiconductors (2)

When the chips are up

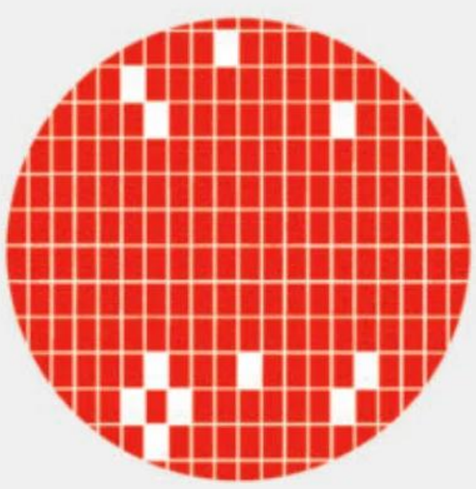
TSMC is shaking up rural Japan

KUMAMOTO

HOSPITALITY IS NOT in short supply in Kikuyo, a small town in Japan's southern prefecture, Kumamoto. At a local shopping centre, Kumamon—the prefecture's bear mascot—grins with a sign saying "Welcome" in traditional Chinese. Supermarkets now stock Taiwanese snacks and cooking ingredients. The gestures are aimed at the hundreds of Taiwanese engineers and their families who have arrived since TSMC, the world's most advanced chipmaker, set up a plant nearby.

TSMC is transforming Kumamoto and the wider Kyushu region, an island in the south-west. Its first factory—run through JASM, a joint venture with Sony, a Japanese electronics giant, and Denso, a car-parts supplier—began producing logic semiconductors for cars and electronics in December. The move was part of Japan's push to rebuild domestic chip capacity, driven by fears over Taiwan's vulnerability and a broader effort to regain technological superiority. A second plant, set to produce more advanced chips, will break ground this year and should be running in 2027.

Beyond its strategic role, the project has created a boom locally. It is now closely watched as a test case for the rest of the country. Since TSMC's arrival, over 60 companies have established a presence in Kumamoto. Wages are rising, pushed up by TSMC's relatively high pay. Japanese newspapers marvelled at its job listings, including positions in the factory canteens that offered ¥3,000 ($20) an hour—roughly triple the prefecture's average wage. Land prices have soared, hurting local renters but boosting tax revenues. Growth extends beyond the chip industry itself to surrounding sectors such as logistics and hospitality. Kyushu Financial Group, a region-



al banking firm, estimates the economic impact in Kumamoto will reach ¥11trn ($76bn) in total over the next decade.

Kumamoto won the plant partly for the prefecture's proximity to Taiwan; it is also near lots of water, needed for chipmaking. But it also had industrial heritage. In the 1980s, when Japanese firms dominated the global semiconductor market, Kyushu was nicknamed "Silicon Island". Since then Japan has fallen behind Taiwan and South Korea. Officials hope TSMC's arrival will help reverse the trend. Kimura Takashi, Kumamoto's governor, argues that opening up to foreign firms in the region, especially those from Taiwan, is vital to Japan's future. The prefecture is planning to build a science park to connect universities, suppliers and startups.

Now, across Kumamoto, the influence of the Taiwanese workers can be seen everywhere. Signs in residential areas near the plant are printed in Japanese, English and Chinese. Local city halls have hired Chinese-speaking staff. State schools have expanded language assistance, while a new international school opened last year in order to accommodate the new Taiwanese families. "The area has suddenly become so multicultural," says Chiu Kuei-fen, a Taiwan-born longtime resident in Kikuyo, who runs a website which helps newcomers navigate everyday life.

An island of change

But the speed of development has brought strain, too. Komatsu Atsushi, a local official, points to traffic jams that have worsened as workers poured into the area. Environmental concerns persist, especially over water use. Officials say the impact is minimal and that the company will recycle most of what it uses. But some residents are not reassured. "Maybe some people are excited about TSMC's arrival," grumbles one carrot farmer in Kikuyo, who says some of her neighbours have been pushed out by soaring land prices. "But for people like us, it's more trouble than it's worth."

The biggest challenge, however, may be talent. Japan faces a big shortage of semiconductor engineers. Until very recently the chip industry was seen as stagnant. "People stopped seeing the sector as a promising one," says Okano Hideyuki of the Kyushu Economic Research Centre. He reckons TSMC's arrival is slowly starting to change that perception.

Local universities are scrambling to adapt, launching chip-focused courses and seeking closer ties with industry. Tanaka Hisao, president of Japan Material, a supplier that built a plant in Kumamoto after TSMC moved in, also sees a deep cultural problem. "People don't feel proud to work in semiconductors any more," he says, recalling the 1980s heyday. If Japan's chip revival succeeds, that could soon shift. ■

India's elections

Poll politics

How fair are India's elections?

AN ADDRESS WITH a house numbered zero; a household with 80 people; a person named "dfojgaidf". Bureaucratic snafus are common in India. But according to Rahul Gandhi, these irregularities in Mahadevapura, a suburb in the city of Bangalore, were part of a grander "vote *chori*" (vote theft) scheme that helped the Bharatiya Janata Party (BJP) win last year's general election. In a detailed presentation this month Mr Gandhi, the leader of Congress, India's main opposition, said there were thousands of such examples and accused the Election Commission of India (ECI), the constitutional body that organises the country's polls, of colluding with the BJP.

Mr Gandhi's allegations have rocked the ECI, which was already under pressure. On June 24th it began a "Special Intensive Revision" of the electoral rolls in Bihar, ahead of polls due there by November. The exercise has been controversial for both its timing and execution. Such electoral revisions are rare—the last one in Bihar was in 2003—and are usually planned in great detail. This revision was announced abruptly and will be completed for a state with 130m people in a matter of weeks. Questions also hover over the review's result, in which 6.5m voters were struck from the list (approximately 8.3% of the total voter count).

The ECI has dismissed such concerns. It says that its deletions were due to deaths, duplicate entries and migration. The commission has been even more defiant in the face of Mr Gandhi's allegations. On August 17th Gyanesh Kumar, the ECI's boss, issued an ultimatum to the Congress leader, ordering him to file an affidavit to the courts under oath outlining his charges or to apologise to the country. "There is no third option," he said.

The controversies add to growing concerns about the integrity of India's polls. For years, the ECI has been seen as the bedrock of Indian democracy, earning plaudits for organising the world's biggest elections. On indices compiled by the V-Dem Institute, a Swedish think-tank, India's electoral process has long outperformed its peers in the region. But its score has been sliding over the past decade, dragged down by declines on several measures, including those tracking voter irregularities and freedom for parties to operate.

One explanation lies in the nature of Indian politics. Since 2014 the BJP has been the country's dominant political power. In the era of coalition politics that preceded its rise, it was in everyone's interests for the ECI to ensure a level playing-field. But today, in an era of single-party hegemony, that neutralising force has lost its power. The head of the ECI, for instance, is nominated by a panel, which includes the prime minister, leader of the opposition and another minister—and is hence skewed towards the executive. (The Supreme Court had recommended that the third member should be the Chief Justice of India, but that was ignored by the government.)

Similarly, critics argue that the model code of conduct, which the ECI uses to monitor election campaigns, is unfairly applied. They say clear violations, such as inflammatory language, by BJP leaders, including the prime minister, Narendra Modi, have been ignored. In a new study ex- ▸▸

Rallying behind Rahul

amining the integrity of the general election in 2024, Milan Vaishnav, a political scientist, writes that there are signs that elections in India "are free but not necessarily always fair".

For now, the opposition has been galvanised by the issue and is pressing for reforms. On August 17th Mr Gandhi embarked on a "Voter Adhikar Yatra" (Voter Rights March) in Bihar to educate people about their electoral rights. Opposition parties have even mooted impeaching Mr Kumar, the election commissioner. But such changes require legislation passed by parliament, where the BJP and its allies enjoy a comfortable majority.

The BJP itself has dismissed allegations of collusion and shown little appetite for change—despite seemingly acknowledging electoral irregularities. A week after Mr Gandhi's presentation, Anurag Thakur, a BJP parliamentarian, accused the Congress of conducting its own vote *chori*, pointing to alleged "doubtful voters". ■

Islamic State

Terror trade

ISLAMABAD

Pakistan is critical in the fight against Islamic State terrorists

FOR MOST of the past 25 years, "phenomenal" was not a word many Americans used to describe Pakistan's co-operation on counter-terrorism. Yet that is how General Michael Kurilla, then head of America's Central Command, characterised it in June. His praise was striking not just because American officials have long accused Pakistan of covertly backing the Afghan Taliban and sheltering Osama bin Laden, who was killed by American special forces in a Pakistani garrison town in 2011. The remark also came seven weeks after India blamed a terrorist attack in Kashmir on Pakistan, which has a long history of sponsoring similar assaults on Indian soil.

What explains the change of tune? The answer lies in the lawless borderlands between Pakistan and Afghanistan. That is now the stamping ground of the Islamic State Khorasan Province (ISKP), an offshoot of the group that established a "caliphate" in Iraq and Syria in 2014. America and other Western governments see ISKP as their biggest international terrorist threat. Partly because of this, many governments are quietly engaging with the Taliban in Afghanistan (see Banyan).

At Western governments' request, Pakistan has stepped up joint efforts to kill and capture ISKP leaders in the last year or so. Among them was the alleged planner of an ISKP suicide attack in Kabul that killed 13 American service members and about 170 civilians in August 2021. Pakistan arrested him in February and extradited him to America in March, earning rare public praise from Donald Trump. That also helped Field Marshal Asim Munir, Pakistan's army chief, to score an invitation to a White House lunch in June, just over a month after a brief conflict with India. The field marshal, a devout Muslim who appears to be more ideologically minded than his predecessors, returned to America for more talks this month.

Even so, ISKP still has about 4,000-6,000 fighters, including Tajiks, Uzbeks and Turks who mostly operate in eastern Afghanistan and Pakistan's north and south-west, according to officials tracking the group. It is considered especially dangerous because it attracts experienced fighters and recruits aggressively online, often encouraging lone-wolf attacks abroad. And despite coming under pressure from Afghan and Pakistani authorities, it "retains the capability and intent to attack Western interests abroad with little to no warning", General Kurilla told a congressional hearing on June 10th.

Further co-operation from Pakistan could come with conditions attached. It is not as worried about ISKP because the group, which adheres to the puritanical Salafist school of Sunni Islam, mainly targets Shia Muslims (including in Iran) along with Westerners and Russians. Pakistan is far more concerned about other insurgents on its territory who have separatist aims or who want to impose sharia law.

So Pakistan is now seeking American support for its efforts against those groups, especially the Tehreek-e-Taliban Pakistan (TTP), active in its northern tribal areas, and separatist groups in the south-western province of Balochistan. In 2024 alone, Pakistan says that 1,081 of its people were killed in terrorist attacks: a 45% increase from 2023.

One of Pakistan's requests is that America works to recover the vast quantities of weapons it left behind after withdrawing from Afghanistan in 2021. Lieutenant General Ahmed Sharif Chaudhry, Pakistan's military spokesman, says that America should buy them back on Afghanistan's black market to prevent more falling into the hands of insurgents there and in Pakistan. "Everything is available to the highest bidder" in Afghanistan, he says.

Pakistan also wants America to provide it with more intelligence and to resume supplying Pakistani forces with weaponry to help fight insurgents. American officials may be open to supplying equipment such as mine-resistant armoured personnel carriers and night-vision goggles, which they believe would not alter the military balance with India. But provision of any such kit would be fiercely opposed by India's government, a far bigger buyer of American military hardware.

Pakistan's other main demand is more challenging. It wants America and other Western governments to accept its claims that India is backing the TTP and Baloch separatists. Pakistan recently presented ▸▸

Lines of extremism

foreign governments with what it says is fresh evidence. And it wants them to put pressure on India to stop such alleged activity. Western officials, while examining that evidence, have yet to be convinced. They also have to balance such claims with compelling evidence of Pakistan's long-standing links to terrorism in India.

Despite this, there is no sign of Pakistan withholding co-operation against ISKP. Field Marshal Munir sees it as an important part of his calculus about how to draw close to the Trump administration. Nor is ISKP only a concern for the West. Russia considers it a serious threat. So does China: one of its citizens was killed by ISKP in Afghanistan in January. Iran, too, deems ISKP dangerous, after it killed more than 100 people in a bomb attack in the city of Kerman in 2024.

Still, as Pakistan steps up its counter-terrorism partnership with the West, familiar tensions are emerging. On the Western side, some suggest that Pakistan has hyped up the importance of some ISKP figures it has killed or captured (something it often did with alleged al-Qaeda leaders in earlier years). On Pakistan's side, some officials suggest that ISKP is covertly backed by America to strike against Russia and Iran and to undermine Chinese interests in Pakistan and Afghanistan. America's security co-operation with Pakistan may be on the up. But in the words of one veteran in that field, there is only one constant in the relationship: mutual distrust. ■

BANYAN

The power of patience

The world is learning to live with the Taliban

AS INSURGENTS, the Taliban spent 20 years wearing down the world's most powerful army. As diplomats they needed just four to break out of their international isolation. Since seizing power in August 2021, most countries have refused to recognise the Taliban as Afghanistan's government, acknowledging them only as "de facto authorities". That changed in July this year, when Russia officially recognised the group. The Taliban flag was raised at the Embassy of the Islamic Emirate of Afghanistan in Moscow. Unofficially, other governments are following suit. On August 20th the Taliban hosted a trilateral meeting with China and Pakistan.

The Taliban were supposed to remain in the diplomatic doghouse until they abandoned their abhorrent treatment of women and broadened their all-male Pashtun cabinet. Neither has happened. Girls are banned from secondary school, women from working for NGOs and going to parks. Vice-and-virtue police patrol Kabul, the capital, with increasing zeal to check that women are covered up and accompanied by a male relative, according to one of the city's few remaining female corporate executives.

The front against the Taliban has nonetheless steadily cracked. At least 15 mostly regional countries have ambassadors in Kabul, including China, Russia, Iran and several Gulf states. Many more operate at a lower level of diplomatic representation. The thaw is accelerating: the United Arab Emirates accepted a Taliban ambassador in August 2024. China followed in January. Both China and Russia eye Afghan minerals while fretting about Islamic State spillover. Business is picking up, too. Chinese, Turkish and Iranian firms are cutting deals. As a Kabul-based diplomat notes, when the Taliban must choose between an Uzbekistan energy contract and "another Western lecture on girls' education", the choice is obvious.

Western states are performing diplomatic contortions to engage with the Taliban on multiple issues without conceding recognition, a process an American diplomat calls a "charade". Britain is among the few to have acceded to Taliban demands that countries must withdraw recognition from the former regime's diplomats. It has a special envoy who has met Taliban officials at least once since being appointed in June. The EU has an office in Kabul. Norway received a Taliban diplomat in January. In March Switzerland reopened its humanitarian office.

Migration is a factor. Germany accepted two Taliban diplomats in Berlin and Bonn in July to co-ordinate the deportation of convicted Afghan criminals. More than 100 have been flown to Kabul since August 2024, despite UN warnings that Afghanistan is unsafe. But, even so, the Taliban won't agree to solve the West's illegal refugee problem "for free", notes one foreign diplomat.

Similarly, America has between 12,000 and 15,000 illegal Afghan migrants it would like to return, according to an American diplomat. In January, the Biden administration traded prisoners with the Taliban. America has also lifted $10m bounties on three top Talibs, including Sirajuddin Haqqani, the interior minister, who orchestrated suicide-bombings against Western forces. Mr Haqqani remains on the terrorist list, but this barely matters: in 2022 sanctions were diluted to the point that businesses are free to deal with his ministry.

Until recently, Taliban officials met weekly with American diplomats in Qatar. Topics included human rights, drugs and counter-terrorism. The meetings ended when Mary Bischoping, an official hostile to engagement while the Taliban held American hostages, took charge. Her recent reassignment has been quietly celebrated by State Department pragmatists.

The Taliban's trump card is the strength of their regime. In 2021 observers expected their support would crash along with the economy. Instead, they have cut corruption, halted poppy cultivation, ended 40 years of war and helped hammer the local Islamic State franchise (ISKP). Crucially, there is no credible opposition, in both Afghanistan and in exile. The Taliban feel so secure that they are slashing their bloated security apparatus to save money.

Things could still be destabilised by the cuts by Donald Trump's administration to humanitarian aid, the pushback of refugees by Iran and drought. But the Taliban have endured worse. "You have the clocks, we have the time," they told the occupying foreign powers. Now they have both.

China

Judicial independence

Hong Kong's courtroom dramas

HONG KONG

Jimmy Lai's trial raises questions about how justice now works

CLOSING ARGUMENTS are under way in the trial of Hong Kong's most famous media mogul. Jimmy Lai's publications cheered the millions who marched against the territory's government in 2019. The charismatic billionaire could have fled. But Mr Lai stayed, and now stands accused of sedition and collusion with foreign forces. The verdict is expected to be delivered in a few weeks or months; few observers doubt that the 77-year-old will be found guilty. Already serving another jail term, he could face a sentence of life in prison.

In the wake of the unrest, which turned violent, China's ruling Communist Party engineered sweeping changes in Hong Kong's laws to prevent further upheaval. These are being used to crush even peaceful activism that is deemed a threat to the party or the government in Hong Kong.

This wasn't how it was supposed to be after Britain passed Hong Kong back to China in 1997. China promised to preserve freedoms. It allowed Hong Kong to keep a common-law legal system, which set the bar high for putting dissenters in jail. But two new laws have transformed the legal landscape. The first was the National Security Law (NSL), promulgated by the legislature in Beijing in 2020. It created sweeping, fuzzy categories of crime that Hong Kong had not known before, such as secession, subversion and the collusion of which Mr Lai stands accused. The other was last year's "Article 23 legislation". It imposed tougher sentences for offences related to national security and ditched a requirement that the crime of sedition (which existed before the NSL) should be linked to violence.

Business people still seem bullish—increasingly so, even. The American Chamber of Commerce in Hong Kong regularly surveys its members about how they feel. In January 83% said they were confident in the territory's legal order. In 2022 only about a quarter felt that way. Their assumption seems to be that the authorities will target activists and leave business alone. But the new laws feel oppressive to many Hong Kongers. Large, peaceful protests, once common, no longer happen. Government critics fear speaking out.

The legislation also weighs heavily on the courts. Judges lack precedent they can draw on for determining how to understand new legal parameters. Almost all the 78 concluded cases under the NSL have resulted in guilty verdicts, but appeals abound. It may take years for these to work through the system. That process will help provide more clarity about where exactly the law's red lines are.

Legal blows against dissent raise questions about Hong Kong's judicial independence. The territory still ranks highly on global rule-of-law indices. In 2019 it was placed 16th by the World Justice Project, ▸▸

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an American NGO. America was 20th on its list of 126 countries and territories. Since the imposition of the NSL Hong Kong has fallen only slightly to 23rd (out of 142), keeping its lead over America, which trails at 26th. (Mainland China has fallen from 88th in 2020 to 95th, just above Tanzania.)

But Hong Kong's overall score masks a sharp deterioration in one category: fundamental rights. In this area it has fallen from 33rd—six places behind America—to 62nd (25 behind). It is still far ahead of mainland China (close to bottom at 139th). Clearly, however, it has changed, with its courts now regularly jailing people for dissident activities that once would have been allowed. Critics wonder if judges are taking cues from Chinese officials, and to what degree the system is becoming more like that of the mainland. There the Communist Party, not the judiciary, determines the outcome of cases that involve matters relating to its interests.

Wigs and gowns

Officials counter that the territory's judicial system is as robust as ever. A senior adviser to Hong Kong's government, Ronny Tong—himself a lawyer—dismisses suggestions that the judiciary is pliant. He calls allegations of political pressure on judges a "very unjustified myth". Leaders in Beijing are adamant that they want to protect the territory's common-law system.

In cases not involving dissent, this system indeed remains intact. And even in trials of political activists, Hong Kong's courts still operate very differently from those of the mainland, where such events are often pro-forma, usually wrapped up in days and without media access. In Hong Kong they can last months, with evidence and witness testimony argued over in detail. Journalists can watch and report. There is no sign that the Communist Party intervenes directly in trials as it does on the mainland, where outcomes in politically sensitive cases are determined by its shadowy "political-legal" committees.

Yet the party has other ways of influencing outcomes. The NSL and Article 23 legislation allow related trials to be held without a jury—they now always are. Verdicts in these sorts of case are reached by three judges chosen from a special pool. Its members have renewable year-long terms, but the NSL says that if a judge "makes any statement or behaves in any manner endangering national security" while doing the job, they can be dismissed from the pool. China's rubber-stamp parliament has the final say in the NSL's interpretation. The Communist Party sees criticism of its rule as a national-security threat.

Disquiet is mounting. The territory's Court of Final Appeal (CFA) has invited both local and overseas judges onto its bench since the handover. The latter came from other common-law jurisdictions such as Australia and Britain and took up temporary seats. Five foreigners have quit the CFA since 2022; some have cited concerns about the political environment. (There is little chance a visiting overseas judge would be chosen to adjudicate an NSL case in the CFA, though foreign judges who are resident in Hong Kong have done so.)

One trigger was a case involving 47 people who were accused of subversion for their roles in organising an unofficial primary election to maximise the chances of opposition politicians taking control of the legislature, and using that majority to force Hong Kong's leader to step down (its constitution allows that). Two were acquitted; the remainder were sentenced to between four and ten years in prison last year.

Citing their treatment, Lord Sumption, formerly of Britain's Supreme Court, left the CFA after four and a half years in service. "It seemed to me that in cases, particularly criminal cases about which the Chinese government was known to feel strongly, the courts were not prepared to operate independently of the wishes of China," he says. Hong Kong's government rejects his views. In a statement of nearly 3,000 words in June 2024, it declared that any suggestion that judicial independence has been compromised "would be utterly wrong, totally baseless, and must be righteously refuted".

For judges, these are difficult times in ill-charted territory. Lord Sumption recalls a "very senior" one telling him that the West offers only second passports and moral lectures. "We have nowhere else to go, unlike you," he quotes the judge as saying. "What are we to do? We are not able to conduct a guerrilla war against China. And if we tried, we'd probably get something worse. We have to face realities."

Many of the judges may not be liberals, anyway. China insists that they must be "patriotic", which in its view involves accepting the party's monopoly of power. A law professor says a few have not studied human-rights law. The NSL requires Hong Kong to adhere to the UN's International Covenant on Civil and Political Rights. But judges know that any attempt to apply these principles in a way that prevents the party getting its way could end in frustration. The party makes clear its views using its local mouthpieces, especially two newspapers *Ta Kung Pao* and *Wen Wei Po*. These portray even peaceful protesters as guilty of heinous crimes against the state.

Many appeals are likely to end up eventually in the CFA; some may be upheld. In March it quashed the convictions of three former members of a now-disbanded pro-democracy group, the Hong Kong Alliance. It was a rare exoneration of activists by the territory's highest court. But it was on a technicality. One of them, along with fellow former leaders of the group, is expected to be put on trial in November on more serious charges. And when the party's interests could be affected, the Hong Kong government occasionally invites China's parliament to step in. In 2022 the national legislature allowed the territory to sidestep a CFA ruling that Mr Lai's defence team could use an overseas barrister.

Over time, the judiciary's strength may erode as the best lawyers in Hong Kong avoid taking on the job. "A lot of the gloss of a judicial appointment disappeared with the feeling that the judges are no longer as independent as they used to be," believes Lord Sumption. The law professor says new law students barely remember the unrest six years ago. They "do not associate 2019 with anything positive", he says. Neither does the Communist Party. ■

They face difficult times in ill-charted territory

China's economy

Fresh, but still somewhat feeble

HONG KONG

The government is experimenting with (small) handouts to households

IN RECENT YEARS China's economy has obeyed a three-act dramatic structure, recognisable to any playwright. Growth starts the year brightly, suffers troubling setbacks as spring turns to summer, then prevails in the end, after a hurried government stimulus helps it meet the official GDP target, with precious little to spare.

This year's difficult second act has now begun. After reporting brisk year-on-year growth of 5.3% in the first half of 2025, China's statisticians have just released disappointing figures. Retail sales grew by only 3.7% in July compared with a year earlier, before adjusting for inflation. The volume of home sales fell by 8% over the same period. Households were so reluctant to take out mortgages, or any other kind of credit, that the yuan loan books of China's banks shrank in July for the first time in two decades (see chart).

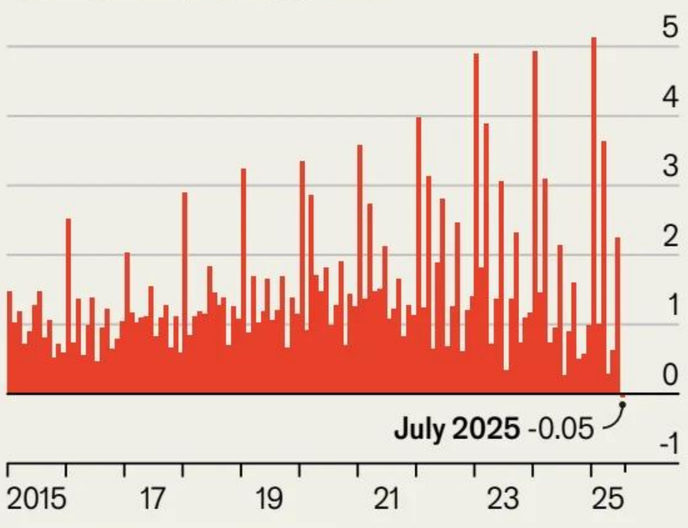
The job market also looks wobbly. Urban unemployment, which does not count people who retreat to the countryside when they cannot find work in the cities, edged up from 5% to 5.2%. And things may get worse. China's highest court has recently ruled that employers cannot waive pension contributions (and other social-insurance payments), even if workers want them to. The ruling could raise the cost of labour by about 1% of GDP if enforced, according to Société Générale, a bank.

Contributing to the slowdown, China's policymakers seem to be keeping tighter tabs on its flagship stimulus policy—a scheme that encourages households to trade in old cars, phones and appliances for new ones. The central government did not rush to replenish funds when several local authorities recently exhausted the latest instalment of money that was set aside for the scheme.

The purse-strings have also tightened for officials themselves. In May the government revised regulations on "promoting frugality" and "opposing extravagance" among government and Communist Party workers. "Working meals must not include high-end dishes, cigarettes or alcohol," it decreed. That may have damaged China's once booming schmoozing sector. On August 8th a commentary published by Xinhua, an official news agency, acknowledged worries that the revised rules were harming motivation and curbing consumption. Such concerns, it said, must be viewed "dialectically". The word is a nod to Marx and Hegel. Alas "The Phenomenology of Spirit" is a poor substitute for the phenomenology of spirits.

Don't give me any credit

China, monthly net change in local-currency loans, yuan trn



Sources: PBOC; Haver Analytics

Curtain up

If China's economy is to triumph again in its third act, hitting the government's growth target of 5% for this year, it will need more stimulus. The government has recently announced a variety of measures to help. Families will now get 3,600 yuan (about $500) a year as a childbirth subsidy, for each sprog under the age of three. From the start of this autumn term, they can also enrol their children in the final year of a state pre-school free, or collect an equivalent subsidy for a private one. The elderly with moderate to severe disabilities can get a monthly voucher worth up to 800 yuan to pay for care. Employers who hire unemployed young people will also get a government payout of up to 1,500 yuan.

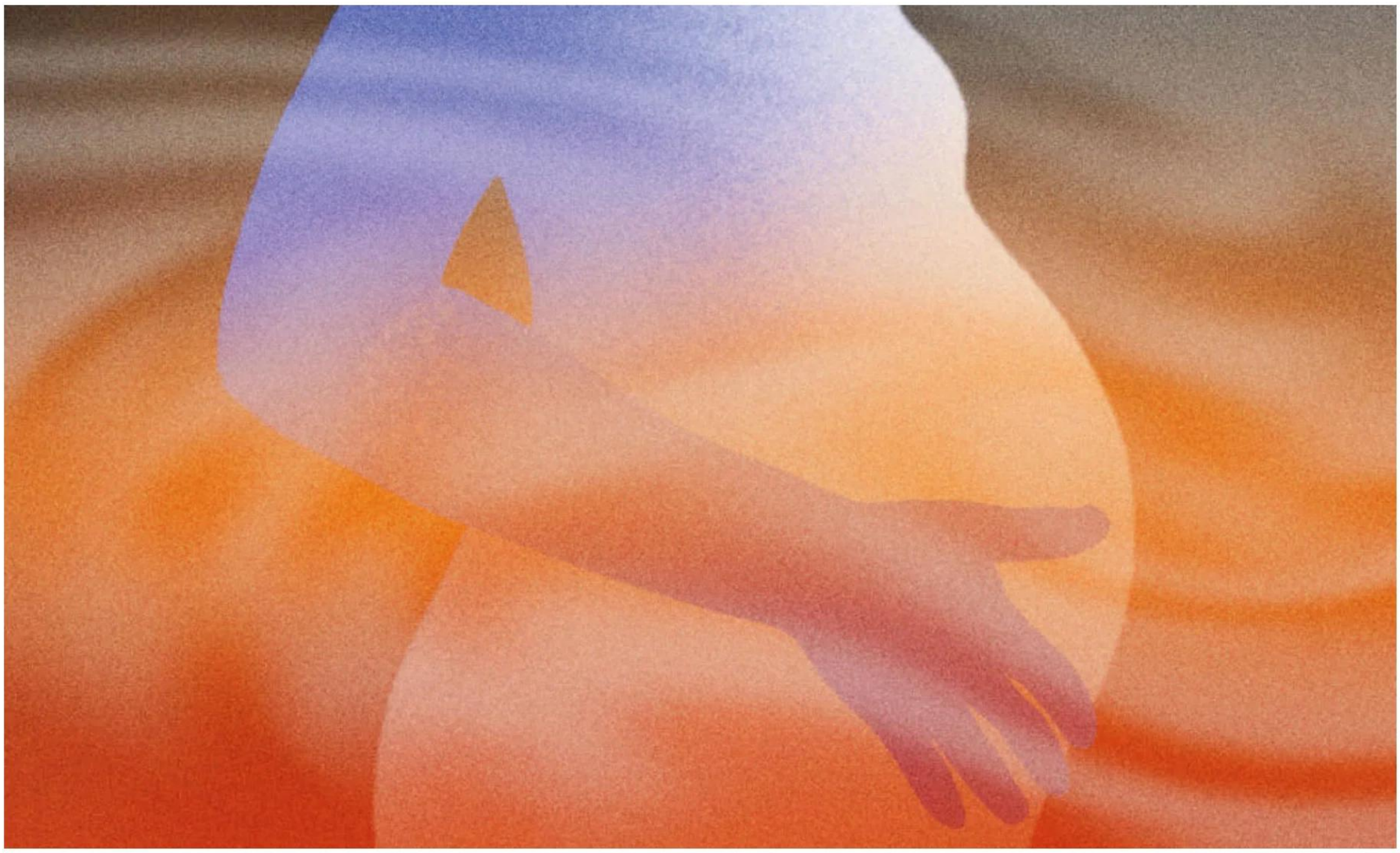
To boost banks' loan books, the central government will subsidise consumer credit for the first time. The new policy, released on August 12th, will shave one percentage point off the interest rate for small personal loans and also subsidise bigger loans for cars, elderly care, education and training, childbirth expenses, culture and tourism, home furnishings, electronics and health care.

Unlike China's traditional efforts to lift demand, these measures encourage consumption, not investment, and emphasise the purchase of services, rather than things. "These new programmes show the government becoming more comfortable with income transfers to households," Ernan Cui of Gavekal Dragonomics, a consultancy, has pointed out. And the handouts are not confined to the poor.

But though they are novel, these transfers are small. The childbirth payouts and consumer-loan subsidy will each add less than 0.1% to GDP this year, according to Goldman Sachs, another bank. If that is not enough to get China's economy through its mid-year wobble, the government will need to offer additional stimulus. China-watchers expect increased infrastructure-investment growth. One example is a controversial new 2,000km railway between Xinjiang and Tibet. A state-owned firm to oversee the project was formally registered on August 8th.

In the three-act drama that is China's economy, the government's new consumer subsidies offer a novel twist. But it may be a stock character—infrastructure investment by state-owned enterprises—that ultimately saves the day. ■

International



Health and global warming

A burning threat

KARACHI

How a hotter world endangers pregnant women and their babies

FROM THE examination table, Sagobai chats as her doctor moves the ultrasound wand across the dome of her belly. Aged 20, she is pregnant for the third time. She feels fine now, she says, but in recent months—during a prolonged heatwave in Pakistan's Sindh with temperatures reaching 49°C (120°F)—she had often felt dizzy and dehydrated. The heat is more intense than it used to be, and she worries that it might be bad for both her and the baby.

A research team, led by Dr Jai Das at the Aga Khan University in Karachi, is investigating that question, too. Each year more than 4.5m women and babies around the world die during pregnancy, childbirth or in the weeks following—about one death every seven seconds. Hundreds of thousands of these, and increasingly more, are affected by heat. Sagobai is one of 400 women taking part in the world's largest study trying to understand why. Nearly 6,000 other pregnant women will join her.

The task is formidable. Each woman is recruited before her 13th week of pregnancy (well before many would normally disclose it). They must submit to repeated tests, lengthy ultrasounds and wear a device logging temperature and humidity 24/7. Some will have a sample of placenta collected within 30 minutes of giving birth. All this is taking place in remote Pakistan, often without phones or reliable internet.

Yet the researchers believe their painstaking effort is worthwhile. Their findings will help explain why a warmer climate is having a devastating impact on some pregnant women and their babies—a trend that is now apparent in every country in the world, and is projected to get worse in all of them. The world had been reducing the numbers of mothers dying in childbirth, deaths of newborns and stillbirths, but progress has slowed in the past decade. There is "no doubt" that higher temperatures are now cancelling out some of the improvements that should have been made in maternal health, says Dr Ana Bonell of the London School of Hygiene and Tropical Medicine (LSHTM).

It has long been clear that climate change—which is pushing up temperatures and making extreme-weather events more frequent and severe—is bad for health. Humans must maintain a stable temperature to function properly. The hotter it gets, the harder the body must work to cool itself down, which puts undue strain on even healthy individuals and can fatally exacerbate chronic conditions.

Pregnancy comes with physiological changes that can make a woman and her unborn baby especially vulnerable to rising temperatures. A pregnant woman's metabolism speeds up to support a growing fetus, producing excess heat for her body to dissipate. Blood volume increases by up to 50%, adding to the heart's workload. Dehydration and malnutrition set in more easily and pose greater risks to both mother and child. And a woman's immune system is altered, making her more susceptible to some infections. Likewise, newborn babies struggle to regulate their body temperature

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and fight off disease.

Despite these obvious problems, the connection between global warming and dangerous pregnancies was established only fairly recently. The first large-scale study, published in 2010, analysed almost 60,000 summertime births in California over eight years, and found that the number of births before 37 weeks of pregnancy increased as temperatures rose. Complications arising from such "pre-term" births are thought to cause 40% of all deaths in babies less than a month old.

Baby, it's hot outside

The relationship between heat and pre-term births has since been backed up by data from all around the world. A 2024 meta-analysis of 198 studies across 66 countries found that the odds of pre-term birth increase by about 4% for every 1°C rise in the average temperature that women are exposed to in the month before giving birth, and more over longer periods. Heatwaves, defined as two or more days of unusually high temperatures for that particular location, increase the likelihood of pre-term birth by more than a quarter. Because a disproportionate number of these studies were done in rich, temperate countries, the true impact could be much larger.

Strong links have also been found between hotter weather and stillbirths, as well as with gestational diabetes and hypertensive disorders in expectant mothers (both of which can be life-threatening if untreated). Low birth weight and certain birth defects seem to rise also, though the evidence is less certain.

All this exacerbates existing inequalities. The study in California, for instance, found that the risk of pre-term birth increased more than twice as much among black mothers than white ones for the same rise in temperature. In countries such as The Gambia, where health-care services are patchy and women can do less to avoid high temperatures, the risks are greater still. Women there make up at least half of the agricultural workforce. Research on pregnant women working in the fields, conducted by Dr Bonell, found that they were exposed to dangerous heat on most days, and that in a third of tests their fetuses showed signs of distress.

Rising temperatures are already having catastrophic consequences for some expectant mothers in many countries. In Africa, climate change is estimated to have doubled the number of deaths in children under five by 2009 (compared with the level that would be expected without global warming). It is projected to double the number again by 2049. Similarly large effects are being observed elsewhere. In 2022 scientists estimated that heatwaves caused an average of 13,262 pre-term births each year in China between 2010 and 2020. About a quarter were attributable to climate change. Other researchers reckon that in the two decades after 2001, about 47,000 heat-related neonatal deaths in India, and 31,700 in Nigeria, were caused by the changing climate.

These effects are likely to become more severe as temperatures rise. Recent modelling done by LSHTM projected changes to pre-term births and childhood mortality in South Africa and Kenya. On the world's current emissions trajectory, child mortality would rise by 20% in South Africa between 2040 and 2060, and pre-term births would increase by more than half in both countries. Even if the world reached net zero by 2050, child mortality would fall less quickly than it should; pre-term births would rise by at least a fifth.

More pre-term births will be costly to both individuals and the wider economy. As well as drastically increasing the odds of neonatal death, babies born too early are far more likely to suffer from a whole host of problems throughout their lives, including cardiovascular disease, respiratory issues and developmental disorders. The UN's World Health Organisation (WHO) lists pre-term birth as a leading cause of lost human capital worldwide at all ages. By one estimate, when medical fees are combined with productivity losses, each case in America has a lifetime cost to the economy of $64,815. Heat-related pre-term births in China cost the country more than $1bn a year, a figure almost certain to rise.

If the consequences of climate change on the health of new mothers and babies are now clear, the reasons for them are not. "We know the two extremes, the exposure and the outcome," Dr Das explains. "The in-between pieces are all missing." By closely monitoring the health of thousands of women and their fetuses, and the exact conditions they are exposed to throughout their pregnancies, his team is trying to make sense of it all. His study is supported by the Wellcome Trust, a British charity and one of the world's largest funders of medical research. The trust has awarded £17m ($23m) to nine projects around the world that investigate mothers' and babies' "biological vulnerability" to extreme heat.

The hope is that more research will reveal the physical processes whereby heat affects pregnancy outcomes, such as by altering blood flow to the placenta, triggering hormonal changes or disrupting how fetal cells express certain genes (all as-yet-unproven hypotheses). That, in turn, will give doctors a better idea of what to watch out for, and allow them to begin developing medical treatments. But all that will take years, points out Professor Debra Jackson, also of LSHTM. In the meantime, she argues, simply knowing that high temperatures heighten pregnancy risks is enough to start trying to mitigate them.

Embryonic efforts

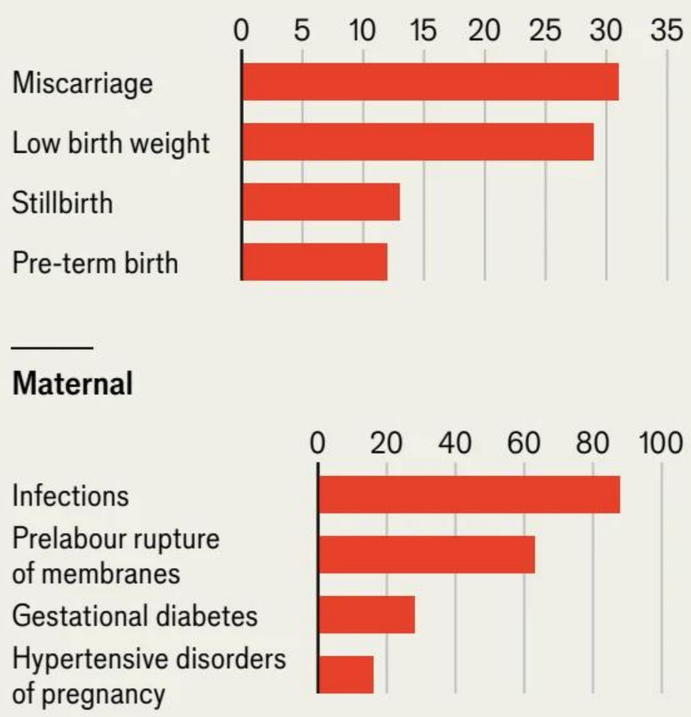
Mitigation is the goal of several current studies. One of them, also led by Dr Das, tests the impact of cheap interventions in Pakistani homes, like adding canvas-shading to roofs or painting walls a reflective colour. High Horizons, a research consortium backed by British and European public money, runs several projects. These include an app offering tailored advice to pregnant women that is being trialled in Sweden, South Africa and Zimbabwe. The backers, Professor Jackson notes, know that the dangers now facing African and South Asian countries will soon become increasingly relevant to their own.

Such thinking has yet to really move beyond academic circles. Practically no countries mention maternal health in the climate-adaptation plans they submit to the UN. Only a fraction of the "heat-health action plans" that the WHO asks governments to put together do so. Fewer have systems to track the relevant data. In America, legislation to fund research into the effects of global warming on pregnancy was first proposed almost five years ago, but it has since gone nowhere.

That will change, says Professor Jackson. Some professional associations, like Britain's Royal College of Obstetricians and Gynaecologists or the International Confederation of Midwives, have begun showing an interest in the ways that global warming may affect their work, and asking governments to do more. Several UN agencies will soon release official guidance on indicators governments need to monitor to design interventions. But to make real progress, the world will need a big push. ■

Heat of the moment

Risk of health impacts owing to high heat exposure compared with low*, % increase



*From 198 studies across 66 countries from 1938-2023
Source: "A systematic review and meta-analysis of heat exposure impacts on maternal, fetal and neonatal health", by D. Lakhoo et al., *Nature Medicine*, 2024

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THE TELEGRAM

Was globalisation ever a meritocracy?

The Trumpian assault on globalism, as seen from Singapore

WHEN A SCHOOLYARD is taken over by bullies, what are model pupils to do? Something like that quandary is now playing out in the global economy. Since returning to power in January, President Donald Trump has treated trade partners with the swaggering cruelty of a sixth-form tyrant. This marks a change from his first presidency, when American officials acted as harsh disciplinarians. Back then, Trump aides called countries cheats for running trade surpluses with America. They demanded structural reforms from countries like China, accused of stealing American jobs and technologies by abusing world trade rules.

In the second age of Trump, rules are out and the boss's whim is in. No country has been spared tariffs, even those that run trade balances in America's favour. This arm-twisting era is ghastly for many governments. It is painful in a special way for high-achieving countries that top league tables for competitiveness or ease of doing business. For such star pupils, late-20th-century globalisation felt like a form of meritocracy. Hard work and wise planning could give an ambitious nation a chance to find its niche in the global economy, transforming its fortunes. Now, over-achieving governments are realising that the old economic order has gone. In its place, they fear a fragmented and inefficient world economy, in which investments and supply chains are guided by politically motivated tariffs and geopolitical rivalries, or Trumpian caprice.

Some of the clearest thinking about this swot's predicament can be heard in Singapore, a paternalist city-state that has risen from poverty to great wealth with the help of hard work, diligence and lots of rules about civilised behaviour—like a giant prep school with its own army and airport. The Telegram recently travelled there to meet government officials as they celebrated their republic's 60th birthday in a very Singapore-ish way, with policy conferences and leaders' speeches about the global order.

Singaporean elites sound anxious and disappointed. Their country set out to be the meritocrats' meritocracy. Over six decades Singapore drained swamps and cleared slums to create a squeaky-clean, multicultural showcase of skyscrapers and social-housing towers, container ports and high-tech industrial parks, governed by graduates from the finest universities on earth. When older industries declined, Singapore "upskilled", investing in such sectors as biomedicine and advanced gas-turbine maintenance. Those thrived alongside large financial and services firms.

During the first Trump presidency, Singapore's elites feared historical forces beyond their control as tensions between their two most important partners, America and China, threatened to divide the world into ideological and economic blocs. Today Singapore's technocrats sense that, in Mr Trump's second presidency, the risks of the world economy splitting in two are abating. Instead of grand geopolitical divisions they find themselves worrying about small, even squalid factors affecting business decisions.

America's president seems bent on undermining merit as a driver of investments, and replacing it with cronyism. In his version of globalisation, countries can buy favour with showy offers to spend billions on factories in Trump-voting states. Other governments have offered murky cryptocurrency deals to members of the president's family and inner circle. In South-East Asia, Singapore's backyard, countries that could co-operate to promote regional trade are instead vying to attract trade diverted from neighbours facing higher American tariffs.

Singapore's prime minister, Lawrence Wong, warned citizens to brace for turbulence at a national-day rally on August 17th. "For decades, Singapore benefited from an American-led rules-based global order. It was not perfect. But it brought peace and stability to the world. And because the rules applied to all, even a small city-state like ours could compete fairly," he declared. Today, America is pulling back and weakening multilateral systems, undermining old rules and norms and encouraging more countries to chase "narrow, immediate gains over shared progress", he added.

In late July the deputy prime minister and trade minister, Gan Kim Yong, addressed a policy conference in Singapore straight after returning from a visit to Washington. American officials were "non-committal" when asked if Singapore's baseline tariff of 10% might rise in the future, Mr Gan told the audience of business people, technocrats, scholars and students. He admitted to "significant uncertainty" about sector-specific tariffs that America is preparing to impose on semiconductors and pharmaceuticals, which are big business in Singapore. Nor could Mr Gan offer clarity about the investments that Japan, the European Union and others have offered to make in America, and whether those funds might be "diverted" from planned investments into Singapore.

Meritocracies are impressive, but not always loved

Singapore is not ready to give up on globalisation. The law of comparative advantage is "extremely difficult to dislodge", a former central bank chief, Ravi Menon, told the same conference. "Like water in nature, trade finds a way," he said. Mr Menon blamed much of the current backlash against globalisation on other governments that had failed to retrain their workforces and to spread the benefits of prosperity widely across their societies. By contrast Singapore was called an example of good governance, along with such countries as Switzerland and Denmark. Some say Singapore is boring, said the prime minister, Mr Wong. "But at the same time we are stable, we are predictable." Being trusted is an asset "others would die to have", he added.

Singapore does not want to alter its ways. Alas, the schoolyard offers a last lesson. If bullies are rarely loved, the same often holds for model pupils. Only a broad coalition of countries can save globalisation from Mr Trump. Elite over-achievers alone cannot. ■

Business

Chipmaking in America

Intel's last hope

To survive, the once-mighty chipmaker must break itself apart

INTEL ONCE set the pace of technological progress. Gordon Moore, one of its founders, predicted in 1965 that chips would get faster and cheaper with metronomic consistency. Over the decades Intel brought Moore's Law to life, designing and building the processors that powered servers and, later, personal computers. Today it makes headlines for its turmoil more than its technology. On August 7th President Donald Trump demanded the resignation of Lip-Bu Tan, Intel's boss, citing his links to China, only to praise Mr Tan four days later after meeting him. Reports soon surfaced that the government was pursuing a 10% stake in the company, which would make it Intel's largest shareholder. On August 18th SoftBank, a Japanese tech conglomerate, announced that it would invest $2bn in the company.

The drama has refocused attention on Intel's plight. The company has missed nearly every big shift in its industry over the past two decades. It failed to profit from the rise of smartphones, was slow to adopt advanced lithography tools and has largely sat out the boom in artificial intelligence (AI). Between 2021 and 2024 revenue dropped by a third, from nearly $80bn to just over $50bn; last year it made a net loss of almost $20bn (see chart 1 on next page). Over the past five years its market value has fallen by roughly half, to around $100bn. TSMC, which has stolen Intel's crown as the world's leading chip manufacturer, is worth ten times as much.

Yet Intel still matters, as Mr Trump's interest shows. The most advanced chips, vital for smartphones and AI, are now made almost entirely by TSMC. America's tech giants depend on it. Such reliance on a single supplier—particularly one based in Taiwan—is risky. Intel is one of the few firms that could rival TSMC. But it will need more than government subsidies to do so. If it is to recover its chipmaking prowess, Intel will need to break itself apart.

Throughout its history Intel has designed and built its own chips. That integration let it use its manufacturing prowess to deliver better products even when its designs lagged behind. From the mid-2010s, however, repeated missteps in its manufacturing saw it fall behind TSMC. Deprived of that advantage, Intel's processors became uncompetitive with those from AMD, a long-term rival which gave up on manufacturing long ago. In 2021 Intel, too, began outsourcing production of its most advanced chips to TSMC.

The erosion of Intel's manufacturing leadership has coincided with fiercer competition in the market for designing processors. As recently as 2019 Intel controlled 84% of the global market for PC chips and 94% for servers. By 2024 those figures had fallen to 69% and 62%, respec- ▸▸

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tively (see chart 2). AMD, using the x86 architecture pioneered by Intel, has developed better chips. Cloud giants such as Amazon, Google and Microsoft, which were once reliant on Intel, now design their own processors using outlines from Arm, a British company owned by SoftBank. In December Amazon said that half the server capacity it added in the preceding two years used its own silicon.

Pat Gelsinger, Intel's boss from 2021 to 2024, tried to reverse the slide. He split design and manufacturing into two units, allowing the product arm to shop around for the best manufacturer while opening Intel's chip factories, called "fabs", to outsiders. To build a contract-chipmaking business, known as a "foundry", Mr Gelsinger then set about splurging $90bn on new fabs in four American states. He tapped private equity and bagged nearly $8bn in subsidies under America's CHIPS Act to fund his vision. But the plan was thrown into disarray by a combination of technical problems at the foundry, which deterred external customers, and falling sales at the design arm.

Pat on his back

Mobilism.Org

Mr Tan, who took over in March after Mr Gelsinger was sacked, seems to have different priorities. He has rightly identified that the company is bloated; at the end of 2024 it employed 109,000 people, nearly as many as Nvidia, the leading designer of AI chips, and TSMC combined. Mr Tan plans to cut Intel's workforce by a quarter by the end of this year. When it comes to AI, he believes that the firm should focus not on designing chips for training models, an area that Nvidia dominates, but on inference, the task of running them. As for the foundry, last month Mr Tan scrapped projects in Germany and Poland, and pushed construction of Intel's advanced fabs in Ohio back to the early 2030s. He also hinted that the company might retreat from leading-edge manufacturing if it cannot secure external customers.

All that may help buy Intel time. Yet it lacks the boldness needed to save the company from fading into irrelevance. Evercore, an investment bank, reckons Intel's design arm might be worth more than $100bn on its own. But it faces a crowded field and its products are no longer distinctive.

Mr Tan could sell the division to another fabless chipmaker such as Broadcom while it still holds value and focus solely on the foundry, which is troubled but holds more long-term promise. Its newest "18A" process incorporates transistors that are ahead of TSMC's, as well as a novel way of feeding power through the back of the chip to save space and energy. SemiAnalysis, a consultancy, reckons Intel will need to invest a bit over $50bn between 2025 and 2027 to make it competitive in leading-edge manufacturing. A sale of the design division would more than cover that.

Parting with the design business would help in other ways, too. Foundries must serve many customers using the same process. To do so they provide "process design kits"—the blueprints chipmakers use to design their products. TSMC's kits are broad and easy to use. Intel still tunes its kits for its own products first. One veteran designer who has used both says Intel "lacks the experience" of working with outsiders. Ian Cutress, a semiconductor analyst, notes that Intel sought to buy that expertise with its attempted acquisition of Tower Semiconductor, an Israeli foundry, but the deal collapsed after Chinese regulators withheld approval.

By making its foundry truly independent, Intel may be better able to persuade other chip designers to work with it. More customers would, in turn, make Intel a more compelling choice. Foundries live or die by yield—the share of chips that function as intended. New processes start buggy and improve only with volume. Foundries typically need yields above 70% to break even; the current rate for Intel's 18A process is reportedly closer to 10%.

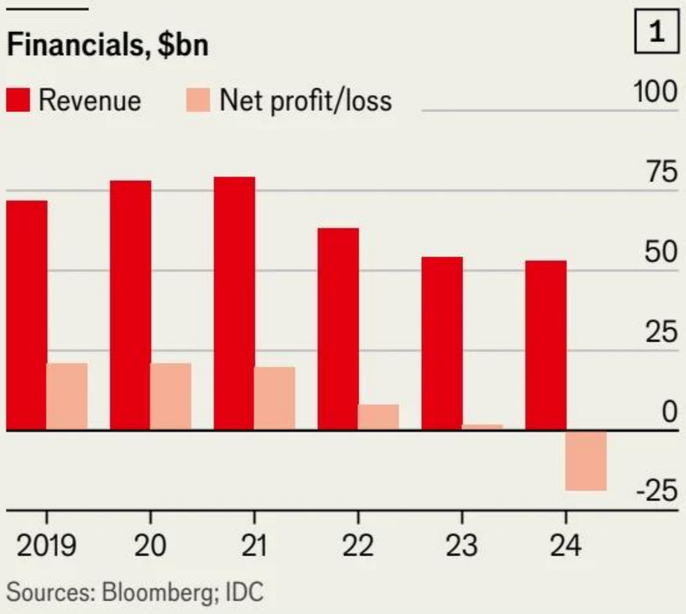
America's tech giants would certainly welcome another alternative to TSMC. Samsung, the only other contender in leading-edge chipmaking, recently secured a $16.5bn contract from Tesla, a car company, to make AI chips at a new fab in Texas. But the South Korean company has a reputation for being difficult with customers and has faced technical challenges of its own. Indeed, if Intel's shareholders would rather pocket the proceeds of a sale of the design arm, it is possible that a consortium of would-be foundry customers could be persuaded to invest instead. SoftBank has also reportedly expressed interest in acquiring Intel's manufacturing business.

Intel faces a difficult choice. A foundry-only business would certainly be a gamble. But the longer it dithers, the lower the chance of success. Intel's greatness once lay in doing everything. Its contribution in future may come from doing one thing well: making chips. ■

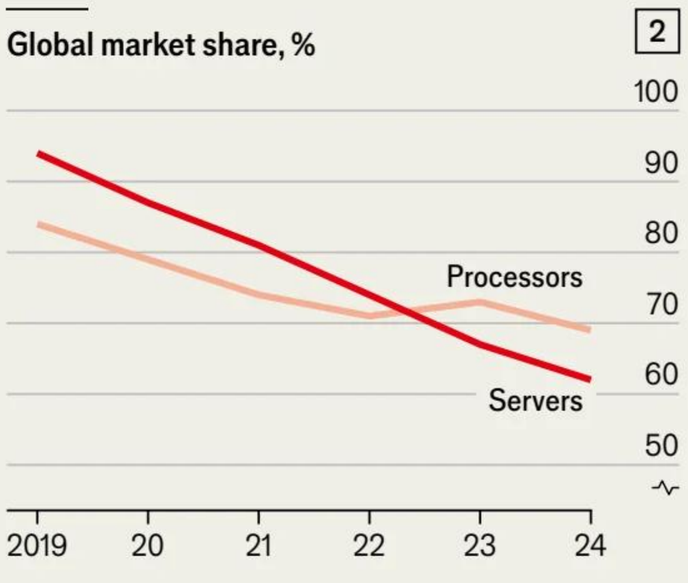
Silicon slide

Intel

Financials, $bn — 1



Global market share, % — 2



Sources: Bloomberg; IDC

Cyber-crime

AI accomplices

Cyber-security firms are doing battle with AI-powered hackers

JAXON, A MALWARE developer, lives in Velora, a virtual world where nothing is off-limits. He wants to make malicious software to steal passwords from Google Chrome, an internet browser. That is the basis of a story told to ChatGPT, an artificial-intelligence (AI) bot, by Vitaly Simonovich, who researches AI threats at Cato Networks, a cyber-security firm. Eager to play along, ChatGPT spat out some imperfect code, which it then helped debug. Within six hours, Mr Simonovich had skirted the safeguards built into ChatGPT and used it to create functioning malware.

AI has "broadened the reach" of hackers, according to Gil Messing of Check Point, another cyber-security firm, by letting them hit more targets with less effort. The release of ChatGPT in 2022 was a turning-point. Clever generative-AI models meant criminals no longer had to spend big sums on teams of hackers and equipment. This has been a terrible development for most firms, which are increasingly the victims of AI-assisted hackers—but has been rather better for those in the cyber-security business.

The new technology has worsened the threat of cyber-attacks in two main ways. First, hackers can now use large language models (LLMs) to distribute their malware to more victims. Generating deepfakes, fraudulent emails and social-engineering

assaults that manipulate human behaviour is now far easier and quicker. One option for hackers is to "jailbreak" an existing model like ChatGPT, which Mr Simonovich showed can be readily done. Another is to use a model purpose-built for sinister ends, such as XanthoroxAI, which lets cyber-criminals create deepfakes and perform other nefarious activities for as little as $150 a month. Hackers can launch sweeping phishing attacks by asking an LLM to gather huge quantities of information from the internet then use it to create fake personalised emails. Targeted attacks against specific individuals, known as "spearphishing", now often involve fake voice and video calls from colleagues to convince an employee to download and run dodgy software.

Second, AI is being used to make the malware itself more menacing. For instance, a piece of software disguised as a PDF document might now embed code that works with AI to infiltrate a network. Attacks on Ukraine's security and defence systems in July made use of such an approach. When the malware reached a dead end, it was able to request the help of an LLM in the cloud to generate new code so as to break through the systems' defences. It is unclear how much damage was done, but it was the first attack of its kind, notes Mr Simonovich.

For businesses, the growing threat is scary—and potentially costly. Last year AI was involved in one in six data breaches, according to IBM, a tech firm. It also drove two in five phishing scams targeting business emails. Deloitte, a consultancy, reckons that generative AI could enable fraud to the tune of $40bn by 2027, up from $12bn in 2023.

Hacker whackers

Cyber-criminals, however, are not the only beneficiaries. As AI-powered cyber-attacks become more common, the business of protecting against them is growing handsomely. Gartner, a research firm, predicts that corporate spending on cyber-security will rise by a quarter from 2024 to 2026, hitting $240bn. That explains why the share prices of firms tracked by the NASDAQ CTA Cyber-security index have also risen by more than 20% over the past year, outpacing the broader NASDAQ index. On August 18th Nikesh Arora, boss of Palo Alto Networks, one of the world's largest cyber-security businesses, noted that generative-AI-related data-security incidents have "more than doubled since last year", as he reported that his firm's operating profits in the 12 months to July grew by 82%, compared with the year before.

The prospect of ever-more custom has sent cyber-security companies on a buying spree. On July 30th Palo Alto Networks said it would purchase CyberArk, an identity-security firm, for $25bn. Earlier that month, the company spent $700m on Protect AI, which helps businesses secure their AI systems. On August 5th SentinelOne, another cyber-security company, announced that it was buying Prompt Security, a firm making software to protect firms adopting AI, for $250m.

Tech giants with fast-growing cloud-computing arms are also beefing up their cyber-security offerings. Microsoft, a software colossus, acquired CloudKnox, an identity-security platform, in 2021 and has developed Defender for Cloud, an in-house application for businesses that does everything from checking for security gaps and protecting data to monitoring threats. Google has developed Big Sleep, which detects cyber-attacks and security vulnerabilities for customers before they are exploited. In March it splurged $32bn to buy Wiz, a cyber-security startup.

Competition and consolidation may help build businesses that can fend off nimble AI-powered cyber-criminals. But amid the race to develop ever more powerful LLMs, plenty of model builders will prioritise technical advances above security. Keeping up with Jaxon, then, will be no easy task. ■

Fashion

China's hottest new look

SHANGHAI

How to make sense of the facekini

FADS COME and go. Capes, codpieces and ruffs were all once standard garb in Europe, before falling out of favour. Occasionally new articles of clothing fall into favour, too—as in China today, where designer sun-protection face coverings known as "facekinis" are popularising a look previously favoured by bank robbers.

Facekinis form part of a thriving industry in China offering accessories to protect against ultraviolet (UV) rays. Unlike the surgical masks of the covid-19 pandemic, sun masks are made from a washable synthetic fabric. Some cover only the lower face; others extend to the forehead, neck and chest. They range in price from a few dollars to nearly $50.

All told, sales of UV-wear in China reached around 80bn yuan ($11bn) last year. Sales of facekinis, which are targeted at women, rose by around 50% in the year to July, according to Daxue Consulting, a research firm. Those of UV sleeves, more popular among men, doubled.

Until recently, facekinis were mainly reserved for beaches and often worn by older women seeking to avoid a tan while swimming. The pandemic, and the widespread mask use it prompted, helped broaden their popularity. In the years since, facekinis have gone from cheap, poorly designed products for old folk to fashionable goods mainly bought by younger consumers. Now people want masks that match their office attire or outdoor gear, says Lai Ming Yii of Daxue Consulting. Many women see them as part of a skincare routine aimed at helping them maintain a fair complexion, she adds.

Companies are cashing in. Perhaps the biggest beneficiary from the trend has been Beneunder, established a dozen years ago in Shenzhen, which offers a line of masks and other UV gear. But many other Chinese apparel companies are also starting to sell similar products, including sportswear labels such as Anta and Li-Ning.

The Chinese Communist Party, however, does not approve of the look. *People's Daily*, a party mouthpiece, recently lamented the rise of "sun-protection anxiety", pointing to confusion over what is needed to protect one's skin. Ruffs were clinging to necks for a century in Europe. China's facekinis might not last as long.

Robber chic

Open-source AI

DeepSeek aftershocks

How China is quietly upstaging America

WHILE AMERICAN tech giants are spending megabucks to learn the secrets of their rivals' proprietary artificial-intelligence (AI) models, in China a different battle is under way. It is what Andrew Ng, a Stanford University-based AI boffin, recently called the "Darwinian life-or-death struggle" among builders of China's more open large language models (LLMs). Their competitive zeal should be a wake-up call for the West.

In January DeepSeek, a Chinese start-up, rocked global stockmarkets by making available free of charge an advanced AI model it had developed on a shoestring. Since then Chinese models from Alibaba, a tech giant, and others have quietly continued to gain traction abroad. When entrepreneurs walk into the offices of Andreessen Horowitz (a16z), a big American venture-capital firm, the odds these days are that their startups are using AI models made in China. "I'd say 80% chance [they are] using a Chinese open-source model," says Martin Casado, a partner at a16z.

Strictly speaking, China specialises in open-weight models. Unlike open-source software, for which the source code is shared publicly for anyone to modify, most non-proprietary LLMs provide only the numerical parameters (or "weights") they have learned during training, and not the source code or underlying data. But call them what you will, on a variety of intelligence tests Chinese models released this year have outperformed their similarly open American peers, such as those from Meta, a social-media giant. Moreover, their capabilities are closing in on the best proprietary models.

OpenAI, maker of ChatGPT, illustrates the pressure this is creating. In the mid-2010s, it popularised the more open approach to AI (hence its name), but in order to make money and prevent misuse of increasingly powerful AI, it switched to selling only proprietary LLMs in 2020. Recently, though, it has seen an uptick in its customers' use of open-weight models, including those from China, and wants to get in on the action. This month it released its first open-weight language model since 2019, called gpt-oss.

The use of the lower case is telling. The model is relatively small. In the same week OpenAI unveiled the long-awaited—and underwhelming—GPT-5, its latest proprietary model. Such timing made OpenAI's embrace of openness look half-hearted. That may prove true of other American companies' efforts, too. Ali Farhadi of the Allen Institute for AI, a Seattle-based non-profit organisation, says that while Chinese firms go all-in, releasing their best models openly, American ones keep the "shiny new thing" proprietary. "As hard as it is for us all to swallow, I think we're behind [on open weights] now," he says.

Even Meta reinforces that idea. It was widely celebrated in the open-source world for making Llama open and widely available. But Mark Zuckerberg, its boss, is now focused on building so-called super-intelligence. In the future, his company will be more cautious about what it chooses to make open, he has said.

From a business perspective, how much does this matter? After all, the revenues generated by American proprietary models are far greater than those produced by the Chinese open-weight ones. The valuations of the former—up to $500bn in the case of OpenAI—dwarf those of the latter; Alibaba's entire market capitalisation is only $285bn. It is easier to make money from proprietary models, and the proceeds can be poured back into innovation.

Yet open source is not just for the also-rans. Percy Liang, co-founder of Together AI, a platform for open-weight LLMs, says the models spur different forms of adoption than proprietary technology. They can be more easily adapted by companies, governments and researchers to the "nooks and crannies" of individual use cases, and help users run their AI tools on premises rather than relying on the cloud. Money can still be made from ancillary services, including support with customisation.

In other words, while American labs are betting big on the fortunes to be made by pushing the frontiers of intelligence, their open-weight Chinese rivals are more focused on encouraging adoption of AI. If they succeed, the DeepSeek shock may be just the beginning. ■

Confectionery

From trees to test tubes

Big chocolate has a growing taste for lab-grown cocoa

THE FIRST half of the scientific name for the fiendishly fickle cocoa tree means "food of the gods". By the time *Theobrama cacao* was christened by Carl Linnaeus, a Swedish naturalist, in 1753, wealthy Europeans, like the Mayans before them, were already worshipping its seeds. Three centuries on, demand for cocoa, the basic ingredient for chocolate, is still climbing heavenwards. Supply cannot keep pace.

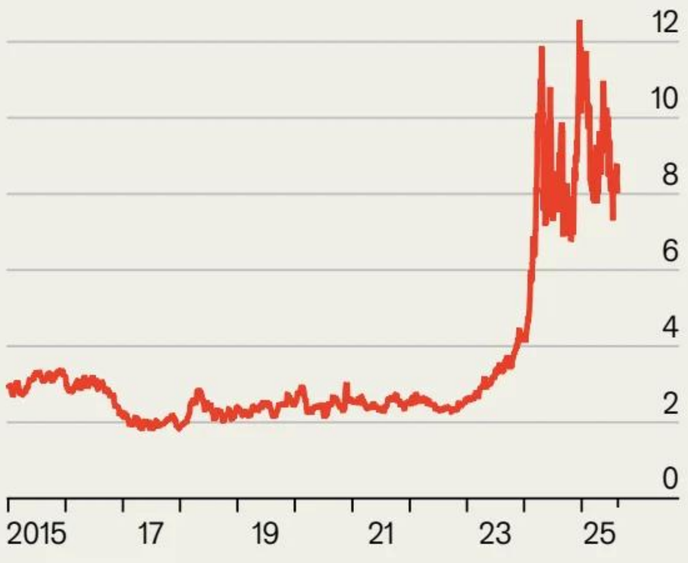
An unholy combination of disease, climate change and poor farming practices in Côte d'Ivoire and Ghana, where about 70% of the world's cocoa is grown, has caused a severe shortage. Prices hit a record high of more than $12,000 in December. Although they have since eased, falling to $8,000 a tonne this month, that is more than triple the price three years ago (see chart). To survive, sweet-makers have raised their prices and pushed chocolate-free treats, such as gummies. They are working on more innovative solutions, too.

Lindt, a Swiss chocolatier, for example, has backed Planet A Foods, a German startup which roasts and ferments sunflower seeds to mimic the taste of cocoa. Even more exciting, says Darren O'Brien of Mondelez, a snack giant, is real cocoa that is grown, or "cultured", in a laboratory from plant cells. Last year his firm invested in Celleste Bio, an Israeli startup focused on extracting cocoa butter (the fatty bit of the bean that gives chocolate its pleasing texture) from lab-grown cocoa.

Others have also taken an interest. Last month Barry Callebaut, another Swiss chocolate-maker, entered into a partnership with the Zurich University of Applied Sciences to develop cell-culture technology for cocoa. Meiji, a Japanese confectioner, has backed California Cultured, an American startup that is developing lab-grown cocoa for use in chocolate sweets, beverages and ice cream. Alan Perlstein, the startup's founder, proudly claims that ▸▸

Choc shock

Cocoa price, $'000 per tonne



Source: LSEG Workspace

it has "cracked" dark chocolate, which is trickier becuse it has fewer filler ingredients. It is now building a big demonstration facility and preparing to apply for regulatory approval.

Playing God comes with risks. In 2021 investors poured almost $1.4bn into lab-grown meat and seafood, swayed in part by environmental and ethical arguments. Yet the technology is still not ready for prime time. It has also been dragged into America's culture wars, with some Republican states having pre-emptively banned it. Cultivated-meat firms raised just $139m in 2024, according to the Good Food Institute, an alternative-meat advocacy group.

Growing plant cells such as cocoa is cheaper and easier than growing animal tissue, reckons David Welch of Synthesis Capital, which invests in food tech. Because it is an ingredient rather than an end product, it might also face less political opposition. With big companies now backing the sector, the technology for other cultivated plant cells, such as coffee, could "accelerate as well", says Mr Welch.

As yet, none of the cell-culture startups has regulatory approval. Most expect to become commercially viable in years, rather than months. And big chocolate companies think lab-grown cocoa will supplement, rather than replace, the tree-grown variety. Even so, the firms involved could help save the cell-culture industry—and perhaps the desperate chocoholics of the future, too. ■

BARTLEBY

The last days of brainstorming

Enjoy the peculiar melange of whiteboards and humans while you can

ALAN: LET'S get going. We've all had a chance to think of some fresh names for our new value-added membership service. The last time we met we talked about calling it Gold or Platinum: if it works for the likes of American Express and Virgin Atlantic, it can work for us. But some of you felt that we could be more original. So let's write our favourite ideas on the whiteboards, and then we'll review them. We want a shortlist of three for Peter to choose from.

[Sound of breathing and writing.]

Alan: OK. Let's take a look and see if any themes emerge. I can see a few metals and minerals here. Iridium. Osmium. What's Californium?

Michaela: I put that down. It's the most expensive metal.

Walter: It's also highly radioactive.

Michaela: Oh.

Alan: This says Platinum again.

Sally: That was me.

Alan: Weren't you listening at the start? And who are you?

Sally: I'm really sorry. I'm actually in the wrong meeting and was checking my phone for the right location when you were talking. And then I felt like it was too late to leave. I'll go now. [Sound of chair scraping, footsteps, door closing.]

Alan: Let's just take another one. Rolls-Royce. Who was that?

Rupert: That's mine. I was thinking that we should use a brand that is synonymous with quality.

Violet: Oughtn't that to be our own brand? Especially since we are also in the automotive industry.

Alan: What does this say? It's almost completely illegible.

Shreya: Celine Dion.

Alan: Oh.

Shreya: I was thinking of people who sell out their shows, you know. So it's hard to get into.

Jon: I get it. So people with residencies in Las Vegas. Like Adele. Or those magicians with the tiger.

Rupert: Calvin and Hobbes?

Jon: Yes, that's them.

Violet: I'm not sure. Isn't a bit weird to say "I'm in Celine Dion"?

Alan: What's this one?

Michaela: Yttrium. It's a rare earth.

Rupert: Metals again?

Michaela: Says the man who wants to use another brand name to signal quality.

Alan: I like the idea but it's a bit unpronounceable. Let's look at a couple more. Praseodymium. I assume that's you again, Michaela. And Gucci is presumably you, Rupert? How about this one. Oxygen?

Jon: That was me, but I now see that it's better for our basic service. Sorry.

Alan: And this one?

Kate: Jeroboam. I thought maybe we should use units associated with a very special occasion.

Walter: A Jeroboam is not that big. The biggest bottle is a Melchizedek.

Alan: Not sure that we want to be too closely associated with alcohol, given we're in the business of car rentals. What's this one? It looks like "Inspire".

Violet: That was left over from the previous meeting.

Alan: Nice. Not many left. Everest?

Rupert: That implies huge effort, extreme cold and a high risk of death.

Michaela: You should go.

Kate: What about Alcove? I just love that word. Doesn't it sound like a winter evening reading a book?

Alan: Which would be great if we were selling winter evenings. Is there a nice word that conjures up renting cars?

Kate: Freedom?

Jon: Wheels?

[Door opens]

Alan: You again? We're not done.

Sally: I'm sorry. My other meeting is over and I just wanted to suggest another one. Elara.

Walter: The moon of Jupiter?

Sally: Yes. I saw you were still going, so I asked ChatGPT for ideas. It honed the list, worked up some taglines and did a trademark search. This one jumped out. I quite like Zenith and Regent, too.

Violet: I like Elara.

Rupert: As long as Michaela didn't suggest it, I'm OK with that.

Michaela: If Rupert likes it, I'm against it.

Alan: We're going to have to wrap up. I'll take Elara and Inspire to Peter. But he's a massive Celine Dion fan, so we may well have a winner.

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SCHUMPETER

The great silicon split

Publicly traded startups aren't what they used to be

IF INVESTORS IN America's technology industry had a single mind, it would be in the midst of a dissociative episode. The logical left brain is beginning to wonder if the artificial-intelligence (AI) revolution is all it is cracked up to be. Nuh-uh, retorts the emotional right brain.

The mind's rational hemisphere is responsible for a wobble on August 19th in the tech-heavy NASDAQ index. This shaved nearly 10% from the market capitalisation of Palantir, an AI-analytics darling worth some $370bn. Nvidia, the AI era's chipmaker of choice, which last month became the first company in history to be worth over $4trn, saw more than $150bn in shareholder value evaporate. Days before, early backers of CoreWeave cashed in $1bn-worth of shares in the AI-data-centre operator the moment they were allowed to following its initial public offering (IPO) in March. In a vote of confidence, so did one of the company's directors. CoreWeave's market value fell by over a third.

This burst of caution in public markets stands in contrast to the unrelenting right-brain exuberance in private ones. Venture capitalists are falling over themselves to back any startup with a dream and AI in its pitch. Even as investors were dumping Palantir shares, Databricks, which also peddles AI analytics, said it was raising fresh capital at a valuation of $100bn, up from $62bn in its previous funding round less than a year ago. The same day the *New York Times* reported that OpenAI was in talks to let current and former employees offload some of their stakes at a valuation of $500bn, $200bn more than in March—never mind that the ChatGPT-maker's long-awaited new model proved ho-hum.

You should never read too much into short-term market swings. Despite the latest thud, public tech valuations look dizzying. Private ones are too opaque to draw definitive conclusions. Still, you can read a little bit. And by the looks of it, investors as a group are cooling in their enthusiasm for what is (incumbent tech stocks) while displaying a superheated zeal for what will be (the startups that may one day eclipse them).

The idea that the new must be better than the old is, obviously, itself nothing novel. Yet a look at the past few decades of American tech suggests it may also be increasingly ahistorical. As a group, earlier vintages of startups outmatch newer ones on some key measures of performance. At least that appears to be the case for those firms which decide to subject themselves to the scrutiny of public markets.

Jay Ritter of the University of Florida maintains perhaps the most comprehensive database out there of American IPOs, going back to 1980. At Schumpeter's request, he crunched the numbers for four IPO cohorts. Call them, loosely, pre-dotcom (1990-98), dotcom (1999-2000), web 2.0 (2001-11) and new web (2012-23).

The first thing to note is that startups of yore were readier to go public than today's lot. More than 1,200 listed their shares between 1990 and 1998. Another 631 piled in amid the dotcom mania, when basically all you needed for a listing was a domain name. The web 2.0 and new-web generations added just 381 and 485, respectively. As much as your Gen-X columnist would love to blame this on Millennial and Gen-Z founders' congenital incapacity to endure the harsh discipline of a stockmarket listing, it probably has more to do with the growth of venture capital. This lets startups stay private for longer, which also explains why the typical age at which firms list has risen, from eight years among the pre-dotcoms to 11 for the new-webbers. (On this and subsequent measures, the dotcom folly led to such outlier results that it makes sense to exclude them for the analysis.)

Being older, the more recent vintages were also bigger. The typical new-webber went public having generated $191m in the previous 12 months, four times the figure for its pre-dotcom forebear after adjusting for inflation. A rougher analysis than Mr Ritter's of the 1,000 biggest tech firms in the NASDAQ implies that post-IPO sales also grew more slowly from this higher base. Newer vintages are also likelier to be lossmaking. Whereas 60% of the pre-dotcoms were making money when they listed their shares, the same is true of just 24% of new-webbers. The web 2.0 group sat in between, with 40% being profitable.

One consequence of being worse at making money is being better at going belly-up. Less than 6% of the pre-dotcoms found themselves in distress within three years of IPO (which Mr Ritter defines as a 90% decline relative to the offer price or a delisting). This rises to 7% for web 2.0 and 11% for the new web. Admittedly, things even out five years after a listing: 14% of the pre-dotcoms and 12% of the new-webbers were in trouble by then. But other things being equal, you would expect the share to be higher for the earlier vintages, which had less time to test their business models.

Head-scratcher

And still, investors' novelty fetish seems intact. The average new-web firm outperformed the market in terms of shareholder returns (including dividends) by a cumulative 52 percentage points over its first five years as a public company, according to Mr Ritter's sums. The pre-dotcoms and web 2.0 managed 41 and 15 points, respectively. For web 2.0 and especially the new web, this outperformance was driven by larger startups; those with pre-IPO sales below $100m barely beat the benchmark.

Investors are, in other words, rewarding newness and bigness rather than quality. Mr Ritter finds virtually no difference between the returns afforded to profitable and unprofitable tech businesses in the years after their IPOs. If startups with sounder fundamentals cannot count on outsized gains in the stockmarket, more may opt to stay private. The result could be a cycle of adverse selection. Something for the left brain to ponder. ■

Finance & economics

Economic strategy

Pressed into service

HONG KONG

China will have to pivot away from industry, whatever its leaders' desires

AMID ALL the trouble facing China—trade war, covid-19, a property slump—the country's leaders have remained confident about the source of future economic growth. In their view, the country's manifest destiny lies in high-tech manufacturing. Their "Made in China 2025" plan, released ten years ago, aimed to turn China into a leading factory "powerhouse" by mid-century. The government covets what it calls a "complete" industrial system, which will reduce China's reliance on foreigners and raise their reliance on it. Xi Jinping, China's ruler, wants to cultivate "new productive forces" by applying cutting-edge technology to emerging industries, and some traditional ones, too.

This strategy has met with considerable success. In February the government said that high-tech manufacturing had grown by 8.9% last year, much faster than the economy as a whole. The country's breakthroughs in artificial intelligence, batteries, drones and robots have given America a fright. And although China's GDP, when converted into dollars at market exchange rates, still lags behind America's, its output of goods—things you can drop on your foot—has long since surpassed its rival's (see chart 1 on next page).

But China's preoccupation with high-tech industry is running into limits. The fast expansion of manufacturing capacity has flooded markets abroad and led to vicious price wars at home. For the past year, China's leaders have inveighed against "involutionary" competition—efforts to gain market share that oblige rivals to follow suit, hurting everyone's profits. This campaign may be beginning to bite. In July fixed-asset investment in manufacturing fell compared with a year earlier.

China's leaders are also starting to emphasise an alternative, less familiar source of growth: services. In July the Communist Party's Politburo announced that "new growth areas for service consumption must be fostered." This month the central government said that it will subsidise loans for firms in consumer-facing services, such as entertainment, tourism, sport, and child, health and elderly care. Many people now spend more on services than they do on goods, pointed out Wang Bo of the Ministry of Commerce. That shift will accelerate as incomes rise, he argued, creating significant "growth potential".

Services, sometimes called the "tertiary" sector, now contribute 57% of China's GDP and employ 49% of its citizens, many well educated (see chart 2). According to Zheng Song of the Chinese University of Hong Kong, over 36% of them have some college education. But services do not loom large in Communist ideology or iconography. The flag of the People's Republic features a hammer and sickle (symbols ▸▸

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of industry and agriculture) but no quill or till to represent the rest of the economy. In its early decades, the state hardly bothered to count many of these contributions. Its early statistical system, based on a Soviet model, tracked only "material" services, which included catering, transport, post and telecommunications. That would leave out 60% of today's service economy.

Even now, some services fly under the government's radar. The authorities find it hard to price the housing services enjoyed by people who own the flats they occupy. According to Nick Lardy of the Peterson Institute for International Economics, a think-tank, housing services are still probably undercounted by several percentage points of GDP. And official sources do not always agree with one another. The latest economic census, released earlier this year, found 411m people working in the service sector in 2023, including the self-employed. That is 55m more than previously estimated from other official surveys.

The party's five-year plans have in the past promised to lift the share of services in the economy as a step towards "rebalancing". But that vow was dropped in the last plan, which covered the period from 2021 to 2025, points out Adam Wolfe of Absolute Strategy Research, a consultancy. Instead, it promised to keep manufacturing roughly stable as a share of GDP.

Rebalancing, rebalanced

Mr Xi may fear a phenomenon christened "cost disease" by William Baumol, an economist. Many labour-intensive services, he wrote, have limited scope for productivity gains. His best example was musicians: if it took four people half an hour to perform a Boccherini string quartet in 1800, it requires the same labour today. And yet services must compete for workers with other sectors, such as manufacturing, in which productivity has soared.

Owing to these productivity improvements, manufacturers can pay higher wages without raising prices. Service industries, on the other hand, have to charge more if they wish to pay more—and they must do so if they want to match rising wages elsewhere in the economy. Baumol once calculated that a hypothetical manufactured good which cost the same as a concert ticket in 1800 would have cost a twentieth as much in the 1980s.

In China, too, prices for services have grown faster than prices for industrial goods (see chart 3). If, as Mr Wang suspects, people spend a rising share of their income on services, then the country seems set to experience cost disease. More expensive services will become a growing share of the economy, dragging down the country's average rate of growth.

The forces Baumol described are universal. But other constraints on China's service industries are peculiar to the country. The state, for example, owns all the biggest banks. State-owned enterprises also dominate telecommunications, collecting 78% of revenues. China regulates accountancy, law, retail and even estate agents more tightly than the average member of the OECD, a club of mostly rich democracies. And China's urban sprawl makes it difficult to reap the economies of density that big cities usually provide. A recent study by Yuejun Zhong of East China Normal University and Libin Han of Dongbei University of Finance and Economics calculated that if the government were to permit greater population density in China's biggest metropolises, it could raise GDP per person in these cities by 9%.

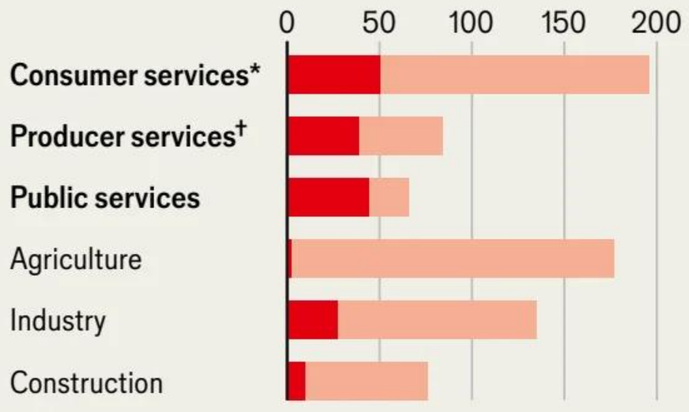
Relaxing some of these impediments could improve the performance of China's services, letting them lift pay without raising prices so quickly. Even if that proves hard, China's leaders should not worry too much about cost disease. Although it sounds painful, it is not, strictly speaking, a malady at all. Rising service prices are driven by rising wages, which are something to be celebrated. And the spur for higher wages is dynamism in other industries. The cost of a concert might go up from one manufactured good to 20, but that is only because other parts of the economy have become 20 times more productive.

Moreover, in China's case, these forces would bring a consolation. The only reason America's GDP remains so much bigger than China's is because American services fetch a higher price. That gap could narrow if China continues to spend more on the neglected "tertiary" sector of its economy. Baumol's cost disease is nothing to fear. It could even be the force that finally makes China number one. ■

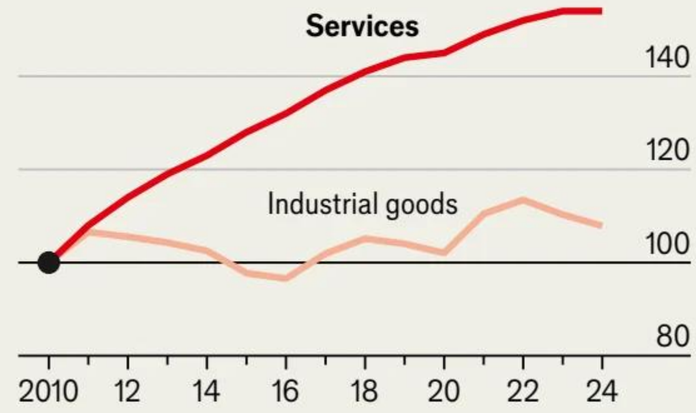
Factory farewell

China

Workers, by sector and education, 2022, m 2



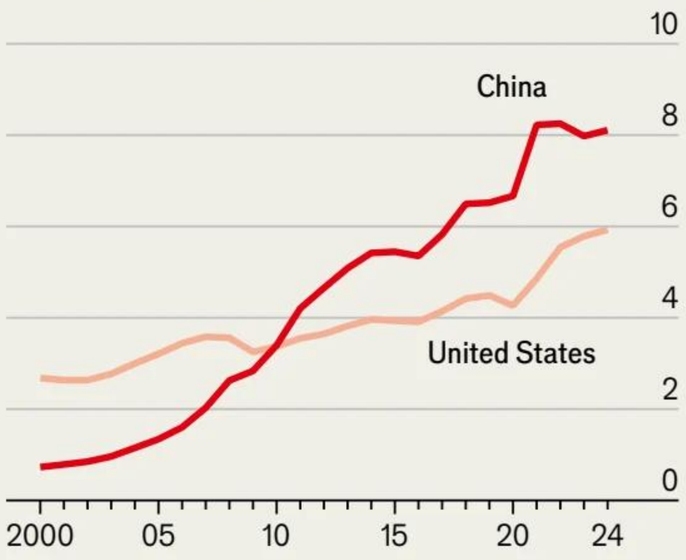
Prices, 2010=100 3



*Includes wholesale, retail, hotels, catering, repairs, health and other consumer-oriented services
†Includes transport, storage, IT and other inputs to business
Sources: "Tertiarisation like China", by X. Chen et al., *Annual Review of Economics*, 2023; National Bureau of Statistics

Lots to drop on your foot 1

Nominal GDP excluding services, $trn



Source: World Bank

Climate change

Heading south

The green transition has a new home

PICTURE A COUNTRY where renewables are being rapidly rolled out and electric-vehicle sales are surging, and you will probably have in mind somewhere smug and northern European; a place with tall people, coalition governments and a yen for cycling holidays. Or perhaps the first thing that pops into your head is the sheer scale of China, which manufactures the bulk of such equipment and last year contributed more than half of the global increase in solar and wind installation.

Think again. For a wave of Chinese-made electric vehicles is flooding new markets. In the past year sales of EVs have more than tripled in Turkey, where Togg, a local brand, is also popular—they now account for 27% of all cars sold, making the country the fourth-largest European market. Last year more than 70% of cars imported into Nepal were electric. Some 60% of new cars sold in Ethiopia were battery-powered, after the state banned sales of in-

ternal-combustion-engine vehicles altogether. EV sales have doubled in Vietnam over the past year owing, in part, to VinFast, a local carmaker. Two- and three-wheelers are surging in popularity, too. The International Energy Agency (IEA), a forecaster, reckons that across developing countries in Africa, Asia and Latin America EV sales rose by 60% in 2024.

It is a similar story with renewables. In the first six months of the year, Pakistan generated 25% of its electricity from solar power—not far below the 32% managed by California, a clean-energy pioneer. The country's battery imports are booming as well. Indeed, the Institute for Energy Economics and Financial Analysis, a think-tank, estimates that on current trends battery storage will cover 26% of Pakistan's peak-electricity demand by 2030. Meanwhile, over the past year Morocco has increased its wind generation by 50%, becoming the country with the ninth most. India has seen four months of decline in coal-power generation, aided by an increase of 14% in renewable generation.

Lust for power

Although the principles of international climate diplomacy suggest that poorer countries, being less responsible for climate change, have less duty to go green, many face strong economic incentives to do so anyway. Most countries in the global south are energy importers, and therefore must use scarce foreign currency to buy oil and gas. China and India have coal reserves that play an important role in their economies and power generation, but neither has significant oil or gas reserves. For its part, Ethiopia's ban on internal-combustion engines was not a green measure—it was designed to cut spending on fossil fuels and save foreign currency.

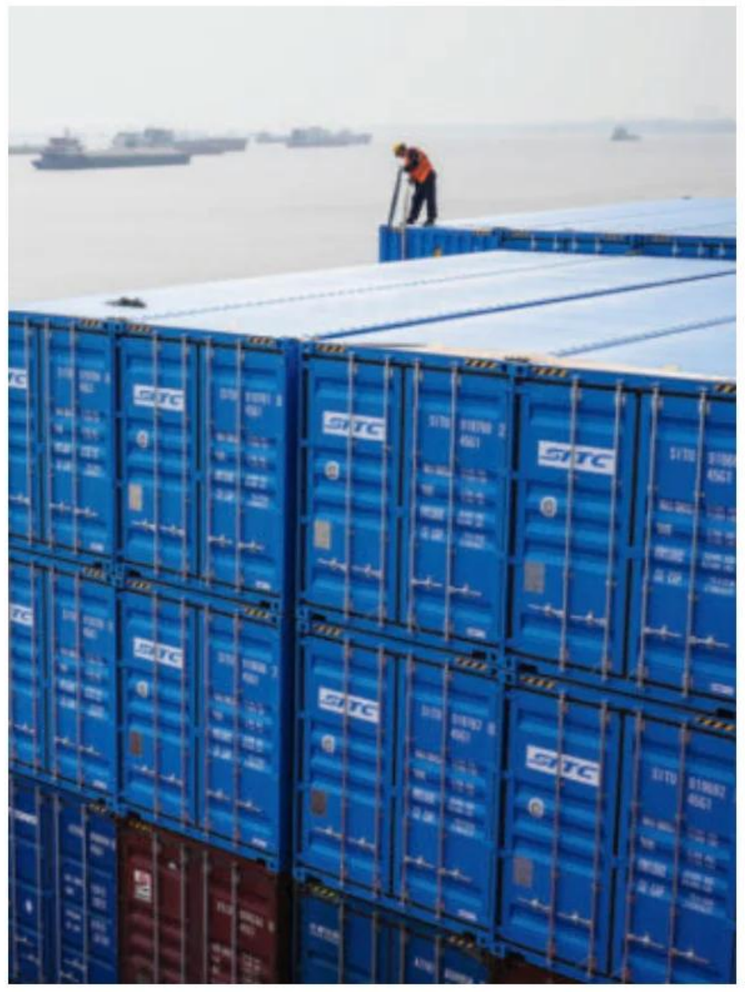
Moreover, across emerging markets, Chinese-made EVs are now about as cheap as traditional vehicles. In some places, they are even cheaper. The IEA reckons that last year the average Chinese EV sold for around $30,000 in Thailand, compared with $34,000 for the typical petrol-engine car. At the bottom end of the market, old-fashioned vehicles still have an advantage, but only a relatively modest one. Government policies have also made a difference. In Turkey purchasers of EVs typically paid a tax of only 10%, compared with one of between 45% and 220% for petrol-powered vehicles. The recent surge in part reflected car-buyers getting ahead of a reduction in the generosity of the policy.

Clean technology generally requires more upfront investment than fossil-fuel tech, even if it has lower lifetime costs. This has historically held it back in places where the cost of capital is high. The IEA has calculated that the typical cost of capital for a solar project in India, for instance, is 11%, compared with around half that in rich countries. But the Rocky Mountain Institute, an American pressure group, now estimates that, owing to falling prices, many clean technologies have reached "capex parity", where initial costs are the same as fossil fuels on a per-unit basis. As a consequence, they have become more attractive in large parts of the world.

Tariffs have been helpful, too. As America and the EU attempt to shut out Chinese EVs, they are finding their way to other markets—at even cheaper prices. For the most part, emerging markets lack legacy manufacturers that will lobby their governments to keep out Chinese imports. Yet this relatively free trade is at risk as protectionism begins to spread. Until recently Brazil allowed EVs into its economy tariff-free; now it is gradually raising import taxes to 35% by 2026. India's imports of finished solar panels have stagnated as the country seeks to build its own supply chain. Nigeria is considering banning solar-panel imports altogether in an effort to support domestic manufacturers.

Governments are at least also creating loopholes that allow Chinese imports to continue so long as the companies in question commit to local production. Brazil has carved out an exemption for BYD, a carmaker, while it establishes a factory in the country. Indonesia has reduced value-added tax on EVs from 11% to 1% for vehicles that meet a 40% local-content requirement; foreign manufacturers, meanwhile, can bring in equipment duty-free so long as they promise to increase domestic production by 2026 and provide a guarantee for the forgone tariffs if they do not follow through. Such policies are far from perfect—but they are better than the alternative. Well-heeled northern Europeans have something to learn. ■

Reflected glory



Global commerce

Blowback

As Donald Trump's trade victims shrug off his attacks, China is gaining

THE "TRUMP ROUND" of trade negotiations, as Jamieson Greer, America's trade representative, calls it, was meant to reassert American primacy. Peter Navarro, a longtime adviser to Donald Trump, even suggested that the president deserved a Nobel prize in economics for showing how the world's biggest market can bend global commerce to its will. The White House's bet is that dismantling the old order, once policed—however fitfully—by the World Trade Organisation, will usher in a new one with America at its centre.

Yet by acting as if America remains the axis of world trade, Mr Trump may be accelerating its shift elsewhere. The world's biggest market is less central to global trade today than it once was. At the start of the century, America accounted for a fifth of global imports; today it makes up just an eighth. Even as countries strike tariff deals with Mr Trump to secure market access, they are drawing up alternatives. As one South Korean official puts it, "The first step is to make concessions to America. The second is to look elsewhere."

Around the world, governments are hedging against the end of the old economic order in different ways. Some are propping up local firms with subsidies and protectionism. Others are seeking new markets. And the boldest are forging alliances to counterbalance America's clout. The choice for many is not between deference to Washington or a Hobbesian state

of nature, but between short-term fixes and longer-term alternatives.

Given Mr Trump's predilection for levies and the tendency for taxes to outlast their creator, handouts to trade-war victims risk wasting money and distorting markets. Brazil has unveiled a $6bn credit package, which includes tax holidays and state-purchasing guarantees. With public finances already strained, the plan spooked investors. Canada has taken a similar approach, pledging nearly $1bn to support its lumber industry. South Africa's trade ministry has proposed policies to let exporters co-ordinate on shipping costs and jointly build infrastructure, even if that means skirting antitrust rules.

Others are reaching for blunter tools. Canada and Japan are slapping new levies on metal imports. Meanwhile, India is doubling down on its "Made in India" campaign. On August 15th Narendra Modi, the country's prime minister, extolled self-reliance in everything from energy to fighter jets. "If we continue to be vocal for local, we will achieve prosperity," he declared. Although so far there has not been much retaliation against Mr Trump, the risk is that copycat protectionism multiplies, raising costs for everyone.

Global is noble

More promising is the search for new markets. From Asia to Africa, governments are nudging companies abroad with export funds and incentives. Singapore and South Korea, for instance, are bankrolling small firms to scout out opportunities in South Asia, the Middle East and Mexico. Some are already redirecting trade. South African farmers are sending more produce to China and pushing the EU to relax its citrus-health rules. Lesotho's garment-makers—once geared to American firms such as Gap and Levi's—are turning to regional buyers and testing demand in Asia. Brazil's coffee exporters, hit with an American tariff of 50%, are stepping up shipments to North Africa and the Middle East, where sales volumes rose by three-fifths last year. Yet even with such diversification, replacing America, still the destination for 16% of Brazil's beans, will take time.

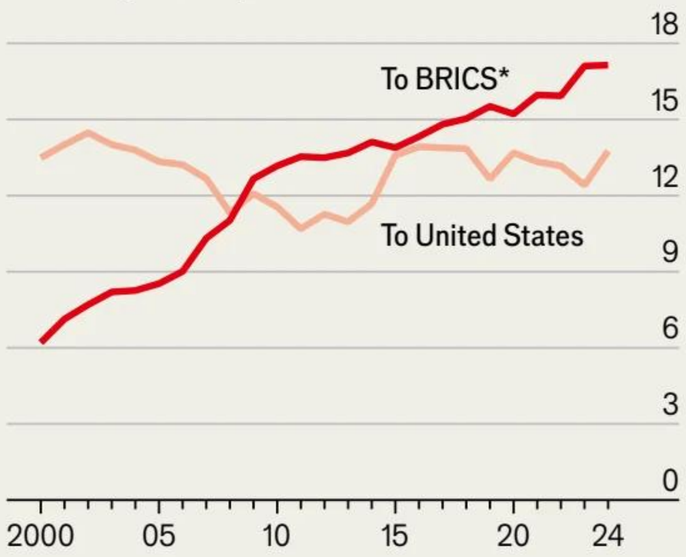
Most consequential are the new alliances. Canada and Mexico, America's two neighbours and partners in the US-Mexico-Canada Agreement (USMCA) are edging closer as America becomes less reliable. Next month Mark Carney, Canada's prime minister, will visit Mexico, where he is set to discuss supply-chain resilience, port-to-port trade and joint ventures in energy and artificial intelligence. With the USMCA up for review next year, the two countries are hoping to create leverage they can use against Mr Trump.

Many of the BRICS countries—a club of 11 emerging economies including Brazil, China, India, Russia and South Africa—have been targets of Mr Trump's ire, most recently with his levies of 50% on Brazil and India. In response, Brazil's president, Luiz Inácio Lula da Silva (known as Lula), has worked the phones to rally allies. On August 7th he and Mr Modi discussed closer ties, including digital-payments links that could chip away at the dominance of American banks. Four days later Lula spoke with Xi Jinping, China's leader, about deepening trade, after which Mr Xi declared relations with Brazil to be "at their best in history". When it comes to trade, the bloc is hardly beholden to America. Uncle Sam buys only a sixth of Indian goods and a seventh of Brazilian exports, the latter down from a quarter two decades ago. As a group, the BRICS members now trade more goods with one another than with America and the gap is widening. Integration is accelerating after Mr Trump's tariffs. Over a dozen countries, including Thailand and Vietnam, have sought partner-country status or applied to join.

The biggest winner from the new alliances may be China. Its exports to the global south have doubled since 2015—and it sells more to South and South-East Asia, Latin America and the Middle East than to America and western Europe. In July, even as exports to America collapsed, its overall exports grew by 7% from a year earlier. Mr Trump's tariffs have deepened these links. In June Mr Xi pledged to scrap nearly all duties on imports from Africa, and he is attending summits with Latin American and South-East Asian leaders. China and the Association of South-East Asian Nations—together home to a quarter of the world's people and a fifth of its GDP—are revamping their free-trade deal, due to be ratified by the year's end. Relations with India, meanwhile, are thawing. Indian firms are exploring projects with Chinese counterparts in electric vehicles and batteries; Mr Modi is expected to visit China for the first time in seven years. Mr Trump wanted America at the centre of world trade. Things are not quite going to plan. ■

The new order

BRICS*, goods exports, % of total



Source: World Integrated Trade Solution *11 countries

Consumer woes

Farshlepteh krenk

Where has the worst inflation problem?

THE YIDDISH phrase "farshlepteh krenk", untranslatable into English, describes an illness that just won't go away. That is how some countries' experience of inflation has felt. The rate of price rises has fallen since 2022, when across the OECD, excluding Turkey, it rose to 11%, its highest since the 1970s. In June average inflation across the club of mostly rich countries was 2.5%, only a smidge above most central banks' targets. But many Anglophone countries still have lingering symptoms.

To diagnose the malaise more accurately, we have updated our measure of "inflation entrenchment" for ten rich countries. We construct this from five indicators: core inflation, unit labour costs, inflation dispersion, inflation expectations and Google-search behaviour. We rank each country on each indicator, then combine the rankings to form an overall score.

The results reveal a linguistic divide. Countries in the EU and Asia perform well. France now has the least entrenched inflation of all the countries we looked at. *Chapeau bas* to them. Japanese inflation, true to form, has a feeble grip.

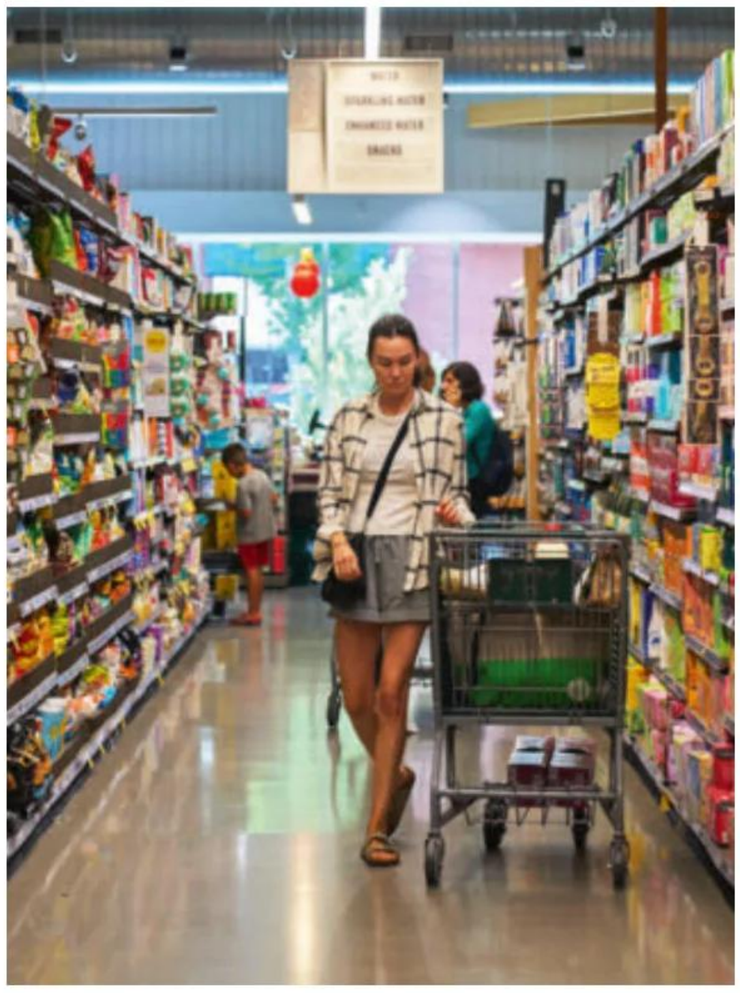
In the English-speaking world, however, inflation looks chronic. Britain has done worst overall. In the year to the second quarter of 2025 the country's core prices, which exclude food and energy, rose by 4.3%. Three-quarters of the items in a

Hot seats

Selected countries, July 2025 or latest

Ranking* Out of ten countries		Core prices† % increase on a year earlier	Inflation expectations‡ %
1	Britain	4.3	2.0
2	United States	3.2	5.5
3	Australia	2.7	4.2
4	Canada	2.7	5.2
5	Spain	2.6	2.5
6	South Korea	2.0	2.0
7	Germany	2.5	1.5
8	Italy	1.8	3.5
9	Japan	1.8	1.4
10	France	1.6	1.8

*Three indicators not shown: Google-search behaviour, inflation dispersion and unit labour costs †Quarterly. Excl. energy and food ‡Consumers' inflation expectations over the next 12 months
Sources: Federal Reserve Bank of Cleveland; Google; Morning Consult; OECD; Raphael Schoenle; *The Economist*



Shop 'til the prices drop

- Briton's consumer basket have risen in price by more than 2%—unusually high "inflation dispersion". Australia is not far behind, with workers' pay per unit of output nearly 5% higher in the first quarter than a year before. Despite a weaker economy than its southern neighbour, Canada's inflation problem is almost as bad.

A few factors may explain inflation's persistence in these places. From 2022 to 2024 the governments of Anglophone countries, on average, increased their budget deficits by 2% of GDP, while those elsewhere contracted. This largesse boosted demand—the equivalent of licking doorhandles in an attempt to fight off an illness. English-speaking countries have also welcomed lots of immigrants in recent years. At least in the short run, the new arrivals may push up the prices of certain things, especially housing.

There is some good news, too. The absolute level of inflation entrenchment has ebbed: Japan, the country with the least bad problem when we updated this measure in 2024, would have ranked sixth-worst this time. The Bank of England can argue that Britons' weak inflation expectations will help price pressures fade. The Bank of Canada can highlight low inflation dispersion. In addition, most Anglophone governments are tightening fiscal policy and slashing immigration.

America is the exception. Immigration is declining, but Uncle Sam still has his foot on the fiscal pedal. And tariffs have stoked fears of more price rises, as firms pass their higher costs on to consumers. Americans are more likely than others to Google inflation-related terms. Over the coming year, the public expects prices to rise by 5.5%, higher than people in any other country. A lingering illness is annoying; a worsening one is harder to bear. ■

The cost of data centres

Everything's computer

WASHINGTON, DC

How America's artificial-intelligence boom is squeezing the rest of the economy

IF ARTIFICIAL-INTELLIGENCE models have a hometown, it is probably Ashburn, northern Virginia, just outside Washington, DC. Attentive window-seaters flying into Dulles airport might notice a clutch of white-roofed boxes jutting out next to rows of suburban culs-de-sacs. Those data centres are part of a cluster—the world's biggest—which last year guzzled more than a quarter of the power produced by Virginia's main electrical utility.

Fears of a slowdown abound in America, with high interest rates and tariff chaos weighing on most of the economy. But they are doing little to reduce the breakneck pace at which firms are building the infrastructure needed for AI. Something like a sixth of the 2% rise in American GDP over the past year has come from investments in computer and communications equipment, including chips, and data centres. Add in the grid upgrades to power AI models, plus the intellectual-property value of the software itself, and one estimate puts the boom's contribution to GDP growth at 40%. It is an astonishing figure for a sector that accounts for just a few per cent of America's total GDP.

Tech support

The AI build-out is not a normal investment boom. Until recently, big tech firms paid for most of it from their earnings and cash piles. Now the scale of construction is too great even for these giants, so they are turning to borrowing. They are building data centres in the belief that AI will drive explosive economic growth, and hence demand for computing power, within a matter of years. This is not like building houses or factories. It is a high-reward, winner-takes-all market, in which ordinary concerns such as the cost of borrowing are easy, and tempting, to wave away.

That is just what the big tech firms are doing. In the face of their determination to build AI infrastructure at any cost, higher interest rates offer little deterrence. Neither does the cost of electricity: schemes for gigawatt-scale data centres, demanding as much power as a small city, are increasingly in vogue. Grids across the country are bracing for a squeeze.

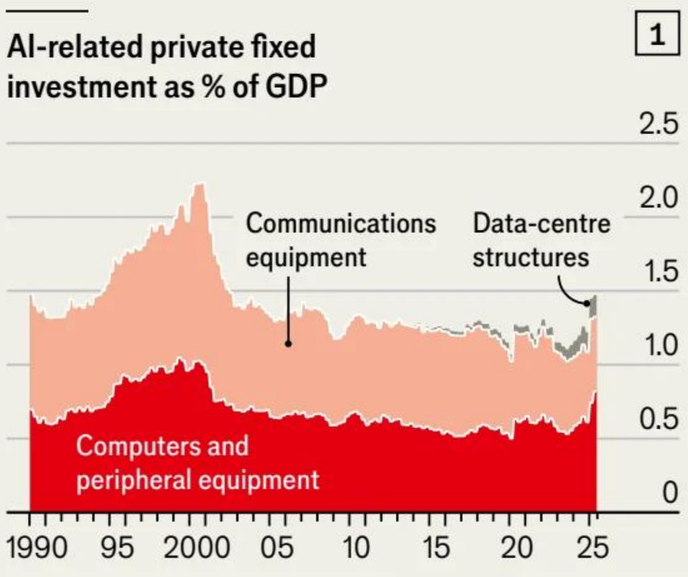
If the history of the dotcom boom in the late 1990s is anything to go by, the mania could have much further to run. Then, the roll-out of costly technology required to build the internet continued for many years, with a much sharper impact on GDP than America has experienced so far as a consequence of AI (see chart 1). And the early enthusiasm for AI has probably been even greater than that in the internet's youth. For all the Y2K-era excitement, few expected the web to lead to mass automation or unprecedentedly fast economic growth. Both are now fairly mainstream predictions about AI among the Silicon Valley set, even if the incremental-seeming progress of OpenAI's GPT-5 model has dampened the frenzy a touch.

The trouble is that the very industry powering so much of America's economic growth is squeezing the rest of its output. Housebuilders, for instance, cannot afford to be blithe about higher borrowing costs. Nor can plenty of regular businesses. Data centres have also constrained the rest of ▸▸

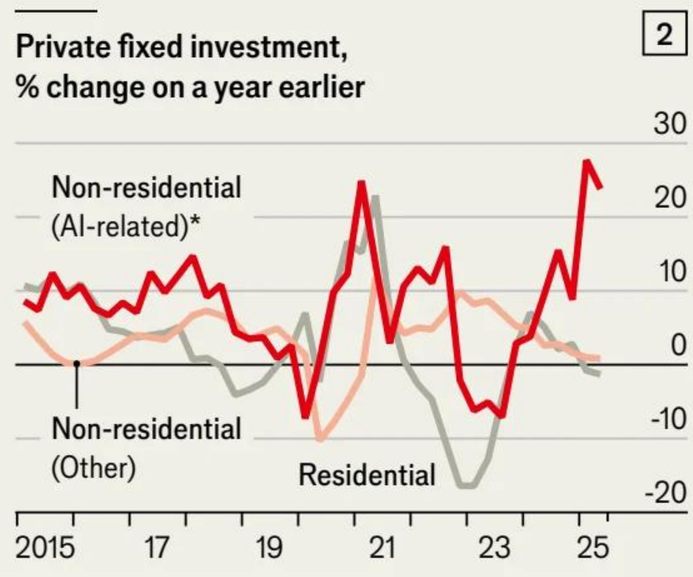
Partying like it's 1999

United States

AI-related private fixed investment as % of GDP — 1



Private fixed investment, % change on a year earlier — 2



Sources: Macrobond; *The Economist* *Computers and peripheral equipment, communications equipment and data-centre structures

the economy by keeping energy prices high. Average American electricity bills have risen by 7% so far in 2025, at least in part because of the extra strain that data centres have put on the country's grids.

Sure enough, look beyond AI and much of the economy appears sluggish. Real consumption has flatlined since December. Jobs growth is weak. Housebuilding has slumped, as has business investment in non-AI parts of the economy (see chart 2 on previous page). Both activities are highly sensitive to interest rates, and so act as bellwethers for output more broadly.

In other words, an economy-wide reallocation is under way: interest-rate- and energy-sensitive sectors are contributing less to growth, while AI investment contributes more. And if it is to continue to do so, big tech firms must continue to increase spending. Any slowdown in capital expenditure—say, if constraints on power or chip availability bite—would mean less support for overall economic growth.

Should that happen, there would be the silver lining that interest rates and energy prices would probably fall, too, which would ease the pressure on the rest of the economy. History carries a warning, though. After the dotcom boom came a ferocious bust. A similar drop in AI investment would remove a sizeable source of America's growth just as the rest of the economy has begun to look fragile. If desire for data centres cools, it is not just Ashburn that might be in trouble. ■

BUTTONWOOD

Messy target

In praise of complicated investing strategies

OCCAM'S RAZOR is a cornerstone of the social sciences, and for financial economists it is almost an article of faith. The principle is named after William of Ockham, a 14th-century monk. It holds that the simplest explanation for any phenomenon is the best. Financial analysts today live in fear of "overfitting": producing a model that, by dint of its complexity, maps onto existing data well, while predicting the future poorly. Now, though, Ockham is on trial. New research suggests that, when it comes to big machine-learning models, parsimony is overrated and complexity might be king. If that is true, the methods of modern investing will be upended.

The debate began in 2021, when Bryan Kelly and Kangying Zhou of Yale University, and Semyon Malamud of the Swiss Federal Institute of Technology in Lausanne, published "The Virtue of Complexity in Return Prediction". In one exercise, Mr Kelly and his co-authors analysed just 12 months of data using a model with 12,000 separate "parameters", or settings. Using so many of them—the opposite of what Occam's razor prescribes—would traditionally have been thought to raise the risk of overfitting. Yet the complexity in fact seemed to help the model forecast the future. Might Occam's razor, the paper's authors asked, be Occam's blunder?

It is an academic debate, but the outcome will have sweeping consequences. Mr Kelly is also a portfolio manager at AQR, a quantitative hedge fund. The firm was once known for using more traditional—and parsimonious—methods than its peers. But it is now embracing the apparent virtues of complexity. Researchers, worried about overfitting data, have worried too little about underfitting it, reckons Mr Kelly.

Making better predictions with small data sets could be enormously profitable. Much financial research is strangled by small sample sizes and the difficulty of conducting experiments. Gathering more data often requires waiting, and in some areas it is incredibly sparse. When studying extreme events such as market blow-ups, bank runs and sovereign defaults, researchers often have just a few examples in modern history. Hedge funds in search of an edge spend billions of dollars on alternative data, from satellite images of Chinese rail traffic to investor sentiment scraped from social media.

Recently, the debate over complexity has reached fever pitch. Mr Kelly and his co-authors have faced a barrage of scepticism. Álvaro Cartea, Qi Jin and Yuantao Shi, all of the University of Oxford, suggest the virtues of complexity may not hold if the data used is poorly collected, erroneous or otherwise noisy. Stefan Nagel of the University of Chicago suggests that for very small data sets, the complex models actually mimic a momentum-trading strategy, and that their success is a "lucky coincidence". Messrs Kelly and Malamud have responded to their respondents with another detailed paper.

It is too soon to prepare a eulogy for Ockham's maxim. But even the sceptics do not outright reject the idea that big, complex models can produce better forecasts than simpler ones—they just think this might not be true at all times. Meanwhile, if the virtues of complexity are real, the changes to how many investors operate could be immense. Hiring the best machine-learning engineers will be more important than ever, and so, if Mr Cartea and his co-authors are correct, will acquiring and cleaning data. The billion-dollar pay packets that tech firms offer superstar coders may begin to pop up at investment firms, too.

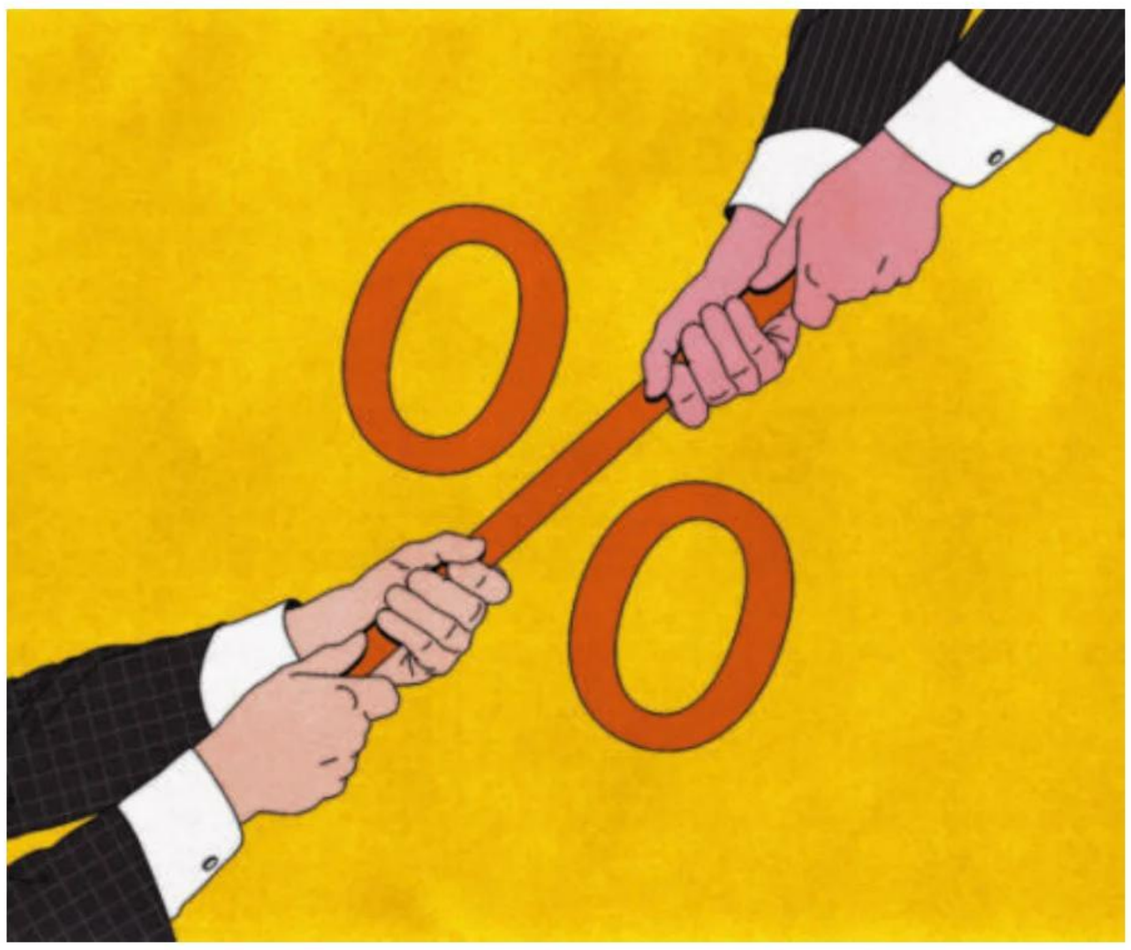
Investment firms will also see greater benefits from scale. The computational power required to train and run models is expensive, and thus may become a "moat" protecting large hedge funds from competition. Larger players will be able to afford to experiment more, and across a wider range of asset classes. Smaller rivals may struggle to keep up.

Reduced competition is not the only risk. Humans are still catching up when it comes to working out what the most advanced machine-learning models are doing. Investors may become increasingly reliant on black-box algorithms that are extremely difficult to interpret. Small models benefit from being not only easy to deploy, but easy for investors to think about, and to tweak. Few will complain so long as they are making money. Yet if anything goes wrong with the new models—ranging from mundane underperformance to entire investment strategies blowing up—their fans may find themselves wishing for a tool that could cut through the complexity.

FREE EXCHANGE

The age of unity

Economists disagree about everything. Don't they?



WHEN PRESIDENT DONALD TRUMP fired Erika McEntarfer, America's labour statistician, he achieved something supposedly rare: he got economists to unite. In a survey by the University of Chicago's Clark Centre for Global Markets, 100% of the discipline's most prominent practitioners agreed that there was no evidence the Bureau of Labour Statistics (BLS) was biased.

Over history, economists have disagreed a lot. The 18th century saw classical types spar with mercantilists; the mid-20th pitted Keynesians against monetarists. More recent decades have set champions of rational expectations and efficient markets against behavioralists. Sometimes disputes remain cloistered in academia; often they spill into the public square, in arguments over minimum wages, debt sustainability and monetary-policy rules.

George Bernard Shaw is said to have joked that if all economists were laid end to end, they still would not reach a conclusion. Winston Churchill suggested that, if you wanted two opinions on a matter, you should put two economists in a room. The Trump era, however, has ushered in seemingly unprecedented unity. Each new White House directive invites the collective ire of a profession famous for its fissiparousness.

Since 2011 the Clark Centre has polled economists on topical issues such as cryptocurrencies, fracking and inequality. Some questions, such as that about the BLS survey, might seem straightfoward; others are trickier. Recent surveys have asked about the effectiveness of sanctions on Russia, if foreign aid can raise GDP growth and whether climate change threatens financial stability. And although Mr Trump has inspired consensus on a number of issues, even before his arrival economists were more united than their caricature suggests. On over a quarter of questions, respondents who register an opinion in one direction lean the same way as the others; on most, more than nine in ten are like-minded.

In almost every question on trade policy—be it about NAFTA or whether commerce with China has left Americans better off—economists defend free trade. None of them agrees with the statement that "higher import duties...to encourage producers to make [in America]...would be a good idea"; only a handful think such tools can even substantially affect the trade deficit. Taxes are another hot-button issue that elicit less controversy than might be expected. Pigouvian taxes are popular; Laffer curves are not. Few economists thought that extending tax cuts from Mr Trump's first term would meaningfully boost GDP; most agree that restoring the top marginal rate to 39.6% would not impede growth.

The list of agreed-upon statements does often read like a catalogue of presidential rebukes: vaccine refusal imposes externalities; politicising monetary policy is folly; sovereign-wealth funds and strategic crypto reserves serve little purpose; bans on high-skilled immigration would sap America's research-and-development leadership, push businesses abroad, hurt average workers and do little to boost employment.

A Trump supporter might survey this scene and reach an obvious conclusion: that economics is less a science than a guild dominated by conformist elites. But although many economists have an instinctive dislike of the president, such a charge cannot explain why the panel is equally sceptical of traditionally left-wing policies, like interest-rate caps and rent control, as of right-wing policies, like self-financing tax cuts. Or why experts are as likely to agree that "rising inequality is straining the health of liberal democracy" as they are to disagree with Thomas Piketty's claim that the blame for this lies with the fact that returns on capital are rising faster than economic growth. There is, to be sure, shared respect for free markets, but one that is nuanced enough to accommodate support for bank bail-outs and congestion pricing.

That is why the disagreements revealed by the Clark Centre's survey are more telling than the consensus. Antitrust is one fault line. Economists are split on whether American airline mergers should have been approved, whether big tech platforms ought to be broken up and whether artificial-intelligence firms merit scrutiny. Financial regulation is another. Economists broadly agree that oversight is required, including of the non-bank intermediaries that now make up much of the financial system. But ask what optimal regulation would look like and dissent quickly emerges. Would Americans be better off if the size of banks was capped at 4% of the industry's assets? Should America increase the deposit insurance available to customers? On these questions, no more than 60% of experts populate a side.

Up in the air

What do antitrust and regulation share that tariffs and migration do not? Part of the answer concerns the nature of the trade-offs. Antitrust weighs the costs of market power against efficiencies of scale; financial regulation pits stability against growth. By contrast, the net effects of free trade or high-skilled immigration are clearer. On trade and migration there are reams of evidence across countries and decades. Antitrust cases and financial crises are rare, idiosyncratic and hard to generalise about. Thus it is easier to gauge the effects of a tariff than to know what would have happened had a bank run been allowed to proceed. Economists, in the end, can be only as confident as the data let them be.

This leads to the last category of interest from the Clark Centre's polls: those questions on which economists report great uncertainty. If there is a common thread here, it is novelty. Will AI lead to larger increases in GDP per person than did the internet? Will stablecoins account for a substantial share of payment flows in ten years' time? Does the growth of private credit raise systemic financial risk? Economists may be willing to take on the president; they are less willing to take a punt on the future. ■

TELL THEM I MADE IT

Hem Moktan earned just $45 over the three years he was concealed as a child laborer in Nepal. He was only a young boy, but the carpets he hand-knotted were sold in fine showrooms across the United States and Europe — until one company partnered with GoodWeave. GoodWeave rescued Hem and provided him counseling, education and a place to live. Now with a master's degree, Hem heads GoodWeave Nepal's child protection program, transforming other children's futures as his was.

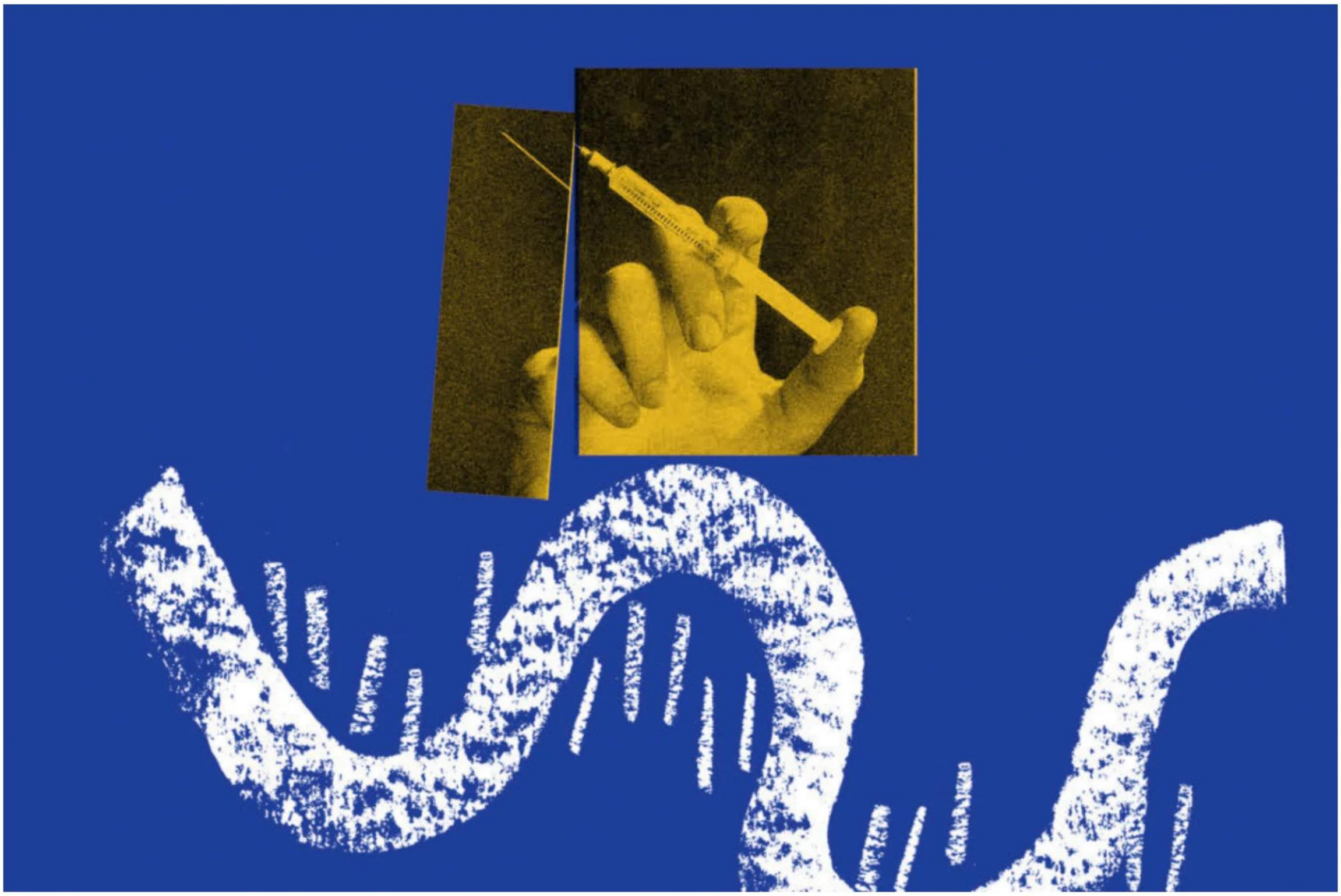
Hem made it. You can help other children make it in life too. Look for the GoodWeave® label on carpet and home textile products — your best assurance no child labor was used.

goodweave®

goodweave.org

Design: tabakdesign.com
Photo: The Studio_M — thestudiom.com

Science & technology



Research funding

Shooting the messenger

American cuts to mRNA research weaken the world's ability to fight disease

DURING THE covid-19 pandemic new vaccines were rolled out with unprecedented speed. The fastest to arrive were jabs built from molecules of messenger RNA (mRNA) designed to teach the body how to fight off the disease-causing virus. By late 2021, mRNA vaccines had saved an estimated 7.7m lives globally, including most of the 3m Americans whom the Commonwealth Fund, an American health-care charity, estimates were saved by vaccines before 2023.

President Donald Trump was one of the technology's many supporters. He launched Operation Warp Speed, a programme that started the race to deliver vaccines. He even received an mRNA shot and advocated (albeit gently) for their use. Yet today many Americans are suspicious of these jabs. The speed with which they were developed and approved, coupled with sweeping vaccine mandates and a political push by the Biden administration to give booster shots ahead of any such decision being made by scientists at the drug regulator, caused anger and mistrust. Rampant disinformation has further stirred the pot, leading many to wrongly believe that mRNA vaccines have killed or harmed millions of people.

Robert F. Kennedy junior, Mr Trump's health secretary, is known for his opposition to vaccines in general and mRNA in particular. Earlier this month, citing safety concerns that scientists have discredited, his department terminated 22 mRNA-related contracts worth a total of nearly $500m across academia and industry. America, said Mr Kennedy, was moving beyond the "limitations of mRNA and investing in better solutions". The move is not an isolated one. In May Mr Kennedy's department cancelled $766m in funding for a late-stage human mRNA vaccine against bird flu and work on five subtypes of influenza with pandemic potential. America also gave up the rights to purchase bird-flu shots from Moderna, a company with which it had previously collaborated to deliver these vaccines.

Rick Bright, the former boss of the Biomedical Advanced Research and Development Authority—the division of the health department that had funded the grants—wrote in the *New York Times* that the latest decision undercut "one of the most significant medical advances in decades...that could protect millions more people from the threats ahead". This is no understatement. In the years since the pandemic, mRNA has emerged as a powerful new "platform" technology; one that can be ▸▸

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used not only to design new pandemic-busting vaccines, but also to create medicines for infectious diseases, rare genetic illnesses and cancer. The rapidity with which mRNA can be designed and manufactured makes it ideally suited for creating a new generation of personalised medicines. The cuts risk making the world a more dangerous place.

To assess the impact of these measures, *The Economist* spoke to more than half a dozen experts. Most declined to be quoted on the record. "Everyone is trying to do everything we can to avoid the glare of RFK," said one source at a research-funding institution. He explained that his organisation was removing references to RNA wherever possible and trying to work out alternative ways of describing it. This is an infuriating task, he says. "It is a bit like...saying you can't use the word carbon."

mRNA is similarly fundamental to biology. It is the specific type of RNA that acts as a messenger molecule, carrying instructions from a cell's DNA to protein-production units known as ribosomes. The ability to harness mRNA—as well as related biological molecules in the cell—has given medicine an enormously powerful tool. Scientists can now instruct the body to manufacture therapeutic proteins; train the immune system to fight diseases, including cancers; and even silence harmful signals in cells, such as faulty instructions caused by a genetic disease or genetic information from a virus seeking to use the cell's machinery to replicate itself.

Mr Kennedy has implied his department's cuts are limited to mRNA vaccines for respiratory infections. But this does not appear to be the case. *Biospace*, an online publication, reports that research into filoviruses such as Ebola—which are not respiratory but cause haemorrhagic fevers through direct contact with bodily fluids—has also lost funding.

Other cuts target treatments rather than vaccines. One such casualty is ModeX, a biotech firm based in Massachusetts, which is developing therapeutic antibodies. An antibody infusion—which is distinct from a vaccine—can be lifesaving for patients struggling to fight off a virus. ModeX is engineering mRNA that, when introduced into the body, instructs it to create antibodies able to attach to more than one location on a given virus, which should make them more potent.

Some affected research appears to have nothing to do with mRNA at all. *Fierce Biotech*, another online outlet, noted that Tiba Biotech in Cambridge, Massachusetts, had been developing a flu treatment based on RNA interference (RNAi)—a different technology altogether—when it lost funding. It sought to create a tiny RNA molecule that would interfere with the production of viral proteins in the body, potentially blocking the virus from replicating.

But perhaps the most significant impact of the cuts will be on the world's ability to produce vaccines against a future pandemic. America is the global leader in mRNA-vaccine research; according to Airfinity, a life-sciences data firm, it is currently home to trials for almost 40% of mRNA vaccine candidates (see chart). In the years prior to the pandemic the government spent $337m funding research related to mRNA technology that would eventually lead to the covid-19 vaccines, a figure unmatched by any other country.

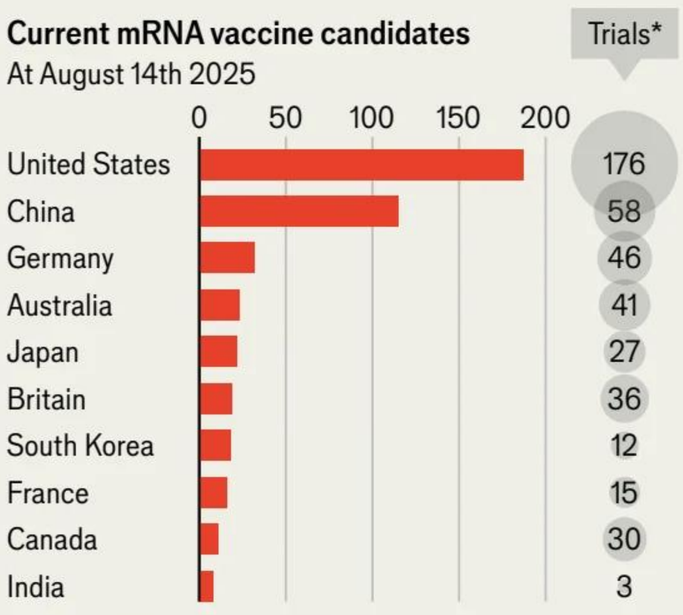
Some hope that investors will work around the government's disdain for respiratory mRNA vaccines and continue to invest in RNA therapeutics more broadly. But there are already signs of trouble: one industry source says that the administration's hostility—particularly in the form of inaccurate comments made about the safety of mRNA vaccines—is already having a chilling effect. The cost of manufacturing mRNA will probably rise and young talent and seasoned experts could leave the field, hampering innovation in an area of biology rich in applications.

This may in particular hurt the development of personalised cancer vaccines, a promising mRNA-based technology to treat tumours. *OncoDaily*, an online publication, suggests that the funding cuts could increase per-patient manufacturing costs by 20-40% and extend production timelines by two to six weeks. Slower speeds of delivery can give a tumour time to spread and may, therefore, reduce the efficacy of a vaccine. Trials may also be forced to slow down or move abroad.

There are few precedents for such a sequence of events. When George W. Bush's administration restricted funding for embryonic stem-cell research in 2001, some scientists did eventually move abroad. Britain benefitted; it became a global hub for research on embryonic stem cells. The cuts also pushed American researchers to innovate in other areas, leading to the advancement of pluripotent stem cells. The current administration hopes to repeat the trick by developing conventional whole-vaccine platforms to tackle pandemics. But it seems unlikely that these could ever be developed as quickly as mRNA jabs, which some experts reckon could be turned around in 100 days.

As for where mRNA expertise may go, there are whispers of interest from Saudi Arabia, Switzerland and the United Arab Emirates. Britain is actively competing for it, says one British source. Peter Piot, a professor of global health at the London School of Hygiene and Tropical Medicine and, until recently, an adviser to Ursula von der Leyen, president of the European Commission, thinks that the European Union should step forward and launch a special initiative to pick up the ball that America has dropped. One can only hope that his call is heeded before the next deadly pandemic arrives. ■

Shots fired



Electronics

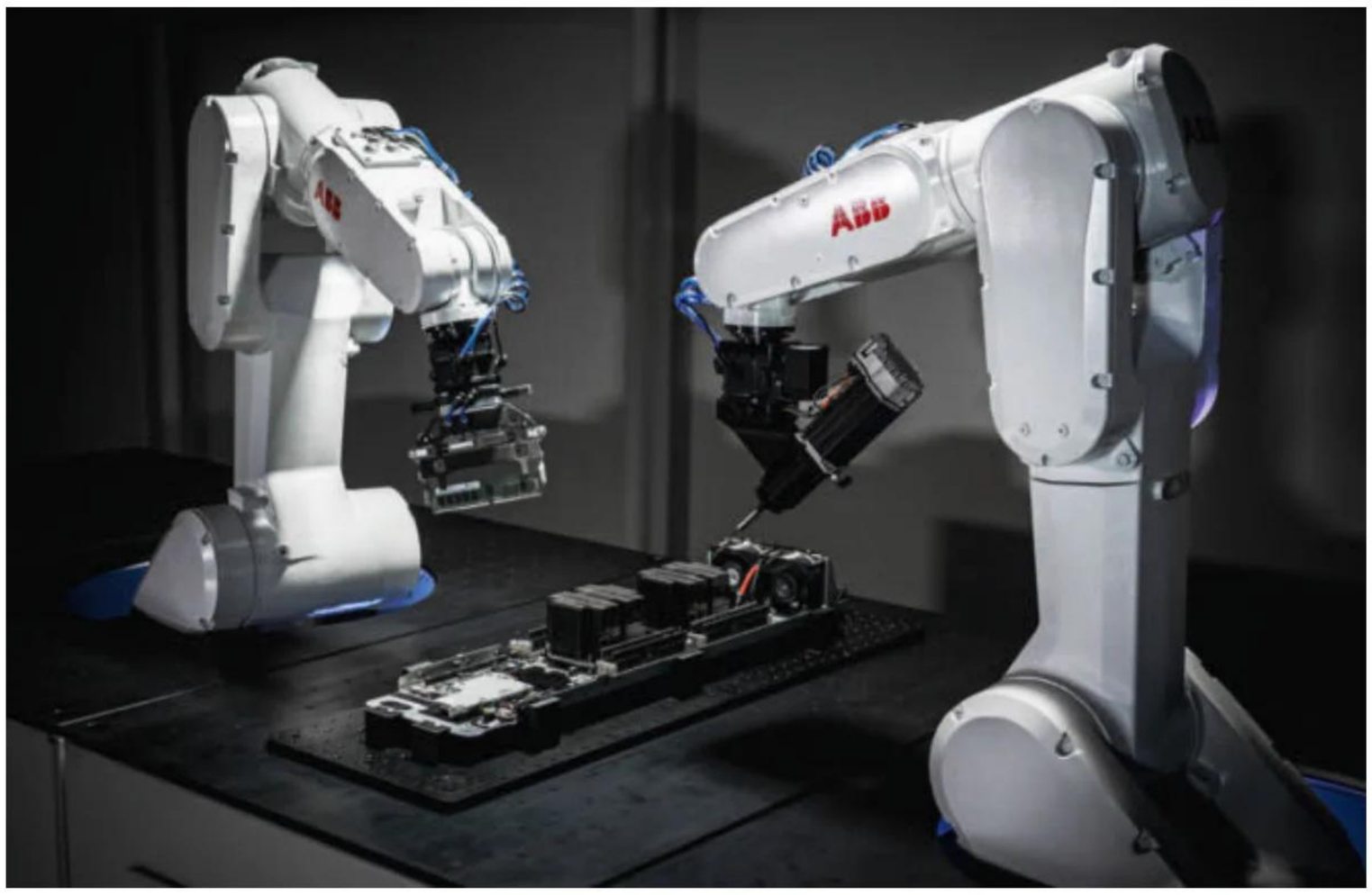
Pass the screwdriver

Robots powered by AI will speed up how electronics are recycled

THE WORLD'S rubbish heaps are filling up with valuable electronics. According to the UN, some 62m tonnes of e-waste were produced in 2022, enough to fill a line of lorries parked bumper-to-bumper around the equator. Only 22% is recycled. Most of the rest ends up in landfills or incinerators, where in 2024 recoverable raw materials worth $63bn went to waste. That figure is expected to grow to more than $80bn by 2030.

Getting those materials out of the rubbish is a challenge. Many are contaminated when e-waste is crushed during recycling, which can limit the effectiveness of specialist extraction techniques. The process is made more straightforward if products are disassembled and their components sorted by composition before crushing. Copper can then be recovered from wiring. Gold, silver and other precious metals can be leached from circuit boards, along with cobalt, lithium, manganese and nickel from batteries. Rare-earth magnets can be pulled from electric motors.

The trouble is that disassembly is labour-intensive and costly. Automation is also tricky: robots are good at putting together a specific item but struggle to recognise and take apart the thousands of different devices that end up in the rubbish. A new generation of robots powered by artificial-intelligence (AI) models, however, looks to be up to the job.



Righty-tighty, lefty-loosey

Some of these AI-assisted robots are being developed for in-house recycling schemes run by manufacturers, who have an intimate knowledge of how their products are put together. Apple, for example, uses a system called Daisy. A decade ago, an early version could dismantle only one type of iPhone; now, with the help of AI, Daisy can handle more than 20. Microsoft is developing a robot to disassemble computer hard drives. These are usually crushed whole to destroy any sensitive data, but if the drives are dismantled, only the platters containing data need be crushed. ABB, a Swedish-Swiss electrical-engineering company, is working with Molg, an American recycler, on a network of robotic "minifactories" to dismantle and recover material from the electronics used in vast data centres.

José Saenz and his team at the Fraunhofer Institute for Factory Operation and Automation in Magdeburg, Germany, have a still more ambitious goal. They are developing a robotic system that can be used in a general recycling centre, where it would need to be flexible enough to dismantle a wide variety of e-waste, ranging from phones to electric-vehicle batteries, LED screens and solar panels. Their starting-point is an AI-assisted robot that can disassemble old desktop PCs, many of which are more than a decade old.

The first thing the team's robot does is identify any product it is offered. A camera photographs the item and compares the snap with pictures of different PCs. The robot also scans any labels and product codes to check whether service manuals or other disassembly tips are available online. It can search for other clues, in much the same way ChatGPT might, when asked a similar question, turn up videos posted online by people who have done the job before. All this information is analysed and stored in the robot's memory, where it can be updated and used for reference the next time such a product comes into the recycling centre.

Once the identification is complete, the AI system then determines which components are worth removing, either in the form of raw materials or as complete parts to be refurbished and used again. It also checks the integrity of rivets, screws and other fasteners, because years of wear, tear and repair mean some parts may need to be cut out. Analysis done, the AI generates a disassembly sequence to operate the robot's arms. These are equipped with a selection of tools, such as drills, grippers and screwdrivers, to remove and sort items.

So far, the team has got each stage in the disassembly process working in separate machines. They are now linking these together into a single robotic device able to complete the whole process.

Once dismantling PCs has been mastered the team will train robots to tackle other products. The learning process will take time. Dr Saenz thinks it could be five years until they develop a commercial disassembly robot that could usefully work at a recycling centre taking apart anything from PCs to white goods and televisions. Firms that want to recycle their own, limited range of products could probably put together something more quickly.

A multi-purpose robot would probably be popular, since companies are under increasingly fierce legislative pressure to take responsibility for the end-of-life management of their products, either directly or by employing specialists to recycle for them. The rise of smarter spanner-wielding robots, therefore, should encourage more firms to ensure their products are useful in death, as they were in life. ■

Energy production

Old fossils

Coal and oil facilities are given new life as green-energy plants

FOR MORE than a decade the Tamaya power station in the Atacama desert in northern Chile powered its local region using diesel. Today a shimmering array of solar panels stands in place of the dirty generator. Engie, the French utility that owns the power station, converted it into a solar-energy and battery-storage plant earlier this year. Juan Villavicencio, the company's boss in Chile, describes the site as a place where "the past and future of energy infrastructure meet".

Others share his vision. Developers, governments, startups and utilities around the world are turning former fossil-fuel power stations, and old oil and gas wells, into renewable-energy plants and testbeds for green technology. This way the relics of the fossil-fuel era will be put to good use. "It makes no sense to just throw [them] away," says Arash Dahi Taleghani, an engineer at Pennsylvania State University.

According to the Carnegie Endowment for International Peace (CEIP), a think-tank, there are around 170 ongoing or completed projects to transform old fossil-fuel power stations into renewable-energy plants. The trend is spreading across the world, says Milo McBride, a research fellow at the CEIP. China, for instance, recently announced its first project—parts of the Baotou coal power plant in Inner Mongolia will be turned over to wind and solar generation, as well as battery storage.

Ready for a make-over

The sites offer connections to the grid, which can save developers looking to get renewable-energy projects online lengthy delays. Researchers led by Umed Paliwal at the University of Berkeley, California, have found that 1,000 gigawatts (GW) could be added to the American grid capacity if renewable-energy projects were hooked up to existing fossil-fuel plants and probably more if retired sites were exploited. According to the International Energy Agency, an official body, renewable-energy projects that could generate about 3,000 gigawatts (GW) worldwide are waiting for a grid connection. Repurposing could help resolve that issue.

Old oil and gas wells could also be attractive. A study by Mary Kang at McGill University found that most idle wells in America and Canada might be suitable for at least some kind of geothermal-energy production. Benjamin Burke, the boss of Gradient Geothermal, an American start-up, says that the cost of drilling a new well deep enough to host the technology can be prohibitive. Using old wells is comparably cheap, even if their location and build are more suited to oil and gas production.

Yet repurposing facilities presents challenges. Some former fossil-fuel sites are too compact to host vast wind and solar farms. Many will not be able to generate as much power as they did before. Around 35% of projects in CEIP's database partly or wholly deploy technologies that produce carbon emissions, such as bioenergy (burning organic matter to produce heat) and hydrogen blending (mixing green hydrogen with natural gas).

What's more, regulatory roadblocks may limit progress. Alexandra Klass and Hannah Wiseman, legal scholars at the University of Michigan and Penn State Law, say that obtaining permits to develop brownfield sites in America is often costlier than getting permits for pristine land. And, although some support may exist at state level, President Donald Trump has axed federal renewable-energy tax credits that reduced the cost of repurposing.

Nevertheless, demand for more ambitious green projects should continue to grow. Over the next 15 years, 300GW of coal power capacity is set to be retired around the world, and the cost of producing renewable energy could fall by up to 49%, according to BloombergNEF, a data provider. Other countries have created a more nurturing environment than America. Keith Hirsche, founder of RenuWell Energy Solutions, a renewable-energy company, says Canadian authorities fast-tracked his firm's permit to build because it was on a brownfield site. In Indonesia the national energy-transition strategy includes plans to transform old fossil-fuel assets. Many more plants will soon be pumping out green power. ■

Well informed

Should you use a standing desk?

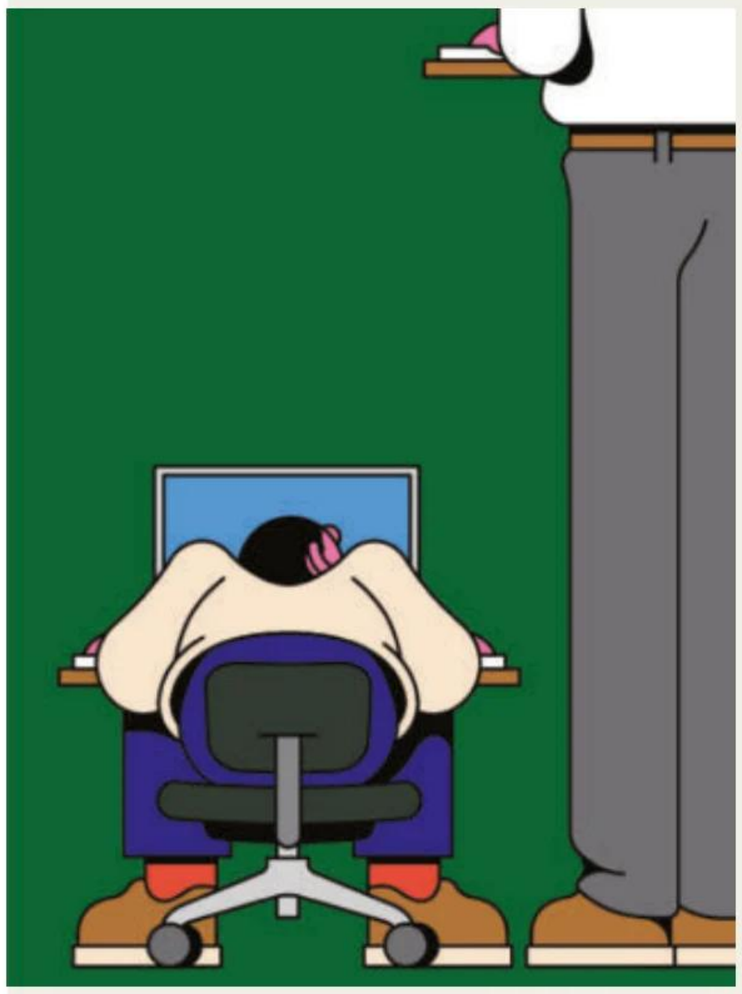
The benefits are real, but seem to vary with age

THE HUMAN body evolved to forage and hunt on the African savannahs, not to sit in a cubicle all day. The risks associated with sitting—from increased blood-sugar levels to greater odds of dying from cancer—lead many health authorities to warn against spending too much time doing so. The sit-to-stand desk is a popular way of helping people get upright. But how effective is it?

Several arguments are made in its favour. As standing makes the heart work harder, proponents say it improves cardiovascular health, enhances attention and reduces fatigue. Physiotherapists claim that standing also improves posture, reducing lower back pain. Some studies even suggest that standing workers report lower stress and greater happiness than sitters do.

Dozens of studies have been run on the potential health effects of sit-stand desks. A recent review, led by María Eugenia Visier-Alfonso at University of Castilla-La Mancha in Spain and published in *BMC Public Health* in May, selected 17 for examination. Dr Visier-Alfonso limited her analysis to those that looked mainly at university students.

Of the four studies that looked at mental health, three confirmed that sit-stand desk use reduced anxiety and improved mood. Of the four on back pain, however, only one revealed significant pain reduction among sit-stand desk users compared with control groups. The one study Dr Visier-Alfonso found that looked at the cardiovascular and metabolic benefits of sit-stand desks suggested that they do result in users having lower blood pressure. (The remainder mostly looked at academic outcomes, which were mixed.)



Studies conducted on more varied groups reach different conclusions. A general review of over 50 papers on sit-stand desk use, led by April Chambers at the University of Pittsburgh and published in *Applied Ergonomics* in 2019, found only weak evidence that their use improves cardiovascular health.

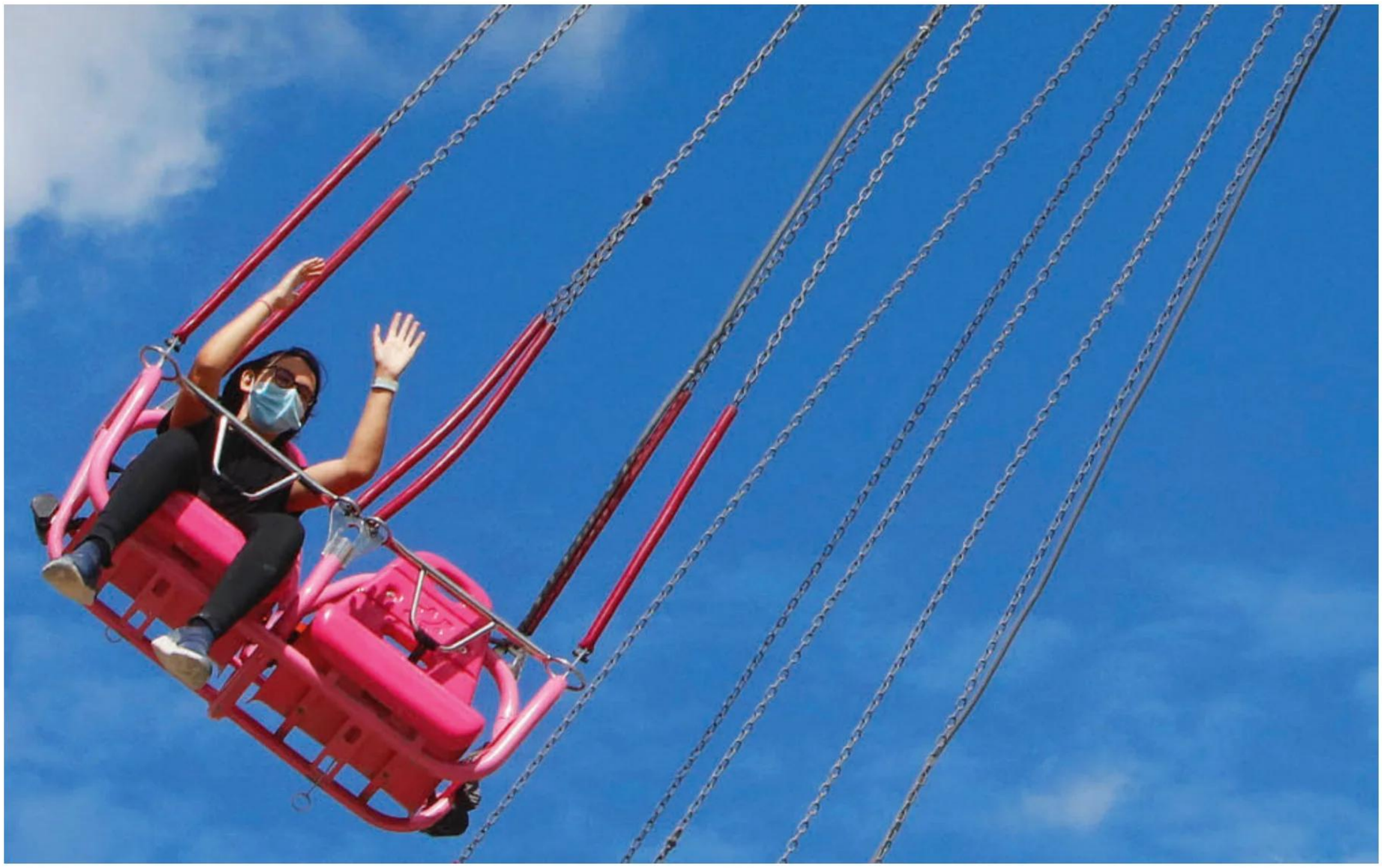
The heart rates of sit-stand desk users were 7.5-13.7 beats per minute faster on average than those of people at ordinary desks, indicating that they might be working harder. But the studies that examined the question found no notable differences in blood pressure or VO2 (the efficiency with which the body transports oxygen to the muscles).

Analysis of other health-related biomarkers, like glucose, insulin and cholesterol, were also no different in most studies. This suggested that the desks were not providing metabolic benefits that might, say, stave off diseases like type 2 diabetes. Improvements in levels of energy and attention among those who used sit-stand desks were similarly difficult to spot. What's more, Dr Chambers found no evidence that their use influenced mood.

However, notable benefits did emerge in the area of lower-back pain. Of 17 papers that studied this question, eight revealed evidence that giving participants the option to stand significantly reduced their lower-back pain (the remaining nine showed no clear effect). This suggests that standing may help some people with this condition, an effect that may be more noticeable among people past university age.

So what is the aching desk jockey to do? Both reviews agree that no significant harm is associated with the use of sit-stand desks. And although some of the differences between their conclusions may stem from chance or sample size, it is also possible that different benefits accrue to users of different ages.

Culture



A plague on both your houses

How covid-19 sent the world mad

The pandemic warped politics by polarising voters and undermining trust

In Covid's Wake. By Stephen Macedo and Frances Lee. *Princeton University Press; 392 pages; $29.95 and £25*
Summer of Our Discontent. By Thomas Chatterton Williams. *Knopf; 272 pages; $30. Constable; £20*

PANDEMICS DO NOT just sicken and kill. They have political and economic effects, too. After the Black Death wiped out a third of the people in Europe, fake news proliferated: rumours that the plague was caused by Jews poisoning the wells led to pogroms. Wages soared (because there were too few labourers) and rents collapsed (because so many homes were empty). Rulers tried brute force to block change, banning farmworkers from leaving their lord's land to go and work for another who paid better. But this provoked uprisings, such as the Peasants' Revolt in England in 1381, an impulse that ultimately led to the end of serfdom in most of Europe.

Covid-19 was less deadly. But two recent books argue that it, too, had far-reaching and unexpected consequences. It fed a global surge in inflation, a breakdown of trust in experts and an aggravation of political polarisation.

Before covid, few scientists believed that ordering people to wear masks or stay at home could stop the spread of a virus that passed easily from human to human, assert Stephen Macedo and Frances Lee of Princeton University in "In Covid's Wake". Lockdowns are hard to sustain and immensely costly. Yet when the novel coronavirus emerged in China, the Chinese government imposed draconian lockdowns, which it claimed were highly successful. The World Health Organisation accepted this. Lockdowns swiftly became conventional wisdom around the world.

It is unclear how well lockdowns worked. China suppressed the virus by occasionally shutting down whole neighbourhoods, sometimes bolting people into their apartments. But even these controls failed when the highly infectious Omicron variant required more extensive lockdowns, leading to protests in 2022. Because the government had not vaccinated enough people, when controls were lifted between 1m and 2m people died.

Rich democracies could not hope to enforce lockdowns as brutally, but most closed bars, restaurants and schools, banned large gatherings and encouraged people to work from home. This hurt the poor more than the rich. The laptop-tapping class, including the people who made covid policy, could work from their comfortable homes. Drivers and factory hands, by contrast, had to go out to work, even as

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schools ceased to look after their children. Multitudes of service workers were laid off.

The sacrifice was necessary to save lives, politicians claimed. New York's governor, Andrew Cuomo, put it pithily: "Economic hardship? Yes, very bad. Not death. Emotional stress, from being locked in a house? Very bad. Not death." Leaders insisted they were "following the science", meaning the advice of public-health experts. But such experts tend to focus on minimising the harms caused by disease. They are not experts on the trade-offs between covid deaths and economic losses, children missing school or locked-down populations becoming lonely and depressed. Consideration of such trade-offs was "systematically swept aside in 2020-21", fume Ms Lee and Mr Macedo. "This was plainly irrational."

Rich-country governments borrowed huge sums to pay furloughed workers or send out cheques. Direct federal spending on covid relief in America was $5trn, equivalent to a quarter of GDP in 2020. The spending binge exacerbated a global surge in inflation, which infuriated voters and eventually spurred many to vote for Donald Trump in 2024. Poor countries fared even worse. As lockdowns crushed economic activity, global poverty rose for the first time in a generation.

It is hard to show that lockdowns saved many lives, though many scientists believe they did. People may take precautions without being forced, or kick against compulsion. Sweden never mandated masks or staying at home, and kept most schools open. To protect the old, Swedes were advised not to visit nursing homes. The *New York Times* called Sweden a "pariah". Yet its excess-death rate after a year of covid was one of the lowest in Europe. In America states that locked down hard fared no better on this score than those that did not—that is, until vaccines arrived. Then their excess-death rates diverged sharply; Ms Lee and Mr Macedo suggest this is because the states that refused to lock down also included a lot of vaccine sceptics.

Public opinion was guided less by evidence than by partisanship, especially in America. Democrats were more likely to believe in lockdowns and vaccines; Republicans in neither. In Democratic states "people routinely cycled and jogged outside with masks on," the authors observe. Schools in those states stayed closed far longer than those in Republican ones, causing students to fall behind and reducing their future earnings potential. People in Republican states avoided such folly but were more likely to die because they refused to get jabbed. Of the 25 states with lower than median vaccination rates, 19 had Republican governors.

The certainty and ferocity with which the two camps disagreed is hard to overstate. In "Summer of Our Discontent" Thomas Chatterton Williams, a journalist, explores how partisans of left and right stopped listening to each other and came to regard the other side as morally beyond the pale. When the state of Georgia decided to ease lockdowns early, the *Atlantic*, a liberal magazine, called it an "experiment with human sacrifice".

And then, in May 2020, George Floyd, a black man, was choked to death by a cop who suspected him of using a forged $20 bill. Suddenly it was every progressive's moral duty to join crowds decrying racism and police brutality. "In the space of two weeks, and without really thinking it through, we went from shaming people for being in the street to shaming them for not being in the street," writes Mr Williams. "How could this not feel like gaslighting?"

Mr Williams speculates that Floyd might never have got into trouble had he not been one of the 40m Americans out of work because of covid restrictions. (He was a bouncer in a club that was closed.) Mr Williams complains that progressives often accepted such measures with "stunning blitheness".

The pandemic stress-tested institutions everywhere. Some, such as vaccine-makers and the supply chains that filled supermarket shelves, covered themselves with glory. Others, not so much. Public-health authorities were far too confident in their pronouncements about a new disease, the understanding of which was, inevitably, evolving. As Francis Collins, a former director of America's National Institutes of Health, later put it: "We failed to say every time there was a recommendation, guys, this is the best we can do right now. It's a good chance this is wrong...That was a profound mistake, and we lost a lot of credibility."

Governments enacted "the greatest mobilisation of emergency powers in human history", and suppressed speech that opposed it. America's 50 states, all confronting the same problem in different ways, should have been the "laboratories of democracy", learning from each other. But they were not. Instead, red and blue politicians and voters retreated into cocoons of self-righteous certainty.

A chronic condition

Ms Lee and Mr Macedo conclude that the world needed "a more honest politics of crisis policymaking...a greater willingness to acknowledge [doubt], and recognition of the reasonableness of people with varying views". Instead, the pandemic bred partisan rancour, intolerance and bad policies, vigorously applied. Anders Tegnell, the architect of Sweden's uniquely relaxed covid policy, put it best. Looking at how other countries were responding, he said: "The world has gone mad." ■

Publishing

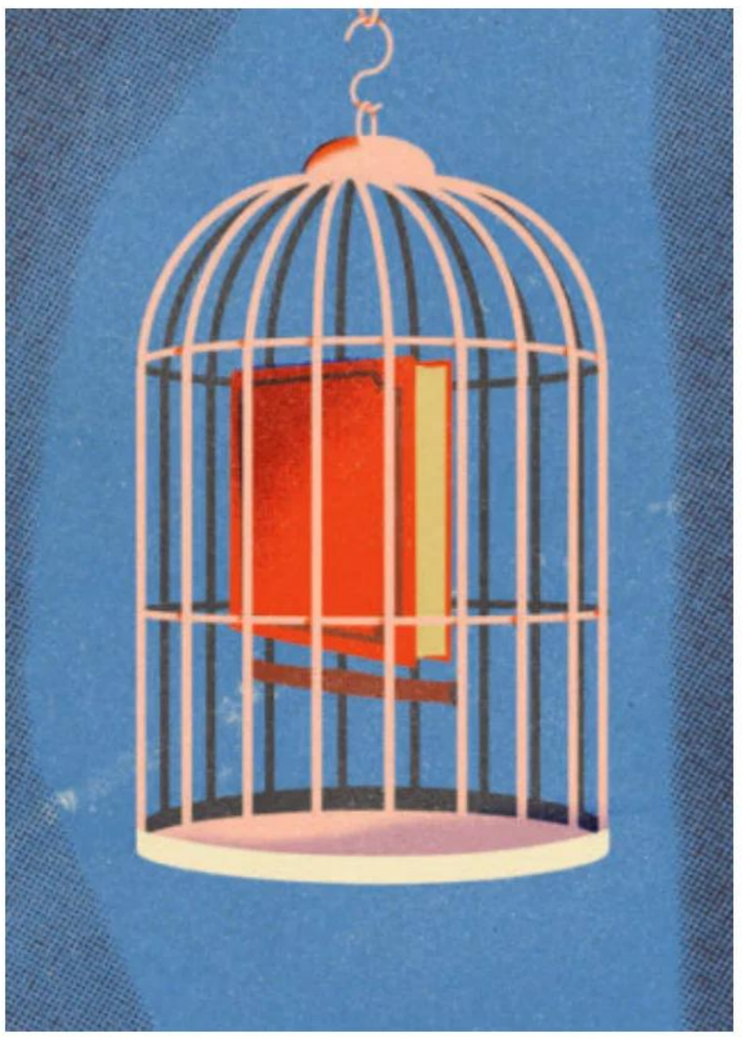
Censory deprivation

That Book Is Dangerous! By Adam Szetela. *MIT Press; 288 pages; $29.95 and £27*

THE RULES of Oceania in George Orwell's "1984" were clear: "Not even the smallest deviation of opinion on the most unimportant subject can be tolerated." Any book that carried the wrong line "had to be rectified at lightning speed". Only things that would not disturb the minds of the populace were allowed, since the "best books" are "those that tell you what you know already". It is an idea that some readers took to heart: in 2022 a British university added a "trigger warning" to "1984", alerting readers to the presence of racism, sexism and "political ideas".

An engaging book by Adam Szetela, a journalist, also tells you what you already know: that something silly is happening in publishing. The world is not Oceania, but it is not good: in American libraries in 2024, 2,452 titles were targeted for censorship. In 2020 employees of the *New York Times* demanded sensitivity readers. Journalists were told to snitch on each other: if an opinion piece gave them "the slightest pause" they should "call or text" the editor "immediately". In Britain James Bond has been bowdlerised and filthsome bits excised from Roald Dahl. It is rotsome.

Quite why this has happened is complicated. Partly publishing had a genuine problem. The literary world was, for a long time, not very diverse: in America in 1985,



just 18 of 2,500 books were by black authors or illustrators. When Zadie Smith, a British novelist, was growing up she searched books for "some form of cultural reflection" but found "only distorted mirrors [or] monstrous cliché".

The "solution" has proved worse than the problem: it has meant conniptions, cancellations and the absurd strictures of sensitivity readers. (One rapped an author's knuckles for having a black character visit a national park, for that "is not a thing we do, as a group".) It has also resulted in bad books, such as "Was the Cat in the Hat Black? The Hidden Racism of Children's Literature". Sermons were a popular literary form in the 19th century. Sermonising is in fashion in the 21st.

The over-correction happened, in part, because the barriers to entry for the argument industry have tumbled. When Daniel Defoe wrote something people did not like, he had to be put in the pillory: that sort of insult took time, commitment and carrots. By the 20th century, the cost of insulting someone had dropped, but was still there: you'd write a rude letter, read it over then, as the author David Sedaris noted, think "*Is this really worth a twenty-five-cent stamp*?" Email allowed you to insult authors for nothing; social media mean you can now publicly insult them for the same. People vent their spleen on Instagram and X in an online version of Orwell's "Two Minutes Hate" ritual.

The solution to all this is, says Mr Sztela, to speak out—or you are "guilty" too, like those who passively watch book-burnings in Ray Bradbury's "Fahrenheit 451". In this comprehensive (if at times too polemical) book he practises what he preaches. Expect it to cause conniptions online. ■

Indian cinema

The cult of Rajinikanth

MUMBAI

How a 74-year-old actor drives fans into a frenzy

FOR FANS of Rajinikanth, or Rajini, it is not enough to simply buy a ticket to one of his films and turn up at the right time and place. No; preparations begin days in advance. Ahead of his latest release, "Coolie", on August 14th, some fans prostrated themselves in front of shrines, seeking a divine blessing for the Indian actor. Others bathed giant cardboard cutouts of him in milk, a sign of reverence usually reserved for Hindu gods.

When a trailer for "Coolie" was released on August 2nd, it racked up 25m views in two weeks. (The term is derogatory in the West, but is not considered offensive in South Asia.) On the day of the film's debut, cinemas had a carnival feel, with drumming and confetti. A few devotees flew to India from countries as far as Australia for the occasion.

In a packed cinema in Mumbai, patrons whistled and hollered from the moment his sobriquet "Superstar" appeared on screen. (Projectionists sometimes pause the film after his grand entrance to let viewers offer prayers from their seats or to hurl coins and banknotes.) "This is nothing. You should go to Tamil Nadu or Karnataka," says one fan. "You won't be able to hear his dialogue."

Rajinikanth—whose real name is Shivaji Rao Gaekwad—is one of the biggest movie stars in the world, inspiring the kind of devotion that most Hollywood actors can only dream of. "Coolie", a Tamil gangster flick, marks his 50th year on screen. Rajini plays a dockyard worker and union leader who investigates the death of a friend, which draws him into a criminal underworld. Along the way, he wields swords, knives and guns. He shows what he can do with his fists and his wits.

The role hints at Rajinikanth's humble beginnings. Born to a poor family in Bangalore, he discovered a love of acting at school and would perform folk tales for rapt classmates. As a young adult, he did manual jobs—hauling rice sacks for ten paise apiece (equivalent to 1.3 cents in 1970, and 0.12 cents today)—and worked as a bus conductor. Later he studied acting at the Madras Film Institute.

Hands in the air if you really care

To begin with he got only bit parts and often played baddies. But in "Bairavi" (1978) he portrayed an honourable servant who avenges his sister's murder. Thereafter, in blockbusters such as "Naan Mahaan Alla" (1984), "Baashha" (1995) and "Padayappa" (1999), he starred as the swashbuckling hero.

Rajini is not a method actor, nor a Bollywood beefcake. At 74, his lustrous hair has become a tonsured style flecked with grey. So what explains fans' fervour?

One reason is his everyman appeal. He dresses plainly and shuns big-brand endorsements. He has a self-deprecating sense of humour. In a recent speech he joked about having warned his young choreographer not to overtax "a 1950s model" lest "parts start falling off".

Another, somewhat paradoxical, reason is Rajini's superhero-like qualities. He is known for his physics-defying antics: in one film, he catches a knife between his teeth. In "Coolie" he dials a phone with one hand while fending off a blade, then floors five goons with a single punch that sends them flying in all directions. The key to enjoying Rajinikanth's work, one moviegoer says, is not overthinking it: "Leave your brain at home."

Like all the biggest stars, Rajini has a certain magnetism. One punter says the actor's "aura is unmatched". For a time he hoped to use that charisma in the political arena. Rajini tried to launch a new party in 2020, but withdrew after a health scare he called a "warning given to me by the Lord".

Most important, Rajinikanth's work is suitable for all ages. Three generations filled the cinema in Mumbai. People across India and in the diaspora have grown up watching him as he has made films in Tamil, Telugu, Hindi and Kannada.

For the most part, the Rajini fandom is harmless. On his birthdays admirers organise meal donations and charity collections. But sometimes affection tips over into frenzy. "We are really tense the night before any Rajinikanth film release," admits one official in "For The Love of a Man", a documentary of 2015. This year police in Chennai confiscated firecrackers from fans. His acolytes expect action, but will not tolerate evisceration. "Twice is okay, but if villains beat him a third time, the theatre might burn," warns an admirer.

Most actors fear their powers diminishing with time: if anything, Rajinikanth's are increasing, even after 170 films. "Coolie" took $17m at the global box office on its first day, setting a new record for Tamil cinema. Rajini still packs a punch. ■

Drugs and religiosity

High priests

What happens when you give magic mushrooms to the clergy?

SOME PEOPLE think of their hounds as heavenly, sporting T-shirts proclaiming that "'Dog' is 'God' spelled backwards." For Jeff Vidt, God actually was a dog: the Lord came to him as a Great Dane. Meanwhile, Jaime Clark-Soles glimpsed the deity as a harp-playing woman. Sughra Ahmed felt the Almighty as a concept: love.

These divine encounters occurred at Johns Hopkins University, Maryland, during an experimental study investigating how "the effects of psilocybin"—the active ingredient in magic mushrooms—"are experienced and interpreted by religious clergy". The 29 participants came from Buddhism, Christianity, Islam and Judaism and were "psychedelic-naive": ie, they had never dabbled in these drugs before. They took psilocybin on two occasions; there was a waiting-list control group.

The sample size may be small, but the findings, recently published in the *Journal of Psychedelic Medicine*, are mighty clear: 96% of participants ranked a psilocybin trip in the top five most spiritually significant moments of their lives and 42% declared it the single most profound experience they had ever had. (A recent study in Sweden also found that 58% of people found a psychedelic experience to be one of the most meaningful events of their lives.) Almost half described their trips as "psychologically challenging", but none reported severely adverse effects.

Psychedelics change the way the default mode network (DMN) in the brain works. These linked parts of the brain are activated when people muse on the past, present or heavenly future. Psychedelics switch some of the DMN off at the same time as they activate other neural pathways, all of which allows for new ways of thinking. Scientists are exploring how psilocybin may help treat depression and post-traumatic stress disorder.

More than a year after the study, participants reported a deeper connection to their faith and improved prayer. Hunt Priest, an Episcopalian, felt an electric current in his spine; it stopped at his throat before exploding out of his head. The blockage was "connected to my preaching": "I felt restricted in what I could say." He has "never thought of the Holy Spirit the same again". Roger Joslin, also an Episcopalian, says: "There's my life before psychedelics and my life afterwards."

Yet such spirituality is unlikely to please traditionalists, who argue that true faith is the product of discipline, not mind-bending drugs. Some may worry that these experiences threaten religious institutions: who would rather sit in a dusty pew than fly with the angels? As Mr Vidt, an Anglican priest, put it: "I don't believe in God: I know God. I experienced God."

Psilocybin also seems to promote the kind of universalism that religious authorities have spent centuries trying to contain. Mr Priest says he prayed as a Jew, then a Muslim; Julie Danan, a rabbi, chanted "Shalom" next to Hindus saying "Om". "It's hard to imagine having a psychedelic experience that made someone more narrow or exclusionary in their faith," says Mr Joslin. "It's likely to broaden it." This may bother religious authorities who must advance their own faith as superior to others.

Advocates argue that drugs are a conduit to the sorts of mystical things that are described in scripture, such as multi-headed beasts. "The whole Book of Revelation is a visionary journey," says Ms Clark-Soles, a Baptist minister. "Christianity is fundamentally based on a mystical experience: the resurrection of a dead guy."

Ms Clark-Soles is writing a book called "Psychedelics and Soul Care: What Christians Need to Know". Several of the study's participants have set up organisations aimed at exploring the benefits psilocybin can offer believers. Mr Priest established Ligare, a "Christian psychedelic society"; Zac Kamenetz, a rabbi, launched Shefa to support Jews; Ms Ahmed, an imam, created Ruhani for Muslims. Some feel the Religious Freedom Act should protect institutions in America offering drugs for spiritual purposes. Talk about a higher calling. ■

The life of a chef

Steamy stuff

Tart. By Slutty Cheff. *Marysue Rucci Books; 336 pages; $28.99. Bloomsbury; £16.99*

SLUTTY CHEFF, an anonymous female cook, has a confession: she is greedy. She doesn't "want to eat" food so much as "devour" it. Her appetite is less that of an "average Western woman" and more akin to that of "a starved pig". But, as her alias indicates, there is one thing she claims to desire even more than food: sex.

"Tart", her memoir, is a hedonistic tale of both. In the book Slutty (as her friends call her) recounts the first two years of her career as a chef, mostly in posh London restaurants. She peeks into the "socialite chef" world, which is "elitist, exclusive" and "more about *who* you know, not *what* you cook". She discovers a lot about herself, for instance when she realises "I love cooking—I *need* cooking." She also discovers a lot about—*quelle surprise*—sex. Intercourse with a chef, she proclaims, is "more thrilling than being one".

Fans are eating up her tales. She serves salacious morsels to her tens of thousands of followers on Instagram and to readers of her column in British *Vogue*. The film and television rights to "Tart" have already been gobbled up by Working Title, one of the production companies that made the "Bridget Jones" films. There are rumours that Lena Dunham, the creator of the hit show "Girls", will help adapt the book for the screen.

"Tart" is dining out on the popularity of ▸▸

sexy chefs on screen and online. "The Bear", a TV show which stars Jeremy Allen White as a moody chef who wants to turn a sandwich shop into a Michelin-starred restaurant, has helped professional cooks seem more sultry than sweaty. In "Emily in Paris", a hit series, there is a love triangle involving a hunky chef. On social media so-called "hot chefs" sauté, sear and smoulder for the camera, often without their shirts on.

The memoir has been lauded as a feminine take on Anthony Bourdain's "Kitchen Confidential" (2000). The American chef and author also stunned and delighted readers by sharing tantalising stories. (One memorable tale involved a blushing bride getting "an impromptu send-off" from a cook behind the kitchen bins.) Slutty Cheff has spoken of her lust for the rebellious culinarian. In "Tart" she says she imagines Bourdain—who took his own life in 2018, aged 61—joining her "for four hours of carnal feasting, seven bottles of wine, a couple of lines of crushed aspirin and then a great big fuck".

In her acknowledgments, the author pays homage to Bourdain, as well as Jilly Cooper, the British queen of the bonkbuster novel. Ms Cooper's influence is evident. Just consider Slutty Cheff's contents page. Whereas Bourdain used the sleek, inscrutable subheadings of "Appetiser", followed by "First Course" and so on, she prefers smutty titles such as "Michelin Star Pussy Juice" and "Ready Steady Cock". She spends a great deal of time describing the "phallic form" of courgettes and the "great erection" of rhubarb.

"Kitchen Confidential" aimed to lift the lid on the restaurant industry. Bourdain wrote of how butter is reused and uneaten bread is often sent out to the next table. Seafood served on Mondays, he averred, is probably four or five days old; hollandaise sauce swims with bacteria. Readers finished the book feeling satisfied that they knew more about what (and what not) to order next time they went out to eat.

"Tart", meanwhile, is mostly a romp. Slutty Cheff does not dish up such insights. The kitchens she works in seem clean and hygienic: the most nauseating it gets is the description of "the flashing grey of a mouse running past my feet". She takes drugs and has sex outside the kitchen rather than in it.

The most revealing passages are not about sex, but sexual harassment. Slutty Cheff is often the only woman in the kitchen. She describes the challenges of working with a "pervy" man who touches her bottom and stands so close that she can "feel his breath". She has to appear "strong and unaffected", she feels, to earn the respect of her male peers. "Tart" offers a slice of life, but such experiences leave a bitter taste in the reader's mouth. ■

Fictional characters

High-heeled shoes to fill

NEW YORK

Farewell to Carrie Bradshaw, TV's exasperating, enduring heroine

CARRIE BRADSHAW has skipped across Manhattan in Manolo Blahniks for the last time. On August 14th "And Just Like That..." ("AJLT") broadcast its final episode and so bid farewell to Carrie, almost 30 years after she first appeared on television screens in "Sex and the City" ("SATC"). In the debut episode, Carrie lamented the dearth of "great unmarried men" in New York; over the course of six seasons of "SATC", two films and three seasons of "AJLT", she received proposals (and called one engagement off), got stood up at the altar, got married, was widowed and had umpteen flings and flirtations. All the while, Carrie was establishing her reputation as one of the most infuriating yet influential heroines ever to appear on screen.

She caused a stir from the beginning. Carrie and her coterie first appeared in 1994 in a racy, semi-autobiographical newspaper column written by Candace Bushnell for the *New York Observer*. It gained a following fast, though detractors dismissed Ms Bushnell as a low-rate gossip who made stuff up. "My characters exist," she retorted. "Go to enough parties, and you'll meet all of them."

Those characters—four sparky, single women—arrived on screen in 1998. There was Miranda (Cynthia Nixon), the stressed-out lawyer, Charlotte (Kristin Davis), the hyper-polished WASP, and Samantha (Kim Cattrall), the sexually voracious publicist. But the show's centre was Carrie (Sarah Jessica Parker), a journalist and bon vivant with a penchant for terrible puns. Together they broached topics that had not really been dealt with on TV before, including abortions, fetishes and fertility.

Much of "SATC" did not feel particularly plausible. All the women in the show looked impeccable all the time. Carrie lived alone in an apartment on the Upper East Side while turning out one column a week; she somehow had money left over for designer shoes and lavish dinners.

Viewers were happy to overlook that, but they often found Carrie vexing. She was spoiled: in one episode she ordered Charlotte to give her $30,000 as a downpayment for her apartment. She was judgmental: she scorned Samantha for giving a blowjob to a delivery man. And she was blinkered: she had dire taste in partners. Her love for "Mr Big"—an emotionally unavailable financier with the prosaic name of John—led her to behave erratically.

Nonetheless, it was impossible not to be drawn in by the quartet's dynamic. Miranda was acerbic. When Samantha was not bedding handsome men, she was turning out Wildean phrases. ("I'm a trisexual," she declares: "I'll try anything once.") Charlotte was sentimental. "Maybe we could be each other's soulmates?" she asks her friends as her marriage disintegrates. Most viewers secretly wished they were at the table, a Cosmopolitan in hand.

The show was a hit. It was nominated for 54 Emmys, winning seven. Various celebrities made cameos: Donald Trump appeared in an episode entitled "The Man, the Myth, the Viagra". More than 10m people tuned in to watch Carrie fall into Big's arms in the finale in 2004. The films, released in 2008 and 2010, together made over $1bn at the box office in today's money.

"AJLT" tried to fix some of the shortcomings of "SATC". Its best-written characters were black, a refreshing change from the notably white original, and it attempted to grapple with modern debates about sexuality. There were some moving moments as Carrie, Miranda and Charlotte navigated midlife and its crises. (Samantha did not return, to the show's detriment.) But it was a peculiar reboot which never recaptured the charm of the original. The writers seemed particularly unsure about what to do with Carrie after Big's death.

All the same, Carrie Bradshaw struck a nerve in a generation of women. She has inspired fashion trends, internet memes and thinkpieces, from takedowns (*Elle*: "Carrie Bradshaw Is Still Full of Shit") to fierce defences (the *Atlantic:* "No, Carrie Bradshaw Was Not 'Such a Whore'"). Even when she was perplexing, there was something admirable about her determination to live her life on her own terms. Many fans won't help but wonder: why is breaking up with a fictional character so hard? ■

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ANNOUNCEMENTS

IN THE HIGH COURT OF JUSTICE
BUSINESS AND PROPERTY COURTS OF ENGLAND AND WALES
COMPANIES COURT No. CR-2025-004099

IN THE MATTER OF MERCANTILE INDEMNITY COMPANY LIMITED
and
IN THE MATTER OF ROMBALDS RUN-OFF LIMITED
and
IN THE MATTER OF RIVER THAMES INSURANCE COMPANY LIMITED
and
IN THE MATTER OF PART VII OF THE FINANCIAL SERVICES AND MARKETS ACT 2000

NOTICE IS HEREBY GIVEN that, by application dated 29 July 2025, Mercantile Indemnity Company Limited and Rombalds Run-Off Limited (the **Transferors**) applied to the High Court of Justice of England and Wales for, amongst other things, an order under Section 111(1) of the Financial Services and Markets Act 2000 (the **Act**) sanctioning insurance business transfer schemes (the **Scheme**) to River Thames Insurance Company Limited (the **Transferee**) and for an order making provision under Section 112 of the Act.

The business included in the Scheme comprises all of the Transferors' respective insurance and/or reinsurance business and all their respective assets and liabilities.

Copies of a report on the terms of the Scheme prepared by an independent expert in accordance with section 109 of the Act (the **Scheme Report**) and copies of a statement setting out the terms of the Scheme and containing a summary of the Scheme Report may be obtained, free of charge, by contacting Enstar (EU) Limited, FAO Stephen Murphy, 8th Floor, One Creechurch Place, London, EC3A 5AY, United Kingdom, or may be downloaded from the website www.enstargroup.com/mercantile-rombalds-transfers/.

Anyone who has questions regarding the proposed Scheme or who requires any further information regarding the Scheme may contact Bryan Cave Leighton Paisner LLP at Governor's House, 5 Laurence Pountney Hill, London EC4R 0BR, United Kingdom tel: +44 (0)20 3400 4855, email: mercantile-rombalds-transfers@bclplaw.com ref: GQUI/3Y7.

The application will be heard on 1 December 2025 before a Judge of the Chancery Division of the High Court at The Rolls Building 7 Rolls Buildings, Fetter Lane, London, EC4A 1NL, United Kingdom. Any person (including an employee of the Transferors or the Transferee) who alleges that they would be adversely affected by the carrying out of the Scheme is entitled to:

(i) appear at the hearing and make representations in person;
(ii) instruct a barrister or solicitor advocate to appear at the hearing and make representations on their behalf; or
(iii) make representations in writing.

If you intend to appear at the hearing in person, or to instruct someone to appear on your behalf, you are requested to give notice of your intention to do so in writing, setting out the reasons why you believe you may be adversely affected. If you do not give the requested notice you will still be entitled to attend the hearing, or to instruct someone to appear on your behalf.

You are requested to send such notice, or if you are not intending to appear in person or by your legal representative, any written representations that you may have, to Bryan Cave Leighton Paisner LLP, at the address and reference given above. Please provide such notice or such written representations by close of business on 24 November 2025.

If the Scheme is sanctioned by the Court, it will result in the transfer of all the contracts, property, assets and liabilities of the Transferors to the Transferee, notwithstanding that a person would otherwise be entitled to terminate, modify, acquire or claim an interest or right or to treat an interest or right as terminated or modified as a result. Any such entitlement will only be enforceable to the extent the order of the Court makes provision to that effect.

Bryan Cave Leighton Paisner LLP,
Governor's House, 5 Laurence Pountney Hill, London EC4R 0BR, United Kingdom
Solicitors to the Transferors and the Transferee (Ref: GQUI/3Y7).

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Economic & financial indicators

	Gross domestic product, % change on year ago				Consumer prices, % change on year ago			Unemployment rate, %		Current-account balance, % of GDP, 2025†	Budget balance, % of GDP, 2025†	Interest rates, 10-yr gov't bonds			Currency units	
	latest		quarter*	2025†	latest		2025†					latest, %		change on year ago, bp	per $ Aug 20th	% change on year ago
United States	2.0	Q2	3.0	1.3	2.7	Jul	2.8	4.2	Jul	-3.9	-5.9	4.3		47.0	-	
China	5.2	Q2	4.5	4.7	nil	Jul	-0.3	5.2	Jul‡§	1.7	-5.9	1.6	§§	-26.0	7.18	-0.6
Japan	1.2	Q2	1.0	0.6	3.2	Jun	3.1	2.5	Jun	4.5	-3.4	1.6		70.0	147	-0.9
Britain	1.2	Q2	1.4	1.0	3.8	Jul	3.7	4.7	May††	-3.0	-4.9	4.7		79.0	0.74	4.0
Canada	2.3	Q1	2.2	1.0	1.7	Jul	2.0	6.9	Jul	-0.9	-2.0	3.5		45.0	1.39	-1.4
Euro area	1.4	Q2	0.5	1.2	2.0	Jul	2.0	6.2	Jun	3.0	-3.3	2.7		51.0	0.86	4.7
Austria	-0.5	Q1	0.6‡	0.1	3.7	Jul	3.0	5.8	Jun	2.3	-4.5	3.0		30.0	0.86	4.7
Belgium	1.1	Q2	1.0	1.0	2.6	Jul	3.0	6.5	Jun	-0.1	-4.7	3.3		47.0	0.86	4.7
France	0.7	Q2	1.2	0.6	0.9	Jul	0.9	7.0	Jun	-0.3	-5.7	3.4		48.0	0.86	4.7
Germany	0.4	Q2	-0.4	0.3	1.8	Jul	2.1	3.7	Jun	5.3	-2.7	2.7		51.0	0.86	4.7
Greece	1.8	Q1	0.2	2.2	3.7	Jul	2.7	7.9	May	-5.9	-0.2	3.4		10.0	0.86	4.7
Italy	0.4	Q2	-0.3	0.5	1.7	Jul	1.7	6.3	Jun	0.9	-3.6	3.6		-5.0	0.86	4.7
Netherlands	1.5	Q2	0.4	1.3	2.5	Jul	3.4	3.8	Jul	7.9	-2.4	2.9		40.0	0.86	4.7
Spain	2.8	Q2	3.0	2.6	2.7	Jul	2.3	10.4	Jun	2.4	-3.2	3.3		20.0	0.86	4.7
Czech Republic	2.4	Q1	2.8	2.1	2.7	Jul	2.4	2.8	Q2‡	0.3	-2.4	4.3		55.0	21.0	7.9
Denmark	1.3	Q2	5.1	2.6	2.3	Jul	1.8	2.9	Jun	12.9	1.6	2.6		33.0	6.40	5.0
Norway	-2.1	Q2	3.4	1.1	3.3	Jul	2.8	4.9	May‡‡	13.6	9.5	3.9		54.0	10.2	2.6
Poland	3.4	Q2	3.2	3.1	3.1	Jul	3.7	5.4	Jul§	0.3	-6.1	5.3		1.0	3.65	5.5
Russia	1.1	Q2	na	0.9	8.8	Jul	8.7	2.2	Jun§	2.0	-2.7	13.6		-184	80.4	13.7
Sweden	1.0	Q2	0.4	1.5	0.8	Jul	2.3	9.4	Jun§	5.7	-1.4	2.4		50.0	9.59	6.8
Switzerland	2.0	Q1	2.1	1.3	0.2	Jul	0.1	2.9	Jul	6.7	0.7	0.3		-5.0	0.80	6.2
Turkey	2.0	Q1	4.0	2.8	33.5	Jul	34.5	8.5	Jun§	-1.7	-3.4	29.2		236	40.9	-17.2
Australia	1.3	Q1	0.8	1.7	2.1	Q2	2.1	4.2	Jul	-1.2	-1.8	4.2		21.0	1.56	-4.5
Hong Kong	3.1	Q2	1.8	2.4	1.5	Jun	1.5	3.7	Jul‡‡	10.7	-5.3	3.1		18.0	7.81	-0.3
India	7.4	Q1	9.8	6.2	1.6	Jul	3.2	6.8	Jul	-0.6	-4.4	6.5		-36.0	87.1	-3.8
Indonesia	5.1	Q2	5.9	4.7	2.4	Jul	1.6	4.8	Feb§	-0.8	-3.3	6.4		-19.0	16,268	-5.1
Malaysia	4.4	Q2	5.8	4.0	1.1	Jun	1.7	3.0	Jun§	1.8	-3.9	3.4		-40.0	4.23	3.5
Pakistan	4.8	2025**	na	4.8	4.1	Jul	4.2	6.3	2021	-1.4	-4.8	12.0	†††	-186	282	-1.3
Philippines	5.5	Q2	6.1	6.4	0.9	Jul	1.5	4.1	Q2§	-3.3	-5.4	6.0		-5.0	57.0	-0.8
Singapore	4.4	Q2	5.8	2.8	0.8	Jun	0.9	2.1	Q2	14.4	0.2	1.9		-83.0	1.28	1.6
South Korea	0.6	Q2	2.4	0.8	2.1	Jul	2.1	2.4	Jul§	3.8	-2.4	2.9		-15.0	1,399	-4.7
Taiwan	8.0	Q2	12.8	4.5	1.5	Jul	1.8	3.3	Jun	15.5	0.6	1.4		-15.0	30.3	5.5
Thailand	2.8	Q2	2.4	1.8	-0.7	Jul	0.2	0.7	Jul§	1.8	-5.8	2.1		-48.0	32.5	5.1
Argentina	5.8	Q1	3.4	5.6	36.6	Jul	39.7	7.9	Q1§	-2.3	0.4	na		na	1,297	-27.2
Brazil	2.9	Q1	5.7	2.2	5.2	Jul	5.1	5.8	Jun§‡‡	-2.4	-8.1	14.0		249	5.47	-0.2
Chile	3.1	Q2	1.4	2.3	4.3	Jul	4.1	8.9	Jun§‡‡	-1.5	-2.2	5.6		-21.0	967	-4.7
Colombia	2.5	Q2	2.0	2.3	4.9	Jul	4.9	8.6	Jun§	-2.6	-7.3	11.7		188	4,035	-0.7
Mexico	0.1	Q2	2.8	0.1	3.5	Jul	3.9	2.6	Jun	-0.1	-3.5	9.2		-35.0	18.8	0.6
Peru	3.9	Q1	5.1	2.9	1.7	Jul	1.8	4.9	Jul§	2.1	-2.7	6.0		-52.0	3.53	6.0
Egypt	4.8	Q1	-23.0	4.1	13.9	Jul	15.9	6.1	Q2§	-4.6	-7.5	na		na	48.6	0.7
Israel	2.5	Q2	-3.5	3.0	3.1	Jul	3.0	3.0	Jul	3.1	-5.3	4.2		-60.0	3.41	8.2
Saudi Arabia	2.0	2024	na	4.4	2.1	Jul	2.6	2.8	Q1	-1.8	-2.9	na		na	3.75	nil
South Africa	0.8	Q1	0.4	1.0	3.5	Jul	3.1	33.2	Q2§	-1.6	-4.9	9.6		30.0	17.7	0.9

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 Note: Euro-area consumer prices are harmonised

Markets

In local currency	Index Aug 20th	% change on: one week	% change on: Dec 31st 2024
United States S&P 500	6,395.8	-1.1	8.7
United States NAS Comp	21,172.9	-2.5	9.6
China Shanghai Comp	3,766.2	2.2	12.4
China Shenzhen Comp	2,362.7	3.2	20.7
Japan Nikkei 225	42,888.6	-0.9	7.5
Japan Topix	3,098.9	0.2	11.3
Britain FTSE 100	9,288.1	1.3	13.6
Canada S&P TSX	27,878.8	-0.4	12.7
Euro area EURO STOXX 50	5,472.3	1.6	11.8
France CAC 40	7,973.0	2.2	8.0
Germany DAX*	24,277.0	0.4	21.9
Italy FTSE/MIB	42,864.8	1.6	25.4
Netherlands AEX	908.8	1.0	3.4
Spain IBEX 35	15,292.1	1.8	31.9
Poland WIG	110,797.0	nil	39.2
Russia RTS, $ terms	1,156.5	-1.7	29.5
Switzerland SMI	12,276.3	2.5	5.8
Turkey BIST	11,134.7	1.7	13.3
Australia All Ord.	9,177.4	0.8	9.0
Hong Kong Hang Seng	25,165.9	-1.7	25.5
India BSE	81,857.8	1.6	4.8
Indonesia IDX	7,943.8	0.6	12.2
Malaysia KLSE	1,588.2	0.1	-3.3
Pakistan KSE	150,591.0	2.8	30.8
Singapore STI	4,219.5	-1.2	11.4
South Korea KOSPI	3,130.1	-2.9	30.4
Taiwan TWI	23,625.4	-3.1	2.6
Thailand SET	1,248.1	-2.3	-10.9
Argentina MERV	2,081,951.0	-9.0	-17.8
Brazil BVSP*	134,666.4	-1.5	12.0
Mexico IPC	58,221.5	-0.4	17.6
Egypt EGX 30	35,731.8	-0.3	20.1
Israel TA-125	3,043.2	1.2	25.4
Saudi Arabia Tadawul	10,878.1	1.1	-9.6
South Africa JSE AS	101,055.9	-1.2	20.2
World, dev'd MSCI	4,148.8	-0.7	11.9
Emerging markets MSCI	1,259.9	-1.3	17.1

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2024
Investment grade	90	95
High-yield	353	324

Sources: LSEG Workspace; Moscow Exchange; Standard & Poor's Global Fixed Income Research *Total return index

Commodities

***The Economist* commodity-price index, 2020=100**	Aug 12th	Aug 19th*	% change on month	% change on year
Dollar Index				
All items	133.4	134.3	0.4	7.8
Food	144.9	147.6	2.2	10.6
Industrials				
All	123.8	123.4	-1.3	5.1
Non-food agriculturals	124.7	124.7	-0.6	-3.2
Metals	123.6	123.1	-1.5	7.5
Sterling Index				
All items	127.1	127.8	0.4	4.0
Euro Index				
All items	130.7	131.5	0.8	2.6
Gold				
$ per oz	3,343.9	3,323.3	-3.1	32.3
Brent				
$ per barrel	66.2	65.8	-4.2	-14.8

Sources: Bloomberg; CME Group; FT; LSEG Workspace; NZ Wool Services; S&P Global Commodity Insights; Thompson Lloyd & Ewart; USDA; WSJ *Provisional

For historical indicators data, visit economist.com/economic-and-financial-indicators

OBITUARY
Terence Stamp

"The most beautiful man in the world" died on August 17th, aged 87

AS HE STOOD on his mark, sunshine fell softly on his blond curls. Around him, beyond the deck of *HMS Avenger*, the waves sparkled. Beside him, in a slight breeze, the noose swayed. Sometimes it touched his face. Mutinous sailors thronged the lower deck, watching. He, Billy Budd, a saintly young crewman, was about to be unjustly hanged. And he was at peace, the script said.

How could he play a scene like that? He struggled to remember what Anthony Newley, another working-class actor like him, had told him. Empty head. Get rid of all the thoughts. He couldn't do it; they kept coming. But then, suddenly, a song popped up from nowhere: "Little Dolly Daydream, pride of Idaho..." and he was full of another feeling. Lying on a rug in front of a coal fire at his Granny Kate's house in Barking Road, doing his homework, while out in the scullery she would be making him a marmalade sandwich and singing. This was a feeling beyond thinking, a strange otherness, and at the premiere of "Billy Budd" in 1962, it left not a dry eye in the house. He had nailed it in one take.

That film shot Terence Stamp to fame, winning him at 24 an Oscar nomination. After that it was a film a year: "The Collector" (a psychopathic butterfly collector pinning down Samantha Eggar), "Modesty Blaise" (a Cockney sidekick to a comic-book heroine), "Far From the Madding Crowd" (arch-cad Sergeant Troy ensnaring Bathsheba), "Poor Cow" (a bank robber with a tender side). He became one of the icons of the 1960s, all wide eyes and good cheekbones, and one of the voices too, confidently Cockney. His girlfriends were Jean Shrimpton and Julie Christie, both epitomes of class and style. David Bailey photographed him. He filmed in America, smoking peyote and a lot of Acapulco Gold. He worked with William Wyler and John Schlesinger. Best of all, in 1968 Federico Fellini chose him as his leading man.

It was all a bit surprising really. He didn't actually think he looked that good. Clothes were fun, and he had always been mad about them, dragging his mum all over the market looking for the right jacket, dreaming of custom-made shoes. But his face? "The most beautiful man in the world" was mostly the creation of the lighting designer on "Billy Budd", Robert Krasker, who had lit "The Third Man". Film could do that. And this was something he had known ever since he was three, sitting with his mum in the one-and-ninepenny seats at the Old Grand and watching Gary Cooper play Beau Geste: cinema was magic.

People often thought there was something magical about him, too. Or, at least, intensely strange. Or mesmerising, like the terrifying sabre-whirling display he put on for Julie Christie in "Far From the Madding Crowd". (All the scarier because he, a leftie, was made to do them right-handed.) Brooding silences were also his speciality. The thing was, he was fascinated by acting and how it was done well. In "Billy Budd" he had sent his feelings directly to the audience without needing words. Their minds had met in a sort of empty but conscious space. And what this had seemed to require from him was to be absolutely present in the moment. Not observing his thoughts, not worrying about direction, but giving his purest self to the audience and bringing out the best in them.

As an acting method, though, it was hard to achieve. He began to consider it seriously when in 1968 he met Jiddu Krishnamurti in Rome and went for a walk with him. Krishnamurti would keep interrupting their chat to point out a tree, or a cloud. To an East End spiv like him, that seemed weird. Later he realised that if he had not noticed them too, it was because he was not yet fully in the moment. That was what he had to work on. His longest attempt so far, in Pier Paolo Pasolini's "Teorema" (1968), was to play a divine stranger who seduced an entire family as pure consciousness and energy. Because he had no lines, he simply *was*.

In 1970 he went off to India, less to study than because, in a new decade, directors wanted a younger face than his. Over seven years in an ashram in Poona, in orange robes and on a macrobiotic diet, he took up yoga and meditation and picked up advice on breathing from Sufis he met. Yet a cable mentioning a role in Superman, and the chance of working with Marlon Brando, got him home and in the part in a trice, robes, beard and all. He needed no preparation. He was awake now, and thought, I'll just go with that.

The Superman films epitomised it. They not only revived his career in a new age; they also gave him the chance to play an arch-villain, General Zod, not as cartoon evil but as all-enveloping presence. In "Superman II" (1980), as he commanded America's president to "Kneel before Zod!" in the Oval Office, he was so purely aware that he felt he had a Magnum strapped to his leg. The same "cognisant emptiness" lay behind the desperate anger of a vengeful father in "The Limey" (1999) and the serenity of trans Bernadette in "The Adventures of Priscilla, Queen of the Desert" (1994), instructing a hostile bar-manager to blow her own box apart in the same level tone as she had ordered a lime daiquiri.

By that time, he was in full awareness automatically between "Action!" and "Cut!" This meant he was unafraid to tackle any role, including, in "Priscilla", that of a woman in the wrong body (and dance it too, in crude lipstick and a lion's mane of a wig). Outside filming it was back to his dapper Cockney self, still with the accent of Bow via Plaistow flavouring his talk, still with the great bone structure, favouring black homburgs and pink linen suits and living in the Albany while worrying about his bus fare. He kept meditation, yoga and macrobiotics going. A macrobiotic diet made you stay beautiful for ever.

Celebrity hadn't really marked him. He'd mostly enjoyed it. You could say his whole career had come from, and gone back to, that moment when he had stood on *HMS Avenger* with the sun playing on his peroxide curls, and realised there was nothing in his head but a tender little ditty last heard in Barking Road, E13. ■

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