

# The Economist

Epstein's web: we analyse 1.4m emails

The most powerful woman in the world

Inside the Starmer drama

Too few tenors: a choral conundrum

FEBRUARY 14TH-20TH 2026



A person wearing a light blue hoodie is shown from the chest up, looking down at a black smartphone held in their hands. A cartoon illustration of a man's face with wide eyes and a shocked expression is superimposed on the hoodie's fabric, appearing to look back at the viewer through the phone screen. The background is dark.

**Why social media bans won't work**

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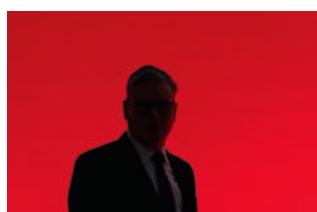
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to take part in 'a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress.'

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# The world this week Politics



Japan's Liberal Democratic Party won a big victory at a snap general election, taking two-thirds of the seats in the lower house of parliament to give it a supermajority. The centre-left and parties further to the left were crushed at the poll. Takaichi Sanae had called the election to give her a fresh mandate after becoming prime minister at a leadership contest last October. She has pledged to cut the consumption tax on food, which was a big issue with voters, and to bolster the armed forces, a vote-winner during Japan's current tensions with China. Japan's stockmarkets hit new records and the yen soared after her emphatic win.

## Turn to the right

An election in Thailand produced a surprise result, when the Thai Pride Party (BJT) won the poll with around 40% of the seats, the biggest margin of victory in 15 years. The BJT is the party of the military-royalist establishment; its victory marks the first outright win for conservatives in Thailand this century. Anutin Charnvirakul, who was elevated to the office of prime minister last September amid a period of political turmoil, now gets to form a new government in coalition with other conservative parties.

Security officers in Pakistan arrested four people in connection with the suicide-bombing of a Shia mosque in Islamabad that killed 32 people and wounded 160 others. It was the worst act of terrorism in the capital in over a decade. The interior minister said one of the suspects under arrest was an Afghan citizen who had planned the bombing.

The High Court in Hong Kong sentenced **Jimmy Lai**, a newspaper publisher and pro-democracy supporter, to 20 years in prison. He was found guilty in December of conspiring to collude with a foreign power and of conspiring to publish seditious materials. The sentence was widely condemned. Marco Rubio, America's secretary of state, described it as "unjust". The UN said it was incompatible with international law. In a document released after Mr Lai's sentence, China said stability was being undermined by "anti-China agitators in Hong Kong and hostile external forces".

Abbas Araghchi, the Iranian foreign minister, said that indirect talks in Oman with America were off to a "good beginning". Donald Trump said Iran wanted to make a deal "very badly" and that another round of negotiations would follow, but no date had been set. Adding to the pressure on Iran America is reportedly preparing to send a second aircraft-carrier to the region. Binyamin Netanyahu, Israel's prime minister, discussed Iran with Mr Trump during his visit to the White House.

**Iranian authorities** arrested leading opposition figures, including Azar Mansouri, the head of the main reformist coalition. The prosecutors' office accused them of "targeting national unity" and colluding with America and Israel. The arrests form part of a wider crackdown on dissent in the wake of huge anti-government protests in January.

**Indonesia** pledged to send 8,000 soldiers to Gaza as part of the International Stabilisation Force that is tasked, among other things, with disarming Hamas. The Indonesian army's chief of staff said the troops would focus on medical and engineering roles.

**Ethiopia's** army began moving large numbers of troops and a lot of heavy weaponry towards

the northern region of Tigray, prompting fears that it may be about to launch a major military offensive. This followed the most extensive clashes between the Ethiopian army and forces loyal to Tigray's ruling party since the 2020-22 civil war. Ethiopia accuses neighbouring Eritrea of arming Tigrayan forces. Eritrea says Ethiopia is stirring the pot. The risk of all-out war is rising.

A shooter attacked a school in a remote part of Canada, killing an adult and five children. The perpetrator's mother and stepbrother were found dead nearby. The suspect, whom the police described as a biological male who identified as female, committed suicide.



Sir Keir Starmer, Britain's prime minister, spent the week clinging to his job as more revelations about Peter Mandelson's relationship with Jeffrey Epstein, a deceased sex offender, came back to haunt him. Sir Keir was forced to admit he had known about Lord Mandelson's continued friendship with Epstein before appointing him as ambassador to America (he was sacked last September). Morgan McSweeney resigned as Sir Keir's chief of staff. Despite the worst poll-rating ever for a prime minister he has survived, for now. Local elections in May could bring fresh peril.

Authorities in Russia arrested three suspects in relation to the shooting and wounding of the second-highest-ranking officer in the GRU, the country's military-intelligence agency. Lieutenant General Vladimir Alexeyev was shot at a block of

flats in suburban Moscow. Russia claims the man who carried out the attack is a Russian citizen who was born in Ukraine. He was swiftly extradited from the United Arab Emirates, where he had fled immediately after the shooting.

Police clashed with protesters in Tirana, the capital of Albania, as they called for the resignation of the deputy prime minister over claims of corruption. The allegations have rocked the government led by Edi Rama, who has been prime minister since 2013.

Juan Pablo Guanipa, a prominent opposition politician in Venezuela, was placed under house arrest just hours after his release from prison, though the authorities provided no evidence that he had breached the terms of his release. The post-Maduro government has released 426 political prisoners since early January, according to Foro Penal, a human-rights group. Hundreds remain behind bars.

## Nowhere to run

America's secretary of war, Pete Hegseth, said that armed forces had chased a tanker transporting Venezuelan oil from the Caribbean and boarded it in the Indian Ocean. America has been intercepting vessels that violate sanctions on Venezuela. Meanwhile, the American military attacked another boat in the eastern Pacific suspected of trafficking drugs, killing two people.

Cuba announced plans to ration fuel in response to America's policy of curbing oil supplies to the country, notably from Venezuela and Mexico. Amid warnings that Cuba is running out of aviation fuel Canadian airlines suspended flights to Havana. The Kremlin said it was looking at ways to aid Cuba, describing the energy situation as "critical". It neglected to mention the suffering Russia has caused by bombarding Ukraine's energy infrastructure.

# The world this week Business



Opening statements were made at a trial in Los Angeles that could determine whether **social-media companies** create algorithms to make young users addicted to their content. The case centres on a 20-year-old woman who claims Instagram and YouTube harmed her mental health as a child. The lawsuit alleges that the platforms are deliberately designed to encourage constant engagement, such as through continuous scrolling, by "borrowing heavily from the behavioural and neurobiological techniques used by slot machines and exploited by the cigarette industry". Meta also went on trial in New Mexico for allegedly failing to protect children from online predators.

**Paramount** sweetened its proposal to buy **Warner Bros Discovery** by offering to compensate Warner's shareholders if a deal is not completed by the end of the year. It kept the value of its proposal at \$108bn. Meanwhile, an activist hedge fund is reportedly opposing Warner's agreement to be taken over by **Netflix**. And America's Justice Department is reviewing the Netflix-Warner agreement on antitrust grounds. An executive at Netflix said the company would work with the department to resolve any concerns.

Taking investors by surprise, **Kraft Heinz** announced that it was halting its plan to split into two separately traded companies, one focused on sauces and condiments and the other on grocery staples. The plan would have unwound the merger of Kraft and Heinz arranged by Warren Buffett a decade

ago, but the company says it is now "prudent" to pause the separation and focus on profits.

## Toy story

**Mattel**'s share price tumbled after it reported an unexpected drop in operating profit and disappointing sales in the last quarter of 2025. The toymaker, which includes Barbie and Fisher-Price among its many brands, faced an uncertain business environment last year because of tariffs, forcing it to delay orders for its products. It had counted on a late spending splurge from consumers, but that didn't happen.

American employers created 130,000 **jobs** in January, the largest number in over a year and almost double that of most analysts' expectations. The news pleased markets, though the Bureau of Labour Statistics revised down the number of new jobs created during 2025 from 584,000 to 181,000.

**China's economy** is on the verge of another bout of deflation. The consumer-price index grew at an annual rate of just 0.2% in January. Prices in China fell for much of last year, but started to grow again in October.

**Britain's economy** grew by 1% in the last three months of 2025 compared with the fourth quarter of 2024. GDP expanded by 1.3% over the whole of 2025.

Novo Nordisk filed a lawsuit against Hims & Hers, an online provider of medications, to stop the sale of compounded versions of its Ozempic and Wegovy **treatments for weight loss**. Pharmacies are allowed to compound drugs, or custom-make them, to meet a specific patient's needs or during a shortage, but Novo argues that Hims has "thumbed their nose at the law". The Food and Drug Administration mentioned Hims specifically when it launched an investigation into compounded weight-loss drugs; the next day Hims said it would withdraw its weight-loss pill from sale.

**BP** wrote down the value of its renewables business by \$3.2bn, curtailed its spending plans and suspended its share buy-back programme, as it shifted its focus to trimming its debt. **TotalEnergies** said it would reduce its stock buy-backs. Big oil companies in America and Europe have reported smaller annual profits because of last year's lower **oil prices**, though

since the start of this year Brent crude is up by more than 10% to nearly \$70 a barrel.

**Schroders**, an asset-management firm in London that was founded in 1804, agreed to be taken over by **Nuveen**, an American asset manager, in a £9.9bn (\$13.5bn) deal.

Amid drooping sales, **Heineken** said it would cut 6,000 jobs, or about 7% of its global workforce, over two years. In January the beermaker announced that its chief executive was stepping down.

## Machine learning

Researchers at Berkeley found that **AI tools** don't reduce work, they consistently intensify it. The article, published in the *Harvard Business Review*, studied a 200-person tech firm. The firm did not compel staff to use AI, but they embraced it, finding they could do more with it. Employees then discovered their workload had "quietly grown" and they felt "stretched", leading to "cognitive fatigue, burnout and weakened decision-making". The researchers warned that what looks like "higher productivity in the short run can mask silent workload creep".



# Let them scroll

Banning teenagers from social media will do more harm than good

PEOPLE DON'T agree on much these days. But one thing brings them together, whatever their politics: the idea that, because social media harm children and teenagers, they should be banned from using them. In December Australia stopped under-16s from having accounts on platforms including Facebook, Instagram and TikTok. A dozen countries, including Britain and Spain, are now toying with the idea; so are legislators in many American states. More than 70% of Britons support kicking under-16s off such sites, as do two-thirds of Americans. The problem is, bans will do more harm than good.

The proposals arise from an understandable desire to keep youngsters safe and healthy. Parents have been shaken by tragedies in which social media have played a role, of children being tricked into sharing explicit pictures of themselves, or taking their own lives after algorithms shovelled them content about self-harm. Along with those shocking cases comes a second, more general worry: that social media might be damaging children as a group, making them reserved, lonely and anxious. People are desperate to understand why today's youngsters seem unhappier than the generations that came before.

Even parents who are confident they can keep their children from serious harm fret that their offspring are wasting hours scrolling through mindless memes. They would like to stop them, but fear that their kids will suffer if they are the only members of their class not on the apps. Blanket bans appear to offer an easy answer—and politicians are only too happy to seize on a measure that, for once, pleases voters from all parties.

Yet policymakers should reconsider. The question of whether social media are causing mass harm is far from settled. Growing evidence suggests they are bad for at least some children. But, as we explain this week, the claim that social media cause great damage to the mental health of young people as a whole has only limited evidence (see Briefing). And even if you wanted to ban social media as a precaution pending conclusive findings, such measures threaten to be counterproductive.

One problem is that enforcing bans is hard; teenagers in Australia are finding ingenious ways to get round them, by scrunching up their faces to look older. Defining social media is hard, too. Australia has not banned young teenagers from messaging apps such as WhatsApp, or from multiplayer online games, because that would have seemed too draconian; scourges such as cyberbullying will doubtless continue on these. Kids barred from mainstream sites could flock to obscure ones, and fall victim to predators there. Children who evade the blocks may be less likely to tell adults if they find something horrid, for fear of being told off.

Higher age limits may just delay problems until youngsters are 16, when they will suddenly gain full access to social sites that they do not have much experience of using. And all the while, higher age limits for social media may provide a false sense of security. It is for all these reasons that bans are often opposed by child-protection groups.

Moreover, the proponents of bans ignore how they would deprive children of the benefits of social media. They are a blessing to children who feel isolated: perhaps because of their location, their sexuality, or because their brains work differently from those of others. Social media can broaden young minds, giving children from all backgrounds a window onto fresh places and people. Like it or not, social sites are now one of the main ways children obtain information (as well as misinformation) about current affairs. It used to be easy for youngsters to pick up their parents' printed newspapers. They sat through news bulletins aired before or after their favourite shows. Those days are no more.

Teenagers who are turfed off TikTok will not instantly begin climbing trees or poring over books. Many will slump for longer in front of games consoles and streaming services. One reason they spend so many hours online is that parents long ago stopped letting them hang around outside with friends. Having chased them indoors, adults should now think twice about placing further prohibitions on their free time.

What to do? Rather than raise age limits, regulators should redouble efforts to make social sites more suitable for teens. Ideally they would force web firms to cough up more data on how teenagers use their products—the better to help researchers

measure harms, and come up with ways to prevent them. They should tell tech giants to rethink features that are keeping kids online longer than is healthy, such as interfaces that permit endless scrolling and videos that play without prompting. They should demand sterner moderation of the content being served up to young users. This may require greater efforts to verify the age of social-media users, in

order to work out which ones must surf with guardrails and which are adults who may go without.

Some observers find these ideas laughable. One reason people demand higher age limits is that they believe social apps cannot be made safer. That ignores the direction of travel. America is gearing up for a series of blockbuster trials—years in the making—that will finally give people who say they were harmed by sites as children a chance to make their case in court. The European Union has just issued a preliminary ruling that features of TikTok's design are "addictive" and threatened fines if it doesn't change. Lately, many of the big social apps have been cajoled into creating "teen" accounts that come with additional safeguards. These things will not solve every single worry. But all of them are progress of a sort.

## Teens, screens and memes

Politicians say their social-media bans are the only responsible option. In fact, they look like a way of ducking the care children deserve. If regulators cannot find ways to tame social media—now over two decades old—what hope is there to let children use novel tools such as artificial intelligence? Youngsters have a right to share in new technologies. Adults must seek to make their time online as safe and as rewarding as possible. ■



Takaichi Sanae

# The world's most powerful woman

Japan's leader has a historic chance to change her country—if she is bold enough to take it

THE LIBERAL DEMOCRATIC PARTY (LDP) has dominated Japanese politics since its founding in 1955, ruling with only two brief interruptions. Never has it won as decisively as it did in a snap election on February 8th, when it took almost 70% of the seats in parliament's powerful lower house. Takaichi Sanae, the triumphant prime minister, now has a historic chance to transform her country. She must not squander it.

To live up to the expectations that her electoral gamble and huge victory have created, Ms Takaichi needs to think bigger and broader. She cannot treat her time in office as routine, focused on short-term relief to ease the pain of today; she must take Japan's long-term demographic and economic challenges head on. She should also recognise that her country has a crucial role to play as a stabilising force in a turbulent world. And she must be a leader for all of Japan, not only for her right-wing loyalists. She must, in short, gamble all over again.

She has the backing. Support for Ms Takaichi came from across the country. The LDP secured 316 seats in the 465-seat lower house, up from 198, giving it a two-thirds supermajority, which will allow it to override an upper house it does not control (see Asia section). Ms Takaichi tapped into Japanese voters' desires for both security and change. She offered hard-nosed realism for a hard-edged era. She also personifies a break with the old guard. She is the plain-speaking child of a middle-class family, not the buttoned-up scion of a political dynasty, like many of her predecessors. And she is a woman, the first to lead democratic Japan.

A historic election unlocks historic opportunities—if Ms Takaichi is bold enough to seize them. Most critically, she is well placed to accelerate the transformation of Japan's defences. The late Abe Shinzo, prime minister from 2012–20, began beefing up the armed forces in response to China's assertiveness and America's unreliability. But the world has changed faster than Japan. Ms Takaichi has already brought forward to the current fiscal year a planned increase in defence spending to 2% of GDP originally planned for 2027; but it is still not enough. Anyway, simply boosting budgets is only part of it. Japan needs a wholesale reckoning with the new world disorder. The prime minister's willingness to break taboos, including talking about nuclear weapons, is healthy. She has the right ideas when it comes to unshackling the defence industry, encouraging defence innovation and enhancing the country's intelligence capabilities.

This will require enterprising diplomacy. Like American allies elsewhere, Japan has been unsettled by Donald Trump's return to the presidency. But, even more than the members of NATO, Japan cannot afford to alienate America. It is surrounded by nuclear-armed adversaries in China, Russia and North Korea and, for the moment, it relies on America's nuclear umbrella. Ms Takaichi has done an admirable job of staying on Mr Trump's good side (he even endorsed her before the vote). Yet even as Japan works with America, it should not hesitate to also work around America, as Abe did when he saved the

Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) free-trade deal after Mr Trump abandoned it during his first term. That did not preclude Abe from having a warm relationship with Mr Trump. This time, Japan should spearhead efforts to link the CPTPP and the European Union, which would create a trade bloc covering over 30% of global output.

Japan will need to demonstrate this global leadership at a time when its domestic resources are strained. A shrinking, ageing population is the main drain on Japan's growth. As many other countries are learning, there are no easy solutions. Families are not a production line that can easily be speeded up. Instead, demographic change, like climate change, requires constant adaptation. The thumping election victory gives Ms Takaichi the space to make hard choices others have so far ducked.

She should focus on unleashing the power of the people Japan has, and on making it more welcoming to newcomers. The social-security system needs urgent reforms. Firms should shift from rigid, seniority-based lifetime employment practices to more flexible job-based systems. Patriarchal family-law and tax structures that discourage marriage and keep women in low-paid work need to go. Japan should attract migrants,

not demonise them. And as demands for spending on defence and welfare rise, Japan will have to reassure markets it can fund the programmes it needs. Now might be an opportune time to gradually take profits on overseas assets, in order to help reduce the gross debt.

Is Ms Takaichi up to the task? Having taken office in October, she is untested. She could misinterpret broad support as a licence to pur-

sue her narrow ideological aims. An ardent nationalist, she might visit the Yasukuni Shrine, which honours Japan's war dead, including its imperial leaders, some of whom were war criminals. That would inflame relations with China and wreck Japan's fragile rapprochement with South Korea, essential to countering China's rise. An arch social conservative, she could fan anti-foreigner sentiment, repelling the migrants Japan needs to help offset its shrinking population and the tourists who boost its economy. A fiscal dove, Ms Takaichi could pursue a big-spending agenda that fuels inflation and panics bondholders. One test will be a populist campaign promise to suspend an 8% sales tax on food for two years, all without issuing new debt. Although voters may have believed in such magical thinking, markets know better. She will need to find a way to pay for the giveaway, or scrap it.

## The difficulty of doing

The prime minister's inbox is daunting. No wonder Japanese are anxious. Ms Takaichi asked voters if they wanted her to lead them through these tumultuous times. The answer was a resounding yes. But if she wastes her mandate on symbolism and populism, more corrosive alternatives will flourish. And Japan will not soon give another leader such a huge chance. ■



Jeffrey Epstein's associates

# The 1.4m deadly sins

The Epstein files tell a story of justice denied

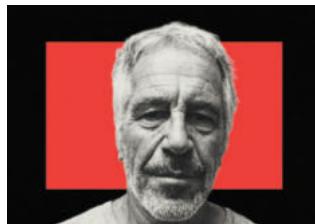
**N**O WONDER THAT the life and mysterious death of Jeffrey Epstein fuel a nihilistic and conspiratorial view that all the elites are rotten. In what is supposed to be a meritocracy too many of the best and the brightest turn out to be motivated by flattery, vanity, cupidity, cruelty and lechery. An unknown number of powerful men (and some women) trafficked and abused a much larger number of vulnerable women and girls. Those victims urgently need justice.

Epstein, a financier, fixer, rapist and paedophile, died in a Manhattan prison cell in 2019. Under popular and Congressional pressure, the Department of Justice (DoJ) released over 3m pages of documents on January 30th—too many for anyone to have read. This week volunteer software engineers converted them into a format that could be analysed. *The Economist* has examined this archive (see International section).

Epstein appears to have been careful about mixing his prolific sexual abuse with his broad network of influence-peddling. We scored each of the 1.4m emails by how relevant it was to his crimes. Around 1,500 threads belong to the most severe category—where, for instance, a correspondent made light of abusing Epstein's "littlest girl".

Nearly 60% of the emails were to people Epstein paid to make his life easier. Some handled the bureaucratic complications from his record as a sex offender. Others scrubbed the web of references to his plea bargain over child prostitution and soliciting in 2008. Because of this concealment, a number of Epstein's social contacts who today protest that they did not grasp the extent of his crimes may be telling the truth.

The rest of the emails depict an astonishing network of influence- and favour-trading. Of the messages to his 500 main correspondents, excluding his own staff and business part-



ners, almost 20% involve financiers; 10% scientists or doctors; 8% media, entertainment and public relations; and 6% each lawyers, politicians, academics and businesspeople. Although some of his contacts were from countries like Britain and Norway, the vast majority were American.

In the worst cases, some members of those networks appear to be implicated in sex trafficking. Others, such as the physicist Lawrence Krauss, may not be criminals, but deserve opprobrium for their moral failure. Still others, like the commerce secretary Howard Lutnick, have lied about relatively minor dealings with Epstein—even if no more damning evidence turns up, they should answer for their dishonesty. Some, such as the author J.K. Rowling, have been pilloried despite the evidence being that the contact was one-sided and came from him.

The files tend to mash these different categories together. That is partly because when Epstein makes allegations it is hard to know if he is lying. It is also because the DoJ's haphazard redactions have shielded criminal abusers, revealed those who briefly came into Epstein's orbit and too often exposed the identity of victims.

Redactions are essential to protect innocent victims. But blacked out faces and names of women and girls inadvertently exacerbate how these vast files, detailing the routine abuse of over 1,000 victims, tend to make the story all about the men. Female bodies are turned into objects in what is a tragic echo of Epstein's own abuses.

The duty to those women and girls is to bring their abusers to justice without delay. It is reprehensible—and, indeed, hard to understand—why the DoJ has made so little progress filing charges over the past seven years. The delay is as baffling as the leniency of Epstein's original plea bargain 18 years ago. ■

World economy

# The parable of Brazil

When governments are indebted, high interest rates wreak havoc. The rich world should beware

**T**H E WORLD economy offers many cautionary tales. Argentina's inflation has shown the danger of treating a central bank like a cash machine. Italy's stagnation shows the downside of joining a currency union with high legacy debts. Britain has suffered from Brexit which has thrown up barriers to trade with its closest neighbours. But the most timely warning for many of the world's big economies comes from Brazil.

As we report (see Americas section), Brazil has decent economic growth, an independent central bank and its primary budget—that is, excluding interest payments—is almost balanced. Its net debts, at 66% of GDP, are high by emerging-market standards but low by rich-world ones.

Brazil, however, has one big problem: its government must

pay sky-high interest rates to service its debts. Controlling inflation has required the central bank to set short-term rates at 15%. As a result—and despite being close to primary balance—the government will probably borrow about 8% of GDP a year to pay its interest bill. Closing the deficit through austerity is unlikely; President Luiz Inácio Lula da Silva, who is campaigning for re-election in October, has loosened the purse strings. Unless interest rates fall a lot, public debt will surge.

The fiscal plight of Brazil casts rich-world budgets in sharp relief. You may think governments in wealthier places are fiscally squeezed, but America, Britain, France and Italy still enjoy borrowing costs in the low-mid single digits. Their debts would stabilise if only they balanced their primary budgets, or ►

► came close to it. By contrast, Brazil would probably need to run a primary surplus of around 5% to keep its debts stable, if interest rates do not fall.

Western policymakers should consider why interest rates are so high in Brazil. The answer lies in a combination of factors. Brazil's institutions, despite enjoying formal protections like central-bank independence and the separation of powers, are wobbly—and teetered during President Jair Bolsonaro's attempted coup in 2022. Inflation is on a shorter fuse, even after three decades of technocratic central banking, owing in part to a legacy of hyperinflation in the 1980s and early 1990s and an economic crisis in the mid-2010s.

Last, the long-term trajectory of the budget is dire. Brazil's government spends 10% of GDP on pensions. Without reforms, by 2050 it will spend more on pensions than richer, greyer countries. Yet pensions are protected in the constitution, which for example requires that when the minimum wage rises, retired folk get more money, too. The extraordinary hold of pensioners over the budget makes it hard to balance the books, and also crowds out other more worthwhile spending.

The diagnosis should worry the rich world, which shows early symptoms of Brazilification. America's institutions are suffering. President Donald Trump has politicised the Justice Department, yearns to control the Federal Reserve and muses about federalising his country's elections. After the big price rises that followed the pandemic, and with geopolitics menacing supply chains, inflation is a greater risk than in recent decades. And spending on pensions and health care is growing as populations age. Pensions might not enjoy the same level of formal protection as in Brazil, but older voters like them. Just look at Britain's "triple lock", which ensures that pensions outpace wage growth in the long term.

If this pushes up interest rates, today's budget dilemmas could seem trivial. Many rich countries are straining to find an extra 1% or 2% of GDP for defence spending. Imagine if they had to find that twice over again for debt interest. It might seem painfully difficult in a populist world both to promise low inflation and to spend less on the elderly. But that is nothing compared with the agonising choice that looms for Brazil: between deep austerity and a terrifying debt-interest spiral. ■

## Amateur choirs A few good men

**Lots of people sing in choirs. Unfortunately, not enough of them are tenors**

**V**INCERÒ!" SANG Andrea Bocelli on February 6th, as athletes carried the Olympic torch around the San Siro Stadium in Milan. It was a thrilling moment. The word in "Nessun dorma", from Puccini's opera "Turandot", demands a sustained high B—a ringing, show-off note for a professional tenor singer. In the ordinary world, though, tenors are not proclaiming victory.

A great many people sing in choirs. Germany, which created much of the world's best choral music and now collects excellent statistics, counts 45,000 groups. Not enough of those people are tenors (see Culture section). Music for mixed-sex adult choirs is normally arranged in four voice parts, from highest pitch to lowest: soprano, alto, tenor and bass. Many choirs could do with more basses, but they are painfully short of the voices just above that range. "A bit more from the tenors, please," implore conductors in schools, halls and churches across the singing world. "And a bit less from the sopranos."

Why the shortage exists is unclear. Perhaps men's voices have lowered as they have become taller; perhaps they fear sounding unsexily shrill. Another possibility is that singing the tenor part is hard, both physically and musically. If singing abilities are declining in general, tenors would suffer first. Whatever the causes, the consequences are plain. Some of the classical choral repertoire has already become unsingable for many choirs. Do not attempt Fauré's "Requiem", which demands that the tenors divide and sing two separate parts, unless you have a strong section. Other music sounds thin and lacking in the strange, slightly desperate note that tenors supply.

Amateur choirs have tried charging tenors lower membership dues, or even paying them. For a fee, a semi-professional

"ringer" or "stiffener" will briefly join the section to boost its sound. This works in a pinch, although it cuts against the collectivist culture of many choirs. In desperation, some groups plump for music that omits the tenor line and treats all men as mid-range baritones. The approach suits some kinds of music, such as gospel, better than others. But the danger is of a downward spiral, as choirs with few tenors pick music that does not require them, and the remaining tenors fade away. Although the voice is unlikely to vanish entirely, it could become unusual—a special sound for special occasions.

Ideally the stock of tenor singers would be larger, not merely allocated more efficiently. It would help in the long run if schools made singing more of a priority, especially among teenagers. Many boys stop singing after their voices break, not only because they struggle with a new instrument but also because they are rudely thrown from singing the tune into singing harmony. In the short run, choirs that can afford it would do well to consult voice coaches. They might discover that some of the men who have assigned

themselves to the bass section can sing tenor, as can some of the women who sit with the altos. Tenor voices are like gold, and not only because they are rare and valuable. They need to be dug out of people and worked on.

Everyone should remember that choirs do not demand singers who sound like Mr Bocelli. An ordinary tenor in a chorus is seldom if ever called upon to reach a high B, or to sing with anything approaching his power. Of course, a tenor might briefly imagine that he or she sounds just like an Italian opera star, when hitting a tricky entrance correctly and when—miracle of miracles—the rest of the section gets it right, too. It is not the world's most harmful fantasy. ■



Britain in crisis

# It will get worse before it gets better

With Sir Keir Starmer weakened, the government will drift left

**I**N BRITAIN POLITICAL instability has become chronic. The story is grimly familiar. A once-triumphant prime minister's poll ratings plummet and Downing Street turns into a bunker. A distant scandal suddenly becomes existential and the cabinet belatedly offers its support. A coup fizzles after an impassioned address to MPs in which the leader promises that everything will be different. But it isn't. The prime minister's authority is shot and the government limps on.

In a way the humiliation of Sir Keir Starmer, Britain's fourth prime minister in four years, is greater than that of his Conservative predecessors. After a landslide win in 2024, he boasted of governing for a decade; but local elections in 12 weeks' time may finish him off. The revelation that Peter Mandelson, his former ambassador to America, was appointed despite Sir Keir knowing of the length of his friendship with Jeffrey Epstein has shattered the prime minister's image as dull, but competent and incorruptible. The aides who ran his swaggering operation have resigned; the cabinet secretary is leaving. A prime minister who defined himself as a constraint on the left-leaning parliamentary Labour Party now governs as its hostage.

After the drama of the past week, it is tempting to think things can only get better. Labour's crisis, it might be hoped, will prove the catalytic moment Britain needs. Perhaps a brave young reformist will emerge from the ranks of Labour MPs and put the party's vast governing majority to work in tackling Britain's problems. Alas, the more likely path is drift. The Labour Party is preoccupied by self-preservation, and traumatised by how quickly voters have soured (see Britain section). With or without Sir Keir, it will retreat to its soft-left comfort zone, and muddle along the path of electoral least resistance. Party unity will trump boldness. For Britain, things will get worse before they get better.

The stasis in Downing Street contrasts with the urgency of the national situation. Problems ailing much of the rich world are found in abundance in Britain. Growth is not dreadful by European standards, but it is too meagre to give voters the living standards and public services they want. The cost of servicing Britain's debt as a share of GDP has risen this decade to its highest since the late 1980s. Rearmament, an ageing population and an unreformed welfare system are straining the public finances. Voters know it: the share who think the state needs to shrink is higher than at any point since 1983. A declinist mood, redolent of Britain in the 1970s, hangs in the air.

Sir Keir's election landslide was meant to escape this trap. Yet without a plan or the political capital to get much done, he has failed. Labour's safety-first campaign promised small giveaways while ruling out big tax changes. Laws to empower trade unions and renationalise the railways were drawn up—but no intellectual spadework was done on reform to the civil service, regulated markets, public services or welfare. Many of his MPs came to Parliament expecting the money to flow, just as it eventually did under Labour in the 1990s. Rather than confront them, Sir Keir nodded along, and when they revolted at cuts to

welfare and pensioner benefits, he backed down. His caution in opposition was termed the "Ming vase" strategy; as a project for government it has proved a hollow vessel indeed.

That is why a change of course now is so improbable. In an age of electoral fragmentation, when voters' loyalties to old parties have broken down, governing on a low vote share is a fact of life. Calling an election today would be likely to cost hundreds of Labour MPs their seats. Hence the panic and timidity is likely to continue, whoever is in Number 10.

Powerful currents will pull Labour left. Sir Keir's boasts of having "changed" the party by purging the hard left under Jeremy Corbyn mask how far its centre of gravity has shifted since the times of Sir Tony Blair. The leadership contenders most popular in the party—Andy Burnham, Ed Miliband and Angela Rayner—are all to the left of Sir Keir. So are the bulk of MPs, who came of age under the austerity of the 2010s. The Labour membership will pick the next leader; 89% of them think that taxes and spending should go up, a view shared by only one in five voters. And if Labour is to hold on to power and defeat the right-wing populists of Reform UK, it must attract voters who have defected to the populist-left Green Party.

Already Sir Keir has declared that "putting money in people's pockets"—rather than economic growth—is his first priority. There may be greater scepticism of big tech (Palantir, a software firm, is the bogeyman *du jour*). The government may become more pro-European, which would be good but only if accompanied by a hard-headed realism that leads to productive negotiations.

The heaviest cost will be what is left undone. A mantra of "unity" and "inclusion" sounds benign, but makes for a lowest-common-denominator government in which everyone gets a veto. Welfare reform will be off the table. So will any overhaul of education or the civil service that irritates the unions. Planning, a bright spot, may sink back into its old ways because Labour members like nature and dislike developers. Above all, chronic instability means ignoring the public finances. Labour MPs are wont to declare that they "didn't get into politics" to impose cuts on their voters. A prime minister who clings on to power by handing out treats is not running a government but an ice-cream van. Bond investors may lose patience.

## Britain's best hope?

Perhaps the coming years will breed a generation of Labour modernisers clear-eyed about Britain's problems. In the meantime, voters will have to look elsewhere for renewal. Reform, which leads the polls, is disrupting the political order but offers little new thinking, beyond a mix of stale anti-immigration rhetoric and vague promises to slash the bits of the state its voters don't use. Perhaps it will fall to the Conservatives, under Kemi Badenoch, to provide intellectual and economic renewal from the right. She is beginning to find her feet. Britons know their country needs to change and financial markets may force change. Therein lies a political opportunity. ■



## Letters education technology, refreezing the Arctic, child prodigies, relationships, song titles

### Technologic

Education technology is profitable but mostly useless, you argue ("Failing the screen test", January 24th). It is right to question the return on investment, but blaming the technology for poor outcomes is like blaming running shoes that are still in the box after a New Year's resolution.

Our data show that the problem isn't the tools. It's the implementation. School districts that buy literacy platforms without committing to its systematic usage see no gains. But districts that ensure just one hour a week of consistent use (40 hours out of 800 total instructional hours) typically see significant reading gains. The difference isn't the platform. It is whether schools maintain disciplined implementation with teacher training and accountability.

You note that some schools are returning to pencil and paper. Fair enough. But whether digital or analogue, learning requires consistent practice. Ed-tech vendors, as a class, oversell, but districts buying tools without the discipline or capacity to use them shouldn't be surprised when outcomes don't improve.

SEAN RYAN  
President  
K-12 Division  
McGraw Hill  
Columbus, Ohio

I found your analysis to be empirically sound, but it would be sharpened by two refinements. First, ed tech is treated primarily as instructional software, but much of the industry's scale and profitability comes from platforms and hardware (such as Chromebooks, iPads, and operating systems) that erode attention and degrade classroom behaviour even when no instructional software is running.

Second, educational apps

may disappoint when they digitise tasks that are better done off-screen, especially for young children. By contrast, there are domains where computers are not optional but necessary, such as coding and data science. Separating infrastructure from instructional software, and distinguishing among different kinds of instructional goals, would clarify the economics of ed tech and the learning-science evidence.

JI SON

Professor of psychology  
California State University  
Los Angeles

### Feels like summer

Regarding your article on "Refreezing the Arctic" (January 31st), the idea has never been to start with a large-scale freezing exercise but rather a reduction in the melting rate brought about by a gradual increase of aerosol levels in summer while controlling for side-effects. This is a true low-cost programme that avoids horrendous expense and disasters in the future as ice lost is gone for ever.

### Mystery of love

"Untying the knot" (January 17th) reviewed "Strangers" by Belle Burden on marriage infidelity. "How well do you really know the person who lies next to you in bed every night?", you asked. This assumes that any person can ever truly know the full depths of another. And that such complete knowledge is even desirable in the first place. Esther Perel, a psychotherapist, views excessive closeness as a romantic death knell.

The ideal of total transparency in romantic relationships is largely a Western concept. In some cultures a degree of secrecy is seen as more respectful and helps

This is not a question of air-pollution treaties from times long past or minuscule reductions in the ozone layer or a moving intertropical convergence zone, which will shift anyway in a warming climate. It is a question of stopping the Arctic from warming three-times faster than the rest of the planet as is the case today, which would prevent irreversible melting processes that set the world onto a track of ever-faster sea-level rises. The case for cooling is clear. The case for refreezing will be decided once we have more insight into the science behind cooling, which needs real-world tests and not just models that could be outdated within a few years.

EDUARD SPIELBAUER  
*Bad Reichenhall, Germany*

### Born this way

You wrote about why child prodigies rarely become elite performers and observed that many adults who reach the very top were not the most outstanding performers in their youth ("Fanfare for the uncommon man", January 17th). That observation may hold within elite groups. But the causal interpretation suggested by the article risks a statistical problem of collider bias.

Adult elite status depends on both early performance and later development, along with many other factors such as

preserve collective family harmony, a concept Ms Perel calls the secret garden. In the end, is extensive knowledge of any situation truly a safeguard against misfortune?

BEATRICE LANGFORD-BRIDGE  
*Founex, Switzerland*



opportunity, health and support. In short, selecting only those who make it can distort what appears to predict why they made it. This does not invalidate the broader message about the value of exploration and flexibility. But it does suggest that evidence drawn solely from elite samples cannot support strong claims about the drawbacks of early excellence or specialisation.

CHRISTIAN ZELLER  
*Munich*

From my experience as the principal of an independent prep school I believe that highly able children at school often do not learn to fail and how to deal with this type of challenge. Life is too easy for them. To thrive and succeed in adulthood and the wider world everyone has to learn that you can't win every battle. Lessable children will have learned this lesson over time at school, and are better mentally prepared to go on and succeed after such a failure. This can apply to any situation whether sport, music or career.

CHRISTOPHER LINFORD  
*Leatherhead, Surrey*

### Don't stop the music

Your department tasked with creating tabloid-style, eye-catching headlines that reference pop music knows no bounds. I spotted several song titles or plays on song titles in the January 10th issue. These included "All Along the Watchtower" by Jimi Hendrix (an article on Ukraine's fortification system), "Breakin' Up is Hard to Do" by Neil Sedaka (Germany's industrial conglomerates), "Blood on the Tracks" by Bob Dylan (a train project) and "Video Killed the Radio Star" by the Buggles (the vodcasting trend). Maybe start a competition?

MIKE NICHOLSON  
*Four Marks, Hampshire*

→ Letters should be addressed to the Editor at: The Economist, The Adelphi Building, 1-11 John Adam Street, London WC2N; Email: [letters@economist.com](mailto:letters@economist.com). More letters available at: [economist.com/letters](http://economist.com/letters)



### Executive Director, IISS–Europe (Berlin)

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## Briefing Social-media bans for kids



### Social outcasts

BARCELONA AND BEIJING

#### More and more countries are trying to curb children's use of social media

**“Y**OU SCROLL without thinking and I lose track of time,” admits Ramón, a Spanish 15-year-old, of his habits on social media. “You see girls sexualising themselves, car crashes, really violent stuff,” he continues. “Everyone I know sees that kind of content.” At school, in particular, he thinks, social-media use “really messes with your head and with your attention”.

Yet the Spanish government’s plan to bar children under 16 from social media, announced earlier this month, leaves Ramón cold. His contemporaries would easily find ways around it, he thinks. His mother agrees. And given that children will inev-

itably be on social media one way or another, she would rather the government try to curb the most harmful effects through regulation: “A blanket ban sounds strong, but in reality it pushes teenagers towards riskier, more secretive use.”

It is not just the Spanish government that is worried about kids and social media. Australia outlawed social-media accounts for children under 16 in December. The second chamber of Britain’s Parliament voted for similar restrictions in January, as did the lower house of France’s. Austria, the Czech Republic, Denmark, Greece, Indonesia, Malaysia and Norway,

among others, are eyeing bans. Brazil will require age verification on social apps from next month. China, which had previously imposed curfews on young gamers, introduced optional screen-time limits for children on social media in 2019. Several states in America have restricted access for younger teens; others are regulating in different ways. California will soon curb algorithmic feeds for minors, for instance. America’s courts are also busy: on February 9th arguments began in two landmark trials, of Meta and YouTube over their apps’ supposed addictiveness and of Meta over whether its platforms do enough to protect children from online predators.

#### Insta-wham

This wave of legal constraints will mark a big change in the lives of teenagers, who spend an average of nearly five hours a day on social apps in America, for instance, and use them for everything from forming relationships to doing their homework. It also threatens to rock an industry that generates hundreds of billions of dollars a year in ad revenue. But implementing new rules, as Ramón and his mother predict, will be trickier than their advocates imagine. Already, some unintended consequences are becoming obvious.

For years the minimum age for most social platforms has been 13. This limit was widely adopted after America passed COPPA, a law to protect children’s privacy online, in 1998. It is widely ignored by users and all but unpoliced by social-media firms, most of which ask new members if they are old enough and largely take their word for it. Though the platforms insist that they weed out underage users, they seem to do a staggeringly bad job of it. Surveys by Britain’s tech regulator, Ofcom, find that among children aged 10-12, over half use Snapchat, more than 60% TikTok and more than 70% WhatsApp. All three apps have a notional minimum age of 13.

Governments that used to turn a blind eye to such practices have now decided that social media are “doing social harm to our children”, as Anthony Albanese, Australia’s prime minister, puts it. The most urgent concern is that social apps provoke depression and enable predators, leading in extreme cases to suicide or abuse. Books such as Jonathan Haidt’s “The Anxious Generation” have persuaded many that smartphones and social media are rewiring childhood in a malign way. If nothing else, social-media apps consume huge amounts of children’s time, which lots of parents would like to see put to different uses.

Some researchers have proposed a new medical condition called “social-media use disorder”, modelled on existing diagnoses ➤

for addiction to gaming and gambling. The suggested criteria include loss of control over the urge to use the apps, persistent distress about use and neglect of essential functions (sleep, self-care and contact with friends and family) and obligations (homework and appointments). A study of 11- to 15-year-olds in 27 European countries and Canada based on survey data from 2017-18 found a 7% prevalence of such troubling dependence on average, ranging from 3% in the Netherlands to 14% in Spain.

Research suggests that social media are making things worse for children who are more vulnerable to begin with. The majority of children who are bullied online are also bullied in the real world; the bullies are often the same in both settings. A study of 17- to 25-year-olds struggling with their mental health found that getting them off social media for three weeks resulted in a small improvement in their well-being.

Whether social media are harmful for the average child is less clear-cut. A recent review of research led by Amy Orben of Cambridge University found consistent evidence of a small correlation between the amount of time spent on social media and the incidence of mental-health problems such as depression and antisocial behaviour. But most studies rely on subjects' own reports of their social-media use, which tend not to be accurate (it's better to install automatic trackers on devices). Many researchers therefore question the results.

Above all, researchers think the amount of time children spend on social media may not be especially relevant to mental health. What probably matters far more is what they do on the apps (are they mostly chatting with friends, for example?), the context (are they scrolling in the middle of the night?) and what content the apps' algorithms show them. Untangling this complexity requires access to detailed data at the level of individual users, something tech firms seldom disclose.

As social-media apps evolve rapidly, with all sorts of new features and AI-enhanced algorithms, research struggles to keep pace. Getting funding for a rigorous study and setting it in motion can take years. "TikTok became really popular with adolescents in the last two-to-three years," says Victoria Goodyear of the University of Birmingham. "The research field is just about to start catching up with that trend."

Whatever the shortcomings of the research, voters seem convinced. Last year Ipsos, a polling firm, asked people in 30 countries whether under-14s should be excluded from social media. A majority was in favour in every single country. The policy commands support across demographic and political divides like few other issues. Supporters of all four of Britain's biggest political parties, for instance, overwhelm-

ingly favour a ban for under-16s (see chart 1). Even in ultra-polarised America both Republicans and Democrats love the idea. Politicians are pushing at an open door.

Translating this support into law is not entirely straightforward, however. The first difficulty is deciding what to ban. Australia has excluded messaging platforms such as iMessage and WhatsApp, prompting complaints from Snapchat, which claims its Australian users spend three-quarters of their time on the app messaging or making calls. (It has fallen foul of the ban owing to additional features such as a video feed.) Some parents are already lobbying for video games to be included in the ban, since online games like Roblox allow social interactions with friends and strangers. YouTube, which initially expected to be let off on the strength of its educational content, was included in the end. Some apps that are not formally included have introduced age checks. Substack, a newsletter and blogging platform, has begun age-gating some of its features in Australia and Britain, citing new content laws.

### FaceBlock

Ascertaining users' age is the next challenge. To avoid challenging every existing customer, most of whom are adults, social firms in Australia have begun by locking out users whom they believe to be under 16. Some have been identified after giving their date of birth. Others are suspected based on analysis of their behaviour, including the people they follow and the content they interact with. Meta has deployed artificial intelligence to help identify users who are younger than they claim to be. But given that, in Britain, more than a third of 10- to 12-year-olds claim to be on Instagram, in breach of its rules, it seems to be far from foolproof.

Those who are suspected of being too young get a chance to prove their age. Facial scans are one method. Again, AI has helped: Yoti, which provides age estimates

for firms like Meta, says that AI is better at guessing age than the average human. But AI has inherited human biases from its training data: Yoti can guess the age of a white teenage boy to within less than ten months, but when faced with a dark-skinned girl is typically out by a year and a half, its figures show. Australian teens are in any case finding ways to fool the robot estimators, from pointing their cameras at an older friend to scrunching up their faces to look wrinkly. "Appetite to comply is low," admits a weary tech executive.

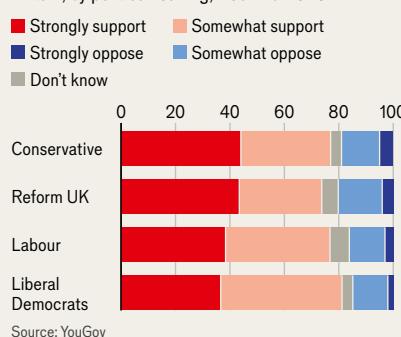
If other methods fail, users can prove their age by uploading personal documents. This comes with risks. In October Discord, a social platform, announced that one of its customer-services partners had been hacked, giving the perpetrators access to a trove of photos of IDs, usernames, email addresses and billing information. Malaysia is mulling plans to make people submit an ID when they register for a social-media account. The government defends the proposal with talk of protecting children and stopping fraud, but civil-liberties groups suspect it has other reasons to ask the identity of those behind anonymous social-media posts.

Tech companies are arguing about who should bear the burden of checking ages. Some social-media platforms argue that age-checking should be done not by them but at the level of the hardware used for access. The idea is that phone or computer operating systems—typically made by Apple, Google or Microsoft—would verify the owner's age, and after that anonymously vouch for their eligibility to look at social networks, porn sites, gambling platforms or whatever other age-restricted entertainment they chose. These firms retort that the companies responsible for creating the alleged harms should bear the burden of mitigating them, and point out that many computers are shared by multiple users of different ages. While the argument goes on, age-verification companies are stepping in to fill the gap. AgeKey, a product used by Meta and others, verifies people's age via a facial scan or uploaded documents, and then vouches for them when they request age-restricted services.

It is too early to say how well Australia's ban is working. The government notes that within a few days of the ban 4.7m accounts were deactivated, a big number given that there are only 2.5m children aged 8-15 in the country. Others believe many accounts have been missed. Some 95% of teens at the upper end of that age bracket use at least one site, the government previously found. Many use more than one, and some have multiple accounts on the same platform (one to show the parents, another for friends). What is more, some of the accounts caught in the dragnet were inactive, insiders say. The upshot is that, despite the ➤

### More popular than ice cream

"Would you support or oppose banning children under the age of 16 from having social-media accounts?", % responding  
Britain, by political leaning, Dec 2nd 2025



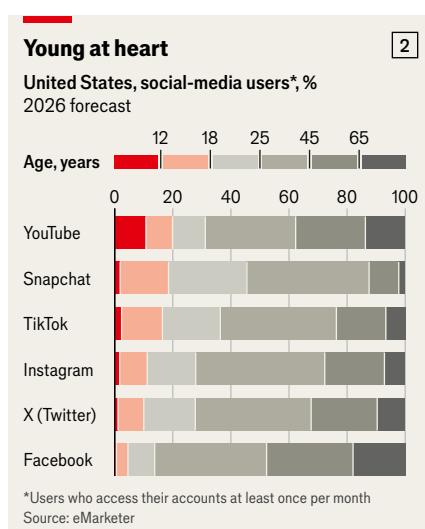
4.7m deletions, many young people still seem to be on social media. "Everyone I know probably found a way around the ban and it hasn't really changed much," declares a 14-year-old in Melbourne.

People worried that teens would get around the bans using virtual private networks (VPNs), software which makes it look as if the user is in another country. VPNS rocketed in popularity in Britain last summer after a new law required age checks on porn sites. But Apptopia, a data company, says that by the end of January use of the ten most popular VPN apps in Australia was only about 10% higher than in the weeks before the ban. Nor do kids seem to have simply migrated to smaller social networks. In the days after the ban apps such as Lemon8 and Coverstar saw big increases in downloads. But Apptopia says that their download and usage numbers have since subsided to their previous levels. Network effects may be making it hard for Australian teens to relocate their social circles en masse.

Some children may instead move to other types of platform that are not covered by bans, such as messaging apps and gaming services. The trouble is that the most serious online threats will follow them. "The problems of bad actors and criminality won't disappear. They will simply migrate to where children go," predicts Andy Burrows, chief executive of the Molly Rose Foundation, a campaigning group set up in memory of a 14-year-old British girl who was found to have committed suicide in part because of exposure to depressive content on Instagram. Mr Burrows, who previously worked to curb child sexual abuse, argues that the most dangerous platforms for children—encrypted messaging apps, gaming platforms and other online communities—are those not covered by most social-media bans. "As someone who...has seen some of the darkest stuff that you could imagine, that is the threat that keeps me up at night more than anything else," he says.

That is one reason why many child-welfare groups, perhaps surprisingly, oppose blanket bans. The Molly Rose Foundation is one of 42 signatories, including the National Society for the Prevention of Cruelty to Children, of a public letter in Britain arguing against one there. As well as creating a false sense of security, they argue, such bans create a "cliff-edge" for 16-year-olds, who would be let loose on unadulterated apps with no experience of social media. "Are you teaching kids to swim, or are you throwing them in the deep end when they turn 16?" asks Kathryn Modecki of the Kids Research Institute Australia.

Rather than excluding children, pressure groups say, tech firms should be forced to do the harder work of making their platforms more child-friendly. Insta-



gram, TikTok and YouTube, among others, have introduced "teen accounts", which provide safety features such as screened content and warnings about excessive usage. The Australian ban makes no allowance for such products, and so undermines any incentive to develop and improve them. Even platforms without explicit kids' versions tend to tailor content to the user, and therefore might serve teenagers different material from adults. But that works only if the user is logged into their account. Children in Australia are now banned from having accounts, but they can still use social-media platforms without logging in. That means that they see an unfiltered feed.

No system is completely watertight. China, unsurprisingly, has some of the strictest rules about kids on social media in the world. The authorities have developed an elaborate "minor mode" that can be activated on most devices. This allows access only to child-friendly versions of apps, restricts the amount of time that can be spent on them and prevents users getting online altogether at night. Content for minors is further stratified into five bands appropriate to their age. Under-16s are not allowed to live-stream themselves, among other things.

### TrickTok

Yet adoption of the voluntary elements of all this is low and workarounds for the compulsory features are common. China has a huge industry promising miracle cures for teens addicted to screens, despite two decades of restrictions on gaming and social media. Parents posting images of the screens they have smashed on their children's devices in despair is something of a meme in China, ironically enough. And kids and tech firms have discovered a loophole in the form of smartwatches, which are subject to less stringent regulation and so have begun to offer their own

addictive social networks and games. Chinese regulators, naturally, are promising to crack down on tiny screens, too.

Few Western countries will go so far. But as age limits spread, tech firms are assessing the impact on their business. They stand to be unevenly affected: whereas only one in 20 Facebook users is under 18, one in five Snapchat users is, according to estimates in America by eMarketer, a research firm (see chart 2). The youngest users are not all that valuable to advertisers. Since 2023 a dispute with regulators has prevented Meta from showing ads to under-18s in the EU, its second-largest market, but there has been no visible impact on its bottom line. On a recent earnings call Snapchat's management acknowledged that Australia's ban had contributed to a drop in users, but said that ad revenue from under 18s was "not material".

Yet no platform wants to lose its youngest users. For one thing, teen adoption leads to more valuable adult use later on. It remains to be seen whether people who are banned from signing up for social networks in their early teens will have cooled on the idea by the time they are old enough. What is more, tech firms recognise that trend-setting teenagers are important drivers of popular culture, not to mention creators of well-watched content. Charli D'Amelio, an amateur dancer, became TikTok's most-followed person when she was 15.

The bigger risk to tech companies—and the great prize for their detractors—is that the movement to regulate social media may yet result in more intrusive kinds of regulation that govern how apps treat adults as well as children. The EU is already pushing in this direction: on February 6th a preliminary ruling from the European Commission found TikTok in breach of its Digital Services Act over its "addictive design", citing features including its infinite scroll, autoplay, push notifications and personalised recommendations—all critical ingredients of the app's success. After years of agonising about apps' content, regulators suddenly also seem concerned with their design, a potentially more awkward approach for tech firms since it is both more central to their offerings and is harder to shrug off with talk of free speech.

Mr Burrows argues that social-media companies should be regulated more like financial-services firms, with obligations to disclose more information and to notify regulators before launching new features or products. Such protections, he suggests, might have reined in X's Grok chatbot, which is under investigation by Ofcom for creating nude images of both adults and children without their knowledge or consent. After all, if social media are inflicting widespread harm on teenagers, it is hard to imagine that the damage stops at 16. ■

## United States



### The Democrats' dilemma

## How to curb ICE without losing votes

LOS ANGELES

**Its brutal tactics are unpopular with Americans. But so is border insecurity**

ON FEBRUARY 10TH Republicans and Democrats had a civil conversation about immigration enforcement. Just kidding. At congressional hearings into the recent deadly actions of federal agents in Minnesota, Rodney Scott, the head of Customs and Border Protection (CBP), referred to protesters as “paid agitators”. LaMonica McIver, a Democrat from New Jersey (who is being prosecuted for allegedly impeding federal officers outside a detention facility), asked Todd Lyons, the acting head of Immigration and Customs Enforcement (ICE), if he thinks he is going to hell.

Republicans largely defended ICE agents, and accused Democrats of making their jobs more dangerous by stoking hysteria against them. Eli Crane, a Republican from Arizona, accused them of wanting to let in more illicit migrants so they could illegally vote in American elections. (However, one or two Republican lawmakers

hinted that the agencies could perhaps be a little less gung-ho in their use of force.)

Democrats are holding up a bill to fund the Department of Homeland Security (DHS), demanding that it include oversight reforms. Without a deal, DHS funding is due to expire on February 13th, causing a partial government shutdown. This may not be the most effective way to rein in President Donald Trump’s deportation campaign. A shutdown would squeeze

some parts of DHS, but ICE and CBP are flush with cash thanks to last year’s One Big Beautiful Bill. Democrats face a quandary. They want to curb ICE’s excesses, which appal voters. But they don’t want to sound soft on border security.

Even after federal agents were filmed killing a mother and a nurse in Minnesota, Americans still trust Republicans more than Democrats on immigration. Much of that distrust stems from Joe Biden’s presidency. Upon taking office in 2021, Mr Biden reversed many of the immigration policies of Mr Trump’s first term, including one that required asylum-seekers to wait in Mexico for their cases to be adjudicated. He also paused all deportations. “The smuggling networks in Central and South America really seized on that to sell migrants on the fact that it was the time to go,” admits Blas Nuñez-Neto, a former DHS official. Encounters at the border exploded in 2022 and 2023.

In 2024 Mr Biden tightened border controls again, but by then a presidential election campaign was raging. Mr Trump, and seemingly every other Republican, ran on border chaos. Kamala Harris, who as vice-president had been given the nebulous task of tackling the “root causes” of migration from Central America, lost.

The safeguards congressional Demo- ➤

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crats now want to add to the DHS funding bill are popular. They include barring immigration agents from wearing masks; stopping racial profiling; requiring judicial warrants to enter private property; and mandating that agents wear body cameras. Each of these ideas enjoys the support of most Americans, finds a YouGov/The Economist poll (see chart 1). They also fit with a message, articulated by moderates such as Senator Ruben Gallego of Arizona, that the aim is to "reform and restrain ICE".

But not all Democrats weigh their words. During this week's hearing Shri Thanedar, a Democratic congressman from Michigan, said "ICE must be abolished." He has introduced a bill to do just that. "Abolish ICE" was a rallying cry for progressives during Mr Trump's first term. It is now so popular among the Democratic rank and file (see chart 2) that some think the party will embrace it again. However, "Slogans like 'Defund the police' or 'Abolish ICE' don't resonate with the voters we need to win elections in purple and red districts," says Mr Nuñez-Neto. "I think this is a...trap that is being set by the president and his advisers for Democrats." Each party insists that the other is extreme.

Sarah Pierce of Third Way, a centrist think-tank, warns that the seemingly high levels of support for abolition could be misleading. Data for Progress, a pollster, found that only a third of Democrats think abolishing ICE means completely dissolving immigration enforcement. Similar proportions thought abolition meant that ICE's duties would be reallocated, or that it would be replaced by a new agency. Voters "definitely still want immigration enforcement", says Ms Pierce. "They just don't want what we're seeing right now."

If Democrats fail to restrain ICE via the appropriations process, they may have other chances. Should the party win back control of the House at the midterm elec-

### Cameras don't lie

1

Federal immigration agents should be...

% of US adults responding, Jan 30th-Feb 2nd 2026

Banned from wearing face masks

Not sure

Support 55	12	Oppose 33
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Banned from stopping people based solely on factors such as race or ethnicity

64	13	23
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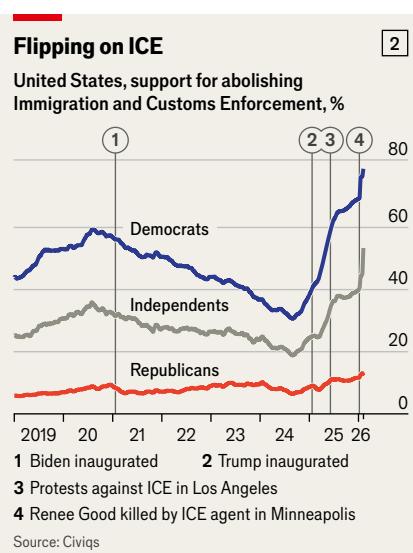
Required to have judicial warrants to forcibly enter homes of people subject to deportation

69	11	19
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Required to wear body cameras

84	9	8
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Source: YouGov/The Economist



### Language in America

## Peak Spanish

The rise of Spanish may be about to end

NOT EVERYONE enjoyed Bad Bunny's Super Bowl halftime show. "Nobody understands a word this guy is saying," complained President Donald Trump of the Puerto Rican singer's Spanish lyrics. That is not strictly true. With more than 40m Spanish speakers, America is the fifth-biggest Hispanophone country in the world, not far short of Spain.

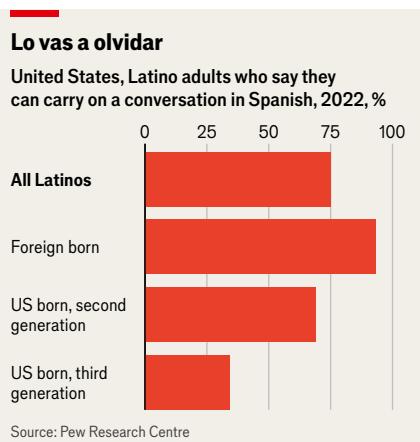
Babbel, which makes a language-teaching app, says that the share of its American users studying Spanish shot up from 26% to 60% between 2012 to 2025. The company notes that Spanish podcasts are gaining listeners, Spanish-speaking artists are winning more Oscar nominations and Spanish-speaking books are being checked out in growing numbers from libraries, among other indicators. Some English-speaking Americans worry that the rise of Spanish in their country is unstoppable.

That is unlikely. The number of Spanish-speakers in America will probably plateau, and eventually reverse, for two reasons. The obvious one is immigration policy. Under Mr Trump the flow of immigrants from Latin America has become a trickle. And ICE is deporting as many illegal (and sometimes legal) immigrants as it can. The crackdown will no doubt ease under a future Democratic administration, but America will probably not be as welcoming as it once was.

Another trend is less visible and as im-



Puerto Rico, my heart's devotion



### Transgender surgery

## A gathering storm

### Malpractice lawsuits over trans medicine for minors could be huge

THOUSANDS OF AMERICAN girls have had elective mastectomies as part of gender-transition treatment. Between 2016 and 2020, according to the *Journal of the American Medical Association*, 3,215 such procedures were carried out on 12- to 18-year-olds; the true number is sure to be higher. Advocates argue that they can relieve distress and even prevent suicide. Critics say the evidence for them is shoddy—and predict a flood of medical-malpractice lawsuits.

Two recent pieces of news suggest that doctors who prescribe irreversible transition procedures to adolescents should take the legal threat seriously. The first was an award of \$2m to a single patient in New York on January 30th.

The case concerned a woman called Fox Varian. After a hard childhood, Ms Varian began to suffer from depression and anxiety. She was also diagnosed with autism. Aged 15, she identified as a boy. Her psychologist allegedly warned her mother that she was in danger of committing suicide if she did not have the surgery.

In December 2019, at the age of 16, Ms Varian underwent a double mastectomy. Far from improving, her mental health grew worse. By 2022 she had decided to detransition. The following year she filed a medical-malpractice lawsuit against both her psychologist and her surgeon. It was the first such lawsuit by a detransitioner to come before an American jury. “I was 16 and I was really, really mentally ill, obviously,” Ms Varian told the court, according to the *Free Press*. The jury awarded her \$1.6m for past and future pain and \$400,000 for future medical costs.

The second warning came on February 3rd, when the American Society of Plastic Surgeons (ASPS) came out against gender-related surgery for patients under 19. In a statement, it cited “limitations in study quality, consistency and follow-up, alongside emerging evidence of treatment complications and potential harms”.

It also restated previous doubts about the trustworthiness of existing clinical guidelines for gender-related care in America, noting that there is “insufficient evidence” that the benefits outweigh the harms of prescribing cross-sex hormones or puberty blockers to adolescents. Hormone treatment can be less immediately dramatic than surgery, but can also have permanent effects, such as sterility.

The ASPS is the first American medical association to take any of these stances. The following day the American Medical Association, which represents more than 250,000 physicians, said that because “the evidence for gender-affirming surgical intervention in minors is insufficient...the AMA agrees with ASPS that surgical interventions in minors should be generally deferred to adulthood.”

All this echoes warnings issued in some European countries. In 2024 a report commissioned by Britain’s government, known as the Cass Review, concluded that evidence for the benefits (and harms) of puberty blockers and cross-sex hormones on children and adolescents was “remarkably weak”. Under President Donald Trump, America’s federal Department of Health and Human Services (HHS) issued a similar report, which agreed that the evidence of benefits was flimsy.

The topic is politically radioactive. Plenty of Mr Trump’s supporters say hateful things about transgender people, and some of his executive orders have targeted them. At the same time, “many Democrats associate restricting adolescent transitioning with President Trump, so they must oppose it, even though the evidence for benefits from the procedures is clearly very weak and the harms are growing,” says Zhenya Abbuzzese of the Society for Evidence-Based Gender Medicine, an NGO.

In the absence of a national health service, the American medical profession generally sets its own standards. Guidelines from medical associations are an important part of this. Several of the most important ones, including the American Academy of Paediatrics, continue to back adolescent transitioning. On February 4th the AAP’s head, Andrew Racine, said that “patients, their families, and their physicians—not politicians—should be the ones to make decisions together about what care is best for them.”

### First, do no harm

Americans tend to trust doctors but are wary of allowing these procedures for children. A *New York Times* poll in 2025 found that 90% of Republicans and 54% of Democrats opposed puberty blockers or cross-sex hormones being given to minors.

Proponents of adolescent transitioning have played down Ms Varian’s case, claiming the circumstances make it of limited relevance to other detransition lawsuits. Critics, by contrast, think the past few days could prove a turning-point. Lawsuits have been filed by more than two dozen other detransitioners. Observers believe the damages, all told, could run into hundreds of millions of dollars. “I wouldn’t say this is the dam breaking, but this is clearly more cracks appearing in the dam,” says Leor Sapiro, a co-author of the recent HHS report. ■

portant. The longer Latino families stay in America, the less Spanish they speak. According to Pew, a pollster, 69% of second-generation Latino immigrants—that is, the first generation born in America—speak Spanish. That drops to 34% of the third generation. Pew does not survey later generations, but overall just 57% of American-born Latinos speak Spanish.

In contrast to many English-speakers, Spanish-speakers fret—with good cause—about the fate of their language in America. “No sabo kids” don’t speak Spanish or speak it badly. (*No sabo* is “Spanglish” for “I don’t know”. In proper Spanish it’s *no sé*.) A majority of non-Spanish-speaking Latinos admit that they have been shamed by other Latinos for not speaking it. But 87% of American-born Latinos say that it is not necessary to speak Spanish in order to be considered Latino.

America is changing Spanish as much as Spanish-speakers are changing America. Borrowings from English like “*bildin*” and “*jaiscul*” (“building” and “high school”) are common. Kim Potowski of the University of Illinois, Chicago, highlights how Spanish words are being used in English ways, as in “*escribir un papel*”, “to write a paper” (*papel* is not used for that kind of paper in Spanish). American Latinos borrow entire grammatical structures from English in sentences like “*Es la chica que hablé con*”—“that’s the girl I was talking with”—whereas conventional Spanish requires the equivalent of “that’s the girl with whom I was talking.”

America’s assimilation machine has, over the centuries, turned huge waves of Germans and Italians into monoglot Americans. For a while, thanks to bilingual schools and Spanish radio and television stations, it looked like Latinos might be the exception. They’re not. Mr Trump won nearly half of the Latino vote in 2024; 36% of Latinos support making English the official language. Spanish is under threat in America, not English. Bad Bunny’s Super Bowl set may signify not the rise of Spanish in America, but its peak. ■



### American families

## The decline of single-earner homebuyers

### A tale of opportunities and costs

**“THE SIMPSONS”** strikes many Americans as unrealistic. Not because the characters are an odd shade of yellow or because Homer Simpson, an incompetent klutz, is a safety inspector at a nuclear power plant. The real credulity-stretcher is that his family are comfortably middle-class—two-storey home, car, holidays to Itchy & Scratchy Land—on the wages of a single breadwinner with only a high-school education.

Single-breadwinner homebuyers are increasingly rare in America. *The Economist* looked at census data since 1960 on young married couples who had moved into a new home in the previous year. Whereas in 1960 more than three-quarters

of these households had a single breadwinner, today the proportion is less than one in three (see chart 1).

Some of this reflects better job opportunities for women. Since the pioneers of the 20th century started breaking down the barriers that kept so many good jobs male-dominated, their daughters have flocked into the workplace. Between 1960 and 2000 the labour-force participation rate of prime-age women in America surged from around 40% to more than 75%.

Since then, however, that figure has plateaued. Yet the share of single-income homebuyers has continued to fall, from 40% to 30%. The sharpest drop in recent years came between 2012 and 2023, when house prices were rising fast.

Politicians and pundits of both the left and the right often lament the decline of the single-income family. Those on the left applaud a more female-friendly workplace but worry that dual-income families bid up the price of housing, health care, childcare and schooling. Elizabeth Warren, a senator from Massachusetts who co-wrote a book in 2004 called “The Two-Income Trap”, argues that families now need two incomes to get by, and that life is therefore tough for those that only have one.

Many conservatives want to make it easier for women to be homemakers. “If people have the choice, most families would prefer to have one breadwinner and have one parent stay at home with the

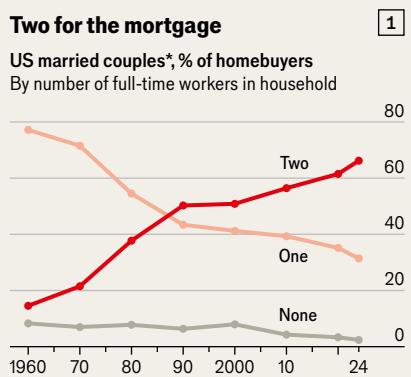
kids,” claimed Blake Masters, a Republican candidate for the Senate, in a campaign ad in 2021. “You ought to be able to raise a family on one single income.”

About half of American mothers tell pollsters they would rather stay at home than work, roughly double the share who actually do. Their reason for toiling when they say they don’t want to is, presumably, because that work pays. If housing were less costly, and the family budget stretched further, might that tempt some of them to stop or go part-time?

The data are intriguing. We grouped a sample of young couples with children between 2010 and 2024 by the husband’s earnings. In an imaginary scenario in which women worked purely because they loved working, then how much their husband made would probably have no effect on whether they kept punching the clock. In the real world, our data show that past a certain point, their full-time labour-force participation rate falls when their husband’s income rises. And the drop-off is far sharper in homeownership families than among renters (see chart 2).

In homeownership families where the husband earns around the median wage, nearly 80% of wives work full-time. In the top third, where the husband earns more than \$100,000, this number starts to dip. When his pay hits \$500,000, it falls to around 50%, roughly the same as the share of mums who tell pollsters they want to work.

All this suggests that Americans have to earn rather a lot before they feel that one income can support the lifestyle they desire. And housing costs clearly play a hefty role. This is not a straightforward story of hardship, as some pundits claim, but one of trade-offs. Many people enjoy their jobs. And what counts as a good-enough lifestyle has changed over the decades. Houses in America today are twice as large as they were in the 1950s, not to mention vastly better-equipped and more comfortable. Still, if it were easier to build, they would be cheaper. And perhaps America might have more families like the Simpsons. ■



\*Under 45 years old who moved into their home in the past year  
Sources: Census Bureau; *The Economist*



\*Under 45 years old with children and a working male partner  
Sources: Census Bureau; *The Economist*

## Education

# Three tricks to fix urban schools

BIRMINGHAM

### Lotteries to fight truancy, extra holiday classes; sometimes gimmicks work

**J**UST SIX years ago Democratic states looked like they were better at educating children than Republican ones. Their pupils scored higher on reading and maths tests. But since the pandemic students in places like Alabama, Florida, Louisiana, Mississippi and Texas have shot up the national rankings.

Adjust the results for such things as student poverty, and the “southern surge” is even more impressive. On a ranking compiled by the Urban Institute, a think-tank, Mississippi comes top (see chart 1). Florida, Texas and Louisiana also beat Massachusetts, the state that scores best when disadvantage is not taken into account.

It helps that red states have gone back to basics: legislators in state capitals have enacted new rules that require teaching reading via phonics and holding failing schools accountable. Those decisions matter a great deal for classrooms. But America is made up of more than 13,000 school districts, most of which have the autonomy to set policy, too. That gives cities and towns across the country the opportunity to run small experiments to figure out how to get students to learn—and then to double down on what works.

In Birmingham, Alabama, city leaders are doing just that. This is not a place where fixes come easily. Pupils in the school district are almost all black and nine out of ten qualify for free or cut-price lunches. For years their test scores were a drag on state averages (which were already low). But a few clever policies seem to be turning things around.

In the past two years the city went from having 15 “F”-rated schools to just one. A Stanford and Harvard study found that children in Birmingham are making up for maths learning lost during covid lockdowns about half a grade level faster than students in less poor districts. Kay Ivey, Alabama’s Republican governor, boasted in her state-of-the-state address last February that Alabama is no longer “just a football state” but also an “education state”.

Three city programmes stand out. The first tackled absenteeism. After the pandemic, Americans were slow to return to school: in 2023 nearly a third of children nationwide were chronically absent, meaning that they missed at least 10% of school days. Birmingham was barely better. Knowing that children cannot learn if they don’t show up, the city worked with its

four years the share of students who were chronically absent halved from 29% to 13%.

Next, the district turned to preventing holiday learning loss. American children spend fewer days in school than their peers in other rich countries such as Britain or Australia. Mark Sullivan, Birmingham’s superintendent, knew that if he wanted to boost test scores he needed to change the calendar. He floated the idea of year-round school to the board, teachers, parents and pupils. But nobody liked it, so he introduced “intersession”, where extra classes carry on over breaks and children choose whether to come. Crucially, buses still run and lunch is served.

When the programme began in the autumn of 2021, around 1,800 students showed up. By spring the number had climbed to 7,000, a third of the district’s pupils, and by summer it reached 10,000, or half. The city now pays local college students and retired teachers to tutor those who are still falling behind. In 2023 just 53% of Birmingham’s third-graders read at grade level. Now 81% do, putting the city far ahead of others like it (see chart 2).

In 2020 some 82% of Birmingham seniors graduated from high school. This year the city predicts that 88% will. The young mayor, Randall Woodfin, wants more of them to go to college. He launched “Birmingham Promise”, a programme that pays full tuition at many Alabama colleges for graduates of the city’s public schools. He persuaded businesses across the state that investing in it would help them build a skilled workforce, raising \$20m in private funds to match the city’s \$10m. “This is not charity, it’s a downpayment,” he told them.

### A rising crimson tide

Can education reform really be that easy? Doug Harris, an economist at Tulane University who studied New Orleans’s school turnaround, says that modest policy changes are unlikely to explain the Birmingham bump. Bigger state policies such as phonics are probably at play, other researchers reckon, and it is not clear that local tricks can be replicated elsewhere.

Evidence for the effectiveness of small programmes is seldom conclusive, especially when they are relatively new. But Mr Woodfin is bullish. He regularly gets calls from other mayors asking about the programmes. Optimists note that big evidence-based schemes usually start as small-town experiments.

The conventional wisdom has long been that there is little hope for the most disadvantaged children. Jim Shelton, a former deputy education secretary, believes that places like Birmingham are changing that narrative. “The South is now demonstrating that it’s never really been about the kids,” he says. “It’s always been about our ability to serve them.” ■

### When it's swotty time down South

**Fourth-grade students, NAEP maths scores\***  
Highest scoring US states†, 2024



\*National Assessment of Educational Progress, 500=maximum

†After adjustment for poverty rate and other demographics

Source: Urban Institute

public-housing authority—which houses about 40% of pupils—to offer incentives.

Under “Every Day Counts” parents whose children have perfect attendance for a month can enter a lottery to have the city pay their rent or utility bill. (Lotteries are a much cheaper incentive than subsidies for all.) And rather than having teens arrested for truancy, prosecutors started helping to make sure that those who were on the brink of missing too much class had clean clothes and a place to sleep at night (437 of the city’s pupils are homeless). In

### Sweet homework, Alabama

**US cities, third-grade students meeting reading standards, %**



Source: City test scores

## LEXINGTON

### *The secretary of cynicism*

*Robert F. Kennedy's idea of making America healthy starts with making it politically sicker*



A YEAR AGO, when Senator Bill Cassidy, the Republican chairman of the committee overseeing the Department of Health and Human Services, cast a decisive vote to support Robert F. Kennedy junior as its secretary, he said Mr Kennedy had promised not to delete from a federal website a statement that vaccines do not cause autism. Mr Kennedy has kept the letter of his promise. But in November he appended an asterisk, noting the statement "has not been removed due to" the agreement with Mr Cassidy.

On a less passive-aggressive, more forthrightly damaging note, the site now adds that "the statement 'Vaccines do not cause autism' is not an evidence-based claim" because "studies have not ruled out" the possibility. Thus, by insisting the negative has not been proved—albeit without providing evidence for his pet theory of the menace of life-saving vaccines—does Mr Kennedy play his role as Donald Trump's secretary of doubt in established science and credentialled experts, of doubt in anything but the wisdom of Mr Kennedy's own corrosive doubt.

The story of immigration and Mr Trump's return to the White House is straightforward: President Joe Biden ignored chaos at the southern border for two years, refuelling Mr Trump's favourite political vehicle for him. The story of immunisation and Mr Trump's re-election is more complex, and its consequences, though not yet as clear, may well prove even more dire. Unlike Kristi Noem, who as secretary of homeland security is delivering the mass deportation Mr Trump promised, Mr Kennedy is taking the MAGA movement and domestic policy into uncharted, and rather weird, territory.

The covid-19 pandemic helped doom Mr Trump's first term. Yet it yielded his greatest achievement, the whirlwind development of vaccines that saved countless lives. As a result, the episode also went on to supply the most revealing index of Mr Trump's hunger to win. For a man given to hyperbolising if not inventing achievements, it must be agony to distance himself, as he has, from a true historic accomplishment. But it was Mr Biden who went on to vaccinate people by the tens and then hundreds of millions. And it was under Mr Biden that resistance to mandatory vaccines, and to other pandemic-era measures such as masking

and lockdowns, began to grow. Mr Trump spotted the political opening as the Biden administration overreached in defending Americans against covid.

Schools stayed closed for too long, businesses suffered, public debt surged and inflation began to find its grip. Social-media platforms banned posts deemed heretical by the administration, such as that the virus might have originated in a Chinese lab. The legacy media, out of credulousness or partisanship, largely failed to question draconian public-health measures. More than a thousand medical experts signed a letter condemning protests against lockdowns in part as "rooted in white nationalism". As such experts struggled with an uncertain global threat, they could sound more than a little condescending. "What you're seeing as attacks on me, quite frankly, are attacks on science," Dr Anthony Fauci, Mr Biden's chief medical adviser, said in 2021. (Democrats justly mock Mr Trump for his hubris, but they have yet to reckon with their own failures of humility, empathy and curiosity.)

It was in this context that Mr Kennedy decided to run for president. His name and his background as a crusading environmentalist gave him some appeal on the left, but his disdain for established science—the covid vaccine was "the deadliest vaccine ever made", he said—helped endear him to Mr Trump's populist base. Mr Trump attacked him as "a Radical Left Liberal" and "Open-Border Advocate". Mr Kennedy called Mr Trump "a terrible president" who "didn't stand up for the Constitution". Then Mr Kennedy dropped out and endorsed Mr Trump. Mr Kennedy later said he was promised control of the health agencies.

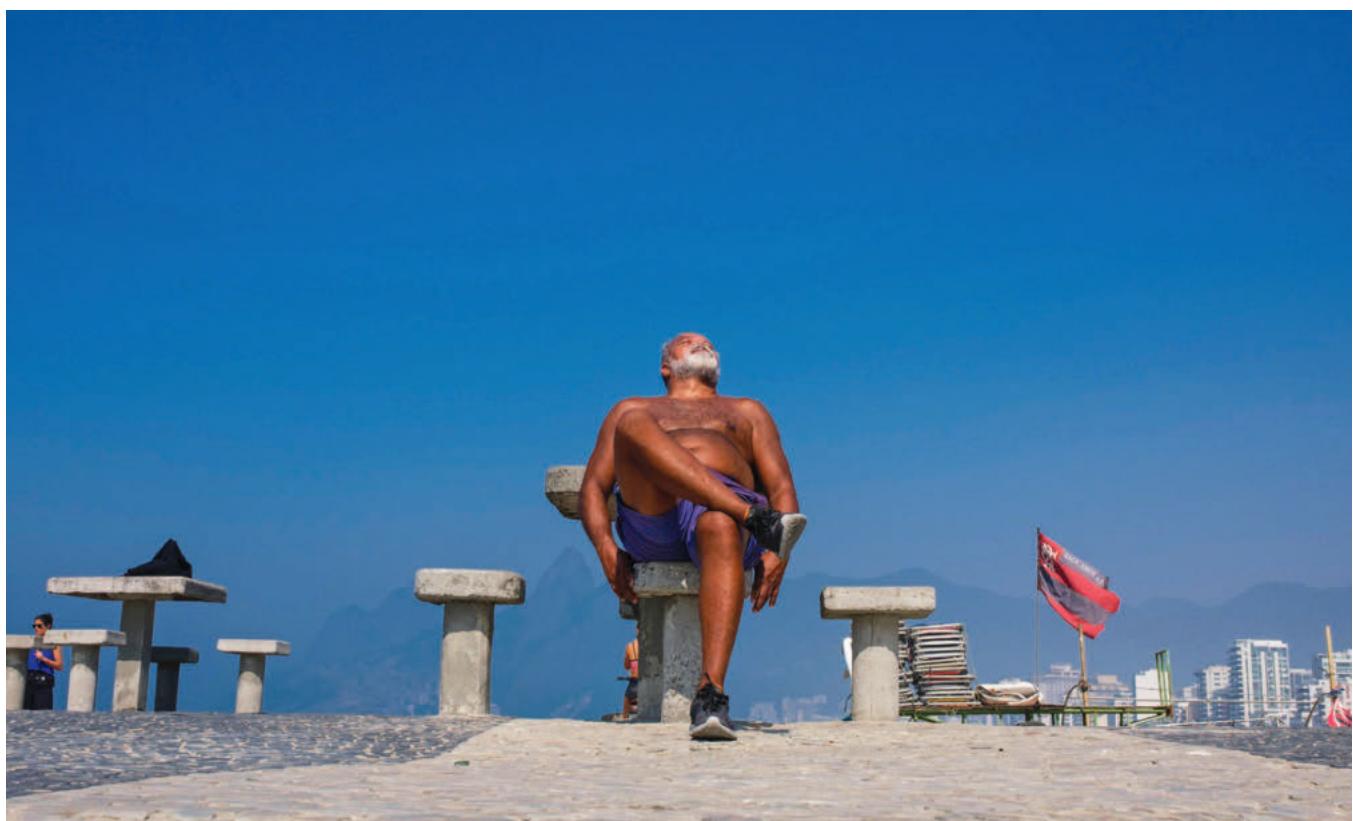
In deference to Mr Trump's conflicting priorities Mr Kennedy has backed off from some of his regulatory passions, such as banning certain pesticides or combating climate change. But having said he would let Mr Kennedy "go wild on health", Mr Trump has kept his word. The result has been the Make America Healthy Again movement: rightist populism and leftist whole-Earthism have found common ground in healthy eating, exercise, the benefits of psychedelics, and good old-fashioned American paranoia about such shadowy government undertakings as putting fluoride in drinking water and vaccines in children.

#### MAHA gets the last laugh

Upon the vast, intricate, profitmaking medical establishment, Mr Kennedy is now focusing suspicions of bad faith honed by a lifetime's training in detecting conspiracies, from a childhood blighted by assassinations to a career as a trial lawyer battling toxins spread by oil and coal companies. He has made a punchbag of the Centres for Disease Control and Prevention, calling it the "most corrupt" government agency. He has replaced the 17 members of its committee responsible for setting vaccination schedules and reconstituted it with vaccine sceptics. He has eliminated \$1.2bn in federal grants to develop mRNA vaccines (a technology that proved wonderfully effective against covid).

Mr Kennedy likes to say people should do their own research, because trusting experts is the stuff not of science but of totalitarianism and religion. You can sense the political appeal, the superficial compliment to Americans' intelligence. "I don't tell people to trust me," he told the *Atlantic* last autumn. "I tell people, 'Don't trust me.'" If only he had told Senator Cassidy that. Now it is too late. He is in charge, and even those Americans who reject his cynicism will live in a country with fewer vaccine breakthroughs than it might have had, and more unvaccinated people. ■

## The Americas



### Brazil's economy

## The grind

RIO DE JANEIRO

### Debt and entrenched interests are throttling Brazil's economy

THE OUTCOME of Brazil's general election in October will hinge on two issues: crime and voters' purses. President Luiz Inácio Lula da Silva, known as Lula, is betting the economy will win him re-election. Annual growth at around 3% has outpaced expectations for three years. Annual inflation of 4.3% is trifling by Brazil's standards. Unemployment is at a record low.

Yet the opposition paints a grim picture. Tarcísio de Freitas, the right-wing governor of São Paulo, says the country is in a "fiscal crisis". Financial pundits warn of an imminent recession. "We're not in the intensive-care unit, but we are moving towards that," says Armínio Fraga, a former boss of Brazil's central bank.

How sick is the patient? Brazilian debt is unsustainable on its current path. According to the IMF, gross public debt will hit 99% of GDP in 2030, up from 62% in 2010. The current debt is 30 percentage points higher than the median rate among

emerging markets and Brazil's Latin American peers. The nominal deficit is a whopping 8.1% of GDP, composed almost entirely of interest payments. The doomsayers are right to forecast trouble.

Businesspeople in São Paulo blame a generous welfare state and Lula's loose purse strings. They have a point. When he came to power in January 2023, Lula inherited a primary surplus equivalent to 1.4% of GDP and a total deficit of around 4.5%. By December 2025 the government was running a primary deficit of 0.4% of GDP. The direction of travel has lowered market confidence in the government's ability to limit the debt. This has forced the central bank to hold real interest rates near 10%

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among the world's highest—crowding out private investment and constraining growth. Brazil invests just 17% of GDP, barely half the rate of India.

But Brazil's problems go far beyond Lula's profligacy. Its economy is also degraded by the ability of powerful groups to wangle benefits from whoever is in government—many of them written directly into the country's interminable constitution. Whether Brazil can meet its potential depends on whether lawmakers elected in October find the courage to stand up to entrenched interests.

Handouts are often blamed, but are a red herring. They cost a reasonable \$83bn, or 3.7% of GDP, per year. This includes a flagship programme, Bolsa Família, which pays poor families to vaccinate their children and keep them in school, as well as various disability and unemployment benefits. Spending on public health and education, at around 4% of GDP each, is in line with that of Brazil's peers. "I am a classical liberal," says Mr Fraga, "but cutting spending in health and education in Brazil would not be my priorities."

The behemoths dogging the economy are pensions and a dizzyingly complex tax code. Pensions cost the government 10% of GDP. If no reforms are made by 2050, Brazil will spend more on pensions as a share of GDP than many richer and greyer countries ➤

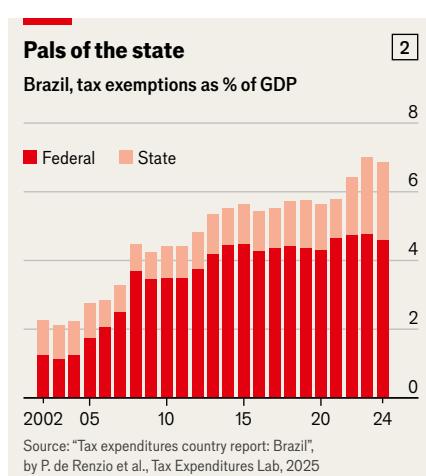
(see chart 1). Though Brazil's share of young people is similar to that in Chile or Mexico, its pension spending is already at Japan's level. That is despite a modest reform in 2019 that introduced a minimum retirement age. The population is ageing rapidly. Without reform, its social-security deficit, or the shortfall between contributions and payments, is set to rise from 2% of GDP today to over 16% by 2060.

Much of this money is gobble up by a coddled public sector. Brazil has around 13m public employees and 40m formally employed private ones, yet the social-security deficits for the two systems are virtually the same. This makes Brazil a global outlier. Juicy perks draw the most educated workers into government. Their giant pensions are thus a subsidy for Brazil's rich.

The judiciary and the armed forces get the biggest bungs. Brazil's courts cost 1.3% of GDP—the second-most expensive in the world—mostly because of generous pensions. The typical soldier retires before turning 55 on a pension equivalent to their full salary. "We need to do ambitious structural reforms, like pension reform, from the top down," says Dario Durigan, the deputy finance minister. "We can't have huge pensions for the military and judiciary while cutting them for the little guy."

It is fiendishly difficult to change the status quo, because reforming pensions requires changing the constitution. It mandates that pensions must rise in line with any increases to the minimum wage. Since every modern president—especially Lula—has put up the minimum wage, this has forced the government to keep boosting pensions. If pensioners get less than they feel they deserve, they can easily win in court. Each year the federal government loses the equivalent of 2.5% of GDP because courts order hefty pension and welfare payments.

Brazilian politicians have tried to get around these constraints by devising complex fiscal rules designed to limit government spending, in the hope that such ges-



tures will win market trust. It hasn't worked. Unless pensions are reformed, the market will never trust Brazilian fiscal rectitude. That distrust is costing Brazil between half and one percentage point of GDP growth annually, up to \$250bn over the next decade if nothing changes.

### Gimme a break

The world's most complicated tax system is also holding back growth. Brazil collects more tax revenue—around 34% of GDP—than most of its peers. But the system is a mess. Of 147 companies surveyed by Deloitte in Brazil last year, firms with annual turnover of up to \$95m spent an average of 16,200 hours a year filing taxes. The largest firms, with sales greater than \$1.5bn, spent 63,000 hours. Estimates of the economic costs vary, but it is on roughly the same order as the growth lost to lack of fiscal credibility, amounting to perhaps half a point of GDP annually.

Interest groups have obtained preferential treatment, creating fragmentation of the tax system and high compliance costs. The evolution of corporate income taxes is revealing. The headline rate is 34%, high by global standards. But few firms pay anything like that. The effective corporate tax rate is 16-18%, says Sérgio Wulff Gobetti of the Institute of Applied Economic Research, a public body linked to the budget office. That is one of the lowest figures among OECD countries.

Instead, most Brazilian firms are classified under special tax regimes. The so-called "Simples" scheme lets companies with annual sales of up to \$900,000 pay as little as 4% tax on their revenue. Another allows companies with revenues of up to \$14m to pay tax based on projected profits, rather than real ones. Both were meant to help small firms deal with taxes in a simplified way, but their thresholds were pushed so high that they in effect include most economic activity. Of Brazil's 16.5m companies, only 220,000 pay the full rate of corporate income tax.

The country spends a staggering 7% of GDP on tax breaks, up from 2% in 2003, according to the Fundação Getúlio Vargas (FGV), a university in São Paulo (see chart 2). Of 128 tax-break regimes, 95 are set to remain in force until 2073. The exemptions contribute to Brazil's regressive tax system. The share of revenue from tax on corporate and personal income is 12 percentage points lower than the OECD average; most comes from taxes on consumption, which hit the poor disproportionately.

Lawmakers are aware of these problems. Since 2019, new tax breaks must expire within five years. A constitutional amendment passed in 2021 says tax breaks should cost no more than 2% of GDP by 2029. Another in 2023 simplifies the morass of consumption taxes into a dual VAT system. That also could boost GDP by up to 4.5% by the time it is fully implemented in 2033, according to FGV research.

Most reforms have, unsurprisingly, been riddled with carve-outs. The Simples regime and the Manaus Free Trade Zone, a failed industrial policy that gives the Amazonian city a gigantic tax waiver to produce white goods, have been excluded. Both are enshrined in the constitution. Corporate and payroll taxes are largely untouched. Pension reform is political dynamite. Unless politicians find the courage to clean up, Brazil will stagnate into crisis. ■

### Cuba's regime

## The squeeze

MIAMI

**Is Cuba's fate in Marco Rubio's hands?**

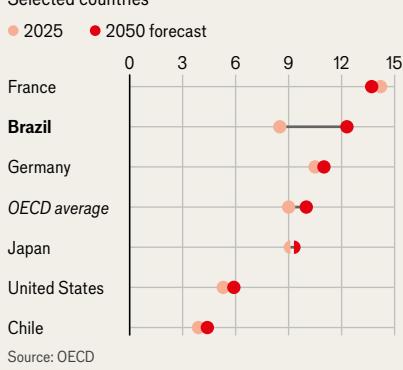
ON THE EVENING of January 4th, a Sunday, Marco Rubio walked into church in a leafy Miami suburb to a standing ovation. One day earlier the secretary of state had stood beside Donald Trump at Mar-a-Lago, the president's Palm Beach resort, as Mr Trump announced the extraction of Nicolás Maduro, Venezuela's dictator, from his Caracas stronghold in an extraordinary night-time raid.

Mr Rubio's fellow parishioners welcomed that operation, but many undoubtedly had another autocratic regime on their minds: the one in Cuba. Mr Rubio, who is 54, was not born there, but his passion to see his parents' homeland freed from 67 years of Communist-Party rule has inspired much of his political career. Now he is in a position to make it happen.

Cuba is in economic free-fall. On January 29th the Trump administration placed an effective embargo on foreign-oil shipments to the island, saying it would put ta-

### The great expanding bung

Public spending on pensions as % of GDP  
Selected countries





I SAVOUR THE VASTNESS OF REMOTE PLACES  
I SEE A COAST SCULPTED BY ICE  
I HEAR THE PROFOUND SILENCE OF GREENLAND  
I SMELL THE SEA FOAM'S SALTY FRAGRANCE  
I FEEL THE THRILL OF THE FIRST EXPLORERS

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► riffs on any country caught sending fuel. On February 8th Cuba's government notified airlines that aviation fuel would run out within a few days. Several airlines suspended flights. The regime has declared an emergency, instituting a four-day working week and reducing school hours.

Mr Rubio is one of the most powerful members of Mr Trump's cabinet. He serves as both secretary of state and acting national security adviser. The only other person to hold both roles simultaneously was Henry Kissinger. While he appeared to be sidelined by some of the Trump administration's special envoys on big foreign-policy projects in the Middle East and Ukraine, the Caracas raid has put him back in the spotlight. He is one of the architects of the president's so-called Monroe doctrine, which prescribes dominance of the western hemisphere for the United States. "For Marco Rubio there is no better moment," says Ricardo Herrero of the Cuba Study Group, which advocates for change in Cuba through dialogue and reconciliation.

Peaceful change would be far from simple to pull off. Unlike Mr Herrero, many of the 2.5m Cuban-Americans are hardliners. That includes south Florida's three Cuban-American members of Congress. They want the Trump administration to impose even harsher measures on the regime, including a ban on family remittances to Cuba and a halt on all flights to the island by airlines based in the United States.

The White House doesn't seem willing to go that far. It hopes instead that the fuel shortage will force the Cuban government to the table. Cuban officials have been pushing back, saying that discussions so far are preliminary, and that while they are open to dialogue, they will not change their one-party communist system.

If the regime holds firm, Mr Rubio will

come under enormous pressure to adopt a more aggressive stance. But that could backfire. He could easily end up as the public face of an induced humanitarian crisis, along with another wave of Cuban "boat people" crossing the 140km (90 miles) of water to the coast of Florida.

Mr Rubio must also be careful to avoid falling out of step with the Trump administration's MAGA base. They are typically isolationist, although many do come around to back whatever Mr Trump does. J.D. Vance, the vice-president, who is more aligned with Mr Trump's core supporters, is also more sceptical of foreign entanglement than Mr Rubio. "Marco cannot afford to be too Cuban," Carlos Díaz-Rosillo, an adviser to the first Trump administration, said at an event in Miami on February 6th.

That may be why Mr Rubio was circumspect when he appeared before the Senate Foreign Relations Committee on January 28th and was asked about Cuba. "We would love to see the regime there change,"

he said. "That doesn't mean that we're going to *make* a change."

The parallels between Venezuela and Cuba are limited. The Cuban regime is ideological and homogenous, where the Venezuelan one under Mr Maduro was split into factions and purely self-interested. Cuba's security forces are also "more indoctrinated" than Venezuela's, says Chris Sabatini of Chatham House, a think-tank based in London. Venezuela has abundant mineral wealth of the kind that allures Mr Trump. Cuba has little.

Given that, Mr Rubio is probably wise to string Cuba along. "Cuba is no longer self-sustaining," says Mr Herrero. "Its only lifeline is the United States." That may soon be more than a metaphor. Several sources tell *The Economist* that the United States is considering sending small quantities of fuel to the island: gas for cooking and diesel to keep water infrastructure running. Mr Rubio would gain even greater sway over his parents' homeland. ■

### Cars, cars, cars

## Guatemala's endless crawl

GUATEMALA CITY

**There is no short-cut to speeding up traffic in Central America's biggest city**

“HERE, EVERY hour is like rush hour,” says Abelino, a taxi driver. He is crawling along the ring road of Guatemala City, known to locals as “Guate”, at 11:30pm on a Saturday. A 30km descent from the highlands can take four hours. Google Maps paints every road into the city in the dark-red hue that marks the worst congestion.

The number of vehicles in Guatemala has risen from 3.2m to 6.2m in the past ten years. Many are in the capital, where little has been done to improve infrastructure. It is telling that the superintendent of Guate's municipal traffic police is followed by 800,000 people—a third of the city's adults—on social media, all keen to get any edge to beat the jams. Many vehicles are old, such as the gas-guzzling “chicken buses”—repurposed American school coaches. Guate's emissions per commuter are the worst in Central America and third-worst in the world.

Congestion is costing Guatemala dearly. A recent study by the Observatory for Cities, an initiative from the University of the Isthmus in Panama, suggests that Guatemalans lose 1,300 Quetzals (\$170) a month due to congestion, more than a fifth of an average salary, because of lost productivity. The same

outfit reckons that this costs the country some \$4bn annually.

Oliver, who works on a coffee plantation on the shores of Lake Atitlán, 170km away, says traffic is one reason why rural Guatemalans are cut off from services like hospitals. The fact that only 40% of the country's rural roads are paved makes matters worse.

The importance of unclogging the jams is filtering onto the government's agenda. In September it published a “mobility plan” for the capital region, proposing new highways and an integrated public-transport system, while also encouraging cycling and remote working. In January the government signed a deal with the United States, committing to spend \$110m on road-building, an increase worth 5% of the entire infrastructure budget. The deal includes technical advice from the United States Army Corps of Engineers.

But road-building in Guatemala has a long history of corruption. Projects risk being snarled up by the graft that President Bernardo Arévalo has pledged to root out. A longstanding project to build a new ring road around the capital has been stalled for years. Perhaps American backing can help. Until then, Guate's drivers will stay in a jam.



Marco's mission

# Asia



**Japanese politics**

## Full throttle

TOKYO

Can Takaichi Sanae get Japan racing again?

AS A YOUNG WOMAN, Takaichi Sanae took a liking to motorcycles, even showing up to an admissions interview on her Kawasaki. As Japan's prime minister, Ms Takaichi has also proven a bold risk-taker: she gambled by calling snap elections for the powerful lower house on February 8th, hoping that her personal appeal would lift her less popular Liberal Democratic Party (LDP). The bet paid off with the biggest election victory in Japan's post-war history, giving the LDP a commanding two-thirds supermajority.

The remarkable result has the potential to reshape Japanese politics for years to come. Ms Takaichi, who is both a fiscal dove and a security hawk, now has a massive personal mandate. Potential challengers inside the party will fall silent. The LDP, which has stumbled in recent years, has returned to a position of unquestioned supremacy. It will be able to control the legislative process, as it can override the more

fractious upper house (where it lacks a majority), thanks to its supermajority. It is the political equivalent of going from a 50cc scooter to a souped-up Kawasaki. Ms Takaichi thus has a chance to get Japan racing again. But obstacles loom.

The scale of Ms Takaichi's triumph shocked even LDP insiders. The LDP and its coalition partners entered with a one-seat majority in the 465-seat chamber. Though Ms Takaichi, who took office last October, enjoyed high approval ratings, a string of scandals had tarnished the party's image. Ms Takaichi set the bar for victory at retaining a simple coalition majority.

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The LDP instead won big across every region and every age group, coming away with 316 seats on its own. It could have had 14 more, but was forced to cede them because there were not enough names on its party lists. (Around 60% of Japan's Diet members are elected in first-past-the-post single-member districts; the others enter through proportional representation.) The LDP is now scrambling to train lots of novice MPs. "We have a whole bunch of first-graders coming into the classroom," one LDP lawmaker says.

Two phenomena explain the outcome. One is Ms Takaichi's personal popularity, which has proven a potent force. On the campaign trail, she electrified audiences, drawing crowds of thousands to concert-like rallies. She also dragged her frosty party into the digital era, becoming a star of social media. For those tired of the old guard, she exemplifies change. The country's first female prime minister, she has cut a welcome contrast to previous ones, thanks to her middle-class upbringing (her father worked for a carmaker, her mother for the police) and plain-spoken style. She played drums in a heavy-metal band at university. "Everyone in Japan gets to see themselves in her," says Eri Arifya, an LDP lawmaker. Yet she also stands for security, reaching voters anxious about Japan's place in an increasingly dangerous world. ➤

“Toughness has its appeal now in Japan, just as much as it has elsewhere around the world,” says Michael Cucek of Temple University in Tokyo.

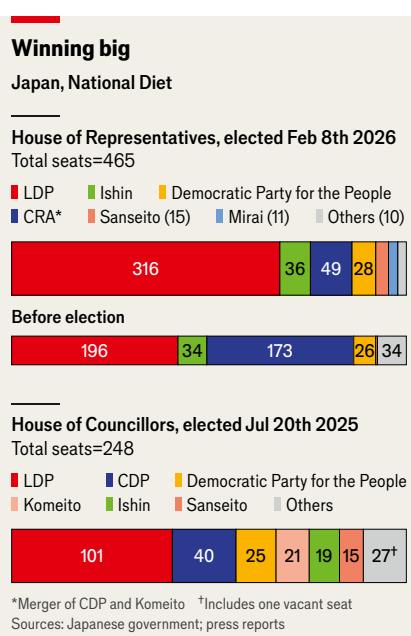
The other is the complete collapse of the opposition. A hasty pre-election merger of the centre-left Constitutional Democratic Party (CDP) and the LDP’s former coalition partner, Komeito, into the Centrist Reform Alliance (CRA) produced a muddle, not synergy. Its nostalgic appeals to pacifism rang hollow. The new bloc acquired the unflattering nickname “5G”, a play on the Japanese word for “old man”, *oji-san*, in reference to the fact that its top officials were all older male political dinosaurs. The CRA fell from having 172 seats to just 49. “One plus one did not make two,” the CRA’s co-leader admitted after the drubbing. (He has since resigned.)

Upstart parties proved more dynamic. The populist-right Sanseito (Do It Yourself) party emerged with 15 seats. Mirai (Team Future), a techno-optimist grouping founded last May, broke through as an alternative for many independent voters, winning 11 seats. But none will be strong enough to challenge the LDP.

With its commanding majority, the LDP will be able to blow past most checkpoints the opposition throws up. Ms Takaichi declares she has set a course for making Japan “stronger” and “prosperous”. The former involves reforms to strengthen Japan’s armed forces and security apparatus, in response to China’s rise and America’s unreliability. In this respect she is following the path laid out by her mentor, the late Abe Shinzo, who was prime minister from 2012–20, says Kanehara Nobukatsu, who held senior posts in the Abe administration.

Ms Takaichi has already accelerated the timeline for planned increases in defence spending to 2% of GDP. (That will please Donald Trump, whom Ms Takaichi will visit in Washington next month.) She has called for lifting restrictions on arms exports to help boost Japan’s defence industry; she favours the creation of a new national intelligence agency. She may now try to achieve the long-standing conservative goal of revising Japan’s constitution, which prohibits possessing “war potential”. For that, however, she will need two-thirds of the upper house, and a majority of the public in a referendum, to agree.

Despite her admiration for Margaret Thatcher, Ms Takaichi sees the path to prosperity running through the state. She wants to spend big on strengthening supply chains: she has set out 17 areas of critical national interest that deserve support with industrial policy. The fiscal doves in her camp believe that with GDP now growing and tax revenues rising, Japan has more fiscal space than a net debt pile equivalent to 130% of GDP would suggest. Aware that bondholders may disagree, Ms Takaichi



promises to be “responsible” as well as “proactive” in her fiscal policy. While pursuing a big-spending agenda, she also hopes to offer households relief from inflation. The aims are obviously in tension.

Markets thus present the first obstacle to realising her vision. During the campaign she promised to temporarily suspend the sales tax on food for two years—without issuing new debt. “That would be a magic trick,” quips Shirai Sayuri, a former policy board member at the Bank of Japan. “Her promises are not consistent, there are lots of constraints.” Although yields on Japanese government bonds remained stable after the elections, investors will be watching closely to see how Ms Takaichi’s plans add up.

Ms Takaichi’s ideology may also get in her way. She has a nationalist streak that may strain relations with neighbours. She believes that Japan has been excessively remorseful for its 20th-century imperialism. Such historical revisionism is often expressed by visiting the controversial Yasukuni Shrine, which honours Japan’s war dead, including its imperial leaders. Ms Takaichi has visited in the past, but has so far refrained from going as prime minister, though she talked of doing so during the campaign. That would exacerbate an ongoing crisis in relations with China. It would also wreck a rapprochement with South Korea that is crucial to countering Chinese ambitions in Asia.

If Ms Takaichi can navigate smoothly, she could prove as consequential as she is popular. “Tremendous opportunity lies on the road ahead,” says the LDP lawmaker. Yet voters’ expectations are now equally large. If she fails to deliver on her myriad promises, says a former MP from the LDP, “she’s going to hit a wall.” ■

## Sri Lanka

# A fragile recovery

COLOMBO

India’s growing involvement in its neighbour is one factor

IT IS ONE thing for a small island to suffer the worst economic crisis in its history, little more than a decade after the end of a protracted civil war. But then, just as it was getting back on its feet, a giant cyclone washed away roads and railways and displaced more than 100,000 people.

That is the plight of Sri Lanka, which since November has been recovering from Cyclone Ditwah. An inexperienced government—led by a former Marxist revolutionary committed to stamping out graft—has weathered the storm, and proved itself a surprisingly responsible handler of the country’s debts. But the economic and environmental blows have left their marks. Sri Lanka’s recovery remains fragile.

Ditwah was the first big test of Anura Kumara Dissanayake, who was elected president in September 2024 and leads a coalition of parties previously unsullied by high office. Though Sri Lanka is routinely battered by storms, this was its most severe natural disaster since the tsunami of December 2004. Ditwah ravaged the island for three days, hitting hardest the poor central uplands. Some towns and villages saw a fifth of their usual annual rainfall in a single day. The rains triggered more than a thousand landslides.

The government botched the immediate response. Despite officials in Colombo, the capital, knowing what was coming, some towns and villages received no warning. Co-ordination was chaotic: it took over a week for medical supplies to reach some remote areas. Both failures added to a death toll that surpassed 800, including those missing and presumed dead. That is much lower than the more than 30,000 who died in 2004, when a 30-metre wave hit the highly populated coastline. But asset losses were probably on a similar scale this time, in part because of extensive damage to bridges and power stations and because widespread landslides damaged the foundations of many buildings. The latest assessment suggests a hit of \$3.5bn, or 3.5% of GDP, says Marc-André Franche, the UN’s country co-ordinator.

The recovery phase has gone better. Many roads and railways were reopened quickly; the government has found money for food, shelter and housing. Anil Fernando, the deputy minister of finance, says the aim is to “build back better”. One effect of Ditwah has been to reveal how disaster relief works in an indifferent world. Tradi-

tional donors, such as America and Europe, now have little presence there, and the supply of aid has fallen sharply. But others have stepped in, mostly to help with the emergency. The United Arab Emirates, where many Sri Lankans work, provided manpower, equipment and rescue vehicles.

Above all there was India, with both the means and the self-interest, given that it has tricky relations with most of its neighbours. Even before the heavy rain had stopped, its choppers were running rescue missions from an aircraft-carrier docked in Colombo. Its engineers have rebuilt dozens of bridges. In December it pledged \$100m in aid and \$350m in concessional loans—by far the most generous package. China, by contrast, has been notable by its absence. Some in Colombo speculate that that is because it is waiting for a \$3bn oil refinery project to be signed off.

This is but one of the ways in which Mr Dissanayake's administration is a puzzle. He is the first Sri Lankan leader to hail from the JVP, a Marxist group that led insurrections in the 1970s and 1980s and has long looked to Russia and China for inspiration. Portraits of Marx, Engels and Lenin still hang at JVP party headquarters; insiders say the government can be slow to act because some decisions must pass through a politburo, on which Mr Dissanayake and party apparatchiks sit.

Yet having won power, Mr Dissanayake has tilted not towards China, but to India. And rather than tearing up an IMF plan negotiated by his predecessor, the former revolutionary has proved an unlikely midwife to fiscal discipline. His government, which has delivered two budgets, has earned plaudits from the fund for exceeding its belt-tightening targets, largely by boosting tax revenues while holding down spending. Opposition figures seem mystified.



"It's like the parish priest preaching *bana* at the Buddhist temple," says Harsha de Silva of the liberal SJB party.

Given what came before, many Sri Lankans seem willing to be patient. But for how long? Beyond being anti-graft and pro-IMF, the government has little sense of direction. A surplus has in part meant cutting much-needed capital investment. And though Mr Dissanayake is a pragmatist, his politburo may restrict his ability to remove the shackles on Sri Lanka's economy, from high trade barriers to restrictive labour laws and a bloated public sector that employs one in five Sri Lankan workers.

The balance could soon tip. Though fiscal targets have been met, says Nishan de Mel of Verité, a Colombo think-tank, two crises in four years have taken a heavy toll. The country's poverty rate has doubled since 2019, to 30% (using the government's own dynamic local-currency threshold, the current equivalent of \$1.71 a day); after Dithwah it is likely to rise further still. With debt repayments locked in for years, there is more pain to be distributed. ■



**Building back**

## Digital money

# Asia's crypto boom

### SINGAPORE

**Speculative crypto may be tottering, but stablecoins are finding their feet**

FOR A FREELANCE software developer in Lahore or a nanny from Manila, smartphones are now crypto banks. Instead of losing the equivalent of as much as a day's pay to wire-transfer fees, their owners can instantly send and receive stablecoins (digital tokens, generally pegged to the dollar) and at low cost.

Such experiences explain why, despite official wariness, crypto is flourishing across Asia—even in places like India, which has among the world's strictest cryptocurrency policies, taxing gains at 30% and deducting a whopping 1% from transactions. India was home to an estimated \$338bn in crypto inflows between the middle of 2024 and 2025, ranking it first in the world for the third year in a row on an index measuring global cryptocurrency adoption by Chainalysis, a data firm.

Nine of the top 20 countries in the Chainalysis index are Asian, including Pakistan (3rd) and Vietnam, as well as richer countries like Japan and South Korea. Trading for profit is still popular, but the region's dominance mainly reflects a shift in how crypto is used: not just as a speculative plaything (currently looking increasingly risky) but also as a new form of financial infrastructure. "Crypto is being used to solve real-world problems," says Chen-yi Ong of Chainalysis.

Remittances are a key application. Around 24m people from South-East Asia work abroad. The average cost of sending \$200 home was 6.5% in 2025, according to the World Bank. This is a painful problem for diaspora workers hoping to send money to countries such as the Philippines, where remittances are 9% of GDP. One solution is stablecoins. Unlike bitcoin, their price barely fluctuates. Stablecoins are "becoming the backbone of crypto activity", says Ms Ong.

Between January and July last year, global stablecoin transfer volumes topped \$4trn. That is still a tiny fraction of the payments that cross borders each year; but while volatile assets like bitcoin make the global headlines, stablecoins are quietly starting to do the work of actual payments.

Their advantages are prompting businesses to adopt stablecoins, too. Each bank involved in traditional cross-border payments adds fees, delays, mark-ups and compliance checks. A Vietnamese firm paying a Thai supplier typically needs correspondent banks for currency conversion; ►

► stablecoin transactions settle faster with fewer intermediaries. Monthly business-to-business stablecoin volumes have surged from under \$100m at the start of 2023 to over \$6bn by mid-2025, according to Artemis, a crypto analytics firm.

Asia's large freelance workforce is also bypassing traditional banking. According to the World Bank, the region has more than 210m gig-economy workers, roughly half of the global total. Conventional payment systems often delay payouts to driv-

ers and delivery workers; stablecoins enable instant settlement. Visa is testing a system that sends payments directly to recipients' stablecoin wallets. Pakistan, with around 2m freelances and \$38bn in remittances each year, has many workers who opt to receive payments in stablecoins, which can easily be converted to local currency, through exchanges or local traders, typically for a fee of 1-3%, roughly half what traditional channels cost.

Whether stablecoins become financial

infrastructure or tools for fraud will depend largely on Asia. The same features that appeal to a Filipino nurse sending money home—speed, low fees, no bank account required—also service criminal syndicates operating in Myanmar and Cambodia. The region has the scale, need and regulatory ambition to resolve that tension. If it does, stablecoins could reshape how money moves across borders. If not, crypto will have found its long-sought use case—just not a legitimate one. ■

## BANYAN

### *War by other means*

*India, Pakistan and Bangladesh are weaponising cricket*

THE LATEST edition of the men's cricket World Cup in the short, T20 format started on February 7th with three matches headlined by the game's biggest subcontinental stars. India, the indomitable host country, took on that other great cricketing nation, America. Pakistan battled the Netherlands. And facing off against the once-great West Indies was... Scotland?

Aye, really. Bangladesh was swept out of the tournament last month. For a while there were rumours that Pakistan, too, might be replaced. What do these countries have in common? They are on bad terms with their domineering neighbour, India, they are sick of being pushed around, and they pushed back. The result has reduced a global event to a stage for South Asia's pathologies.

In December the Indian Premier League, a wildly lucrative domestic tournament, held an auction of cricketers. The Kolkata team purchased Mustafizur Rahman, a Bangladeshi bowler nicknamed Fizz. That caught the attention of a particularly rabble-rousing type of personage: the out-of-work politician.

Sangeet Som, a former state legislator from India's ruling Bharatiya Janata Party (BJP), took issue with Kolkata's purchase of a Bangladeshi player. Other political entrepreneurs soon piled in. Within days the Board of Control for Cricket in India (BCCI), which runs the league, forced Kolkata to drop Fizz.

Relations between India and Bangladesh have been worsening since 2024, when Sheikh Hasina Wajed, the Muslim country's autocratic prime minister, fled to India amid massive protests. Indian media have since been playing up incidents of violence against Hindus in Bangladesh. Bangladeshis, for their part, are angry at India's willingness to shelter

Sheikh Hasina. The Indian government would like to improve relations, but its own media—and low-level functionaries like Mr Som—are making it difficult.

Bangladesh, with its back up, asked to move its World Cup matches to Sri Lanka, arguing that if India could not guarantee the security of one player, it could hardly protect an entire squad. But the International Cricket Council (ICC), the sport's global governing body, saw no merit in the argument and excluded Bangladesh from the contest, replacing it with Scotland, the next highest-ranked team.

Then Pakistan's government flailed its willow, banning its team from playing a fixture against India. Relations between the two, never warm, reached new levels of iciness after a short war in May that both sides believe they won. The ostensible reason for boycotting the India match was to show solidarity with Bangladesh. More to the point, it was a way of harming its bigger neighbour. Matches between the two countries are the most watched in any cricket tournament. Advertising rates are set accordingly, with much of the benefit

accruing to India. By pulling out, Pakistan hit India where it hurt.

After ten tense days of furious back-channel negotiations, Pakistan said that it would play India after all, as scheduled. And, as part of the deal, Bangladesh will face no financial penalty for its impertinence (though it is still out of the World Cup). Cricket's greatest show will go on, sort of.

Yet the brinkmanship has dragged cricket ever deeper into South Asian geopolitics. Like all teams except England and Australia, Pakistan survives on cash from the ICC. By initially pulling out, its government calculated that sporting and financial losses are nothing to the rare pleasure of upsetting India's Hindu-nationalist establishment.

That is because India's cricket board, though nominally independent, acts in practice as a wing of the BJP. Until the end of 2024, its boss was Jay Shah, the son of India's home minister, Amit Shah, who is Narendra Modi's right-hand man. Mr Shah junior now runs the ICC. Pakistan's cricket board, meanwhile, is run by the country's interior minister.

Observers seeking to understand South Asia's dysfunctional relationships can hardly be blamed for being overwhelmed by the baroque nature of the region's multifarious hatreds. Eight decades of wars, coups and terrorism are superimposed upon the centuries of religious and linguistic grievances that stir each country's political compulsions. Onlookers should turn instead to cricket. The rules of the sport are considered, by those who do not have the pleasure of loving the game, to be somewhat convoluted. But they at least follow the logic of pursuing victory. South-Asian geopolitics, on the other hand, is increasingly a negative-sum game.



# China



**Research and more**

## China eyes the melting north

TROMSO

**Its close co-operation with Russia is alarming many Arctic states**

AS WINTER BEGAN in the Arctic, China was celebrating a banner year there. In September one of its ice-breaking ships, the *Xuelong 2*, completed the country's biggest ever Arctic expedition (see map, next page). It involved a hundred scientists and China's first crewed deep-sea dive beneath the ice. In October a Chinese-operated container ship finished the first scheduled transit from China to Europe via the Arctic without using icebreakers. Chinese media hailed its 20-day voyage on the Northern Sea Route (which took half the time of the Suez Canal) as the "fastest delivery in the history of container shipping".

Yet the mood among China's Arctic researchers was subdued as they gathered in early February for two conferences in Tromso in northern Norway. At the annual China-Nordic Arctic Research Centre conference, also attended by *The Economist*, Chinese participants did not mention the "polar silk road", the grand plan to develop

Arctic shipping routes, infrastructure and mining that China outlined in 2018. Instead they suggested that the Arctic was not among China's foreign-policy priorities. And they lamented the new focus on security in the region, especially since Donald Trump has intensified efforts to commandeer Greenland.

China's sudden modesty about its Arctic ambitions stems from a dizzying shift in the region's geopolitics. Mr Trump's recent claim that Chinese navy ships were lurking off Greenland was codswallop. His threat to the territory has deepened tensions with allies, prompting some to lean

closer to China. But Chinese activities elsewhere in the Arctic are genuinely troubling for America, Canada and Europeans, especially because of China's alignment with Russia. Some fear China is gathering data and experience to operate navy ships and submarines there. Since Russia's full-scale invasion of Ukraine in 2022, Nordic countries that had once hoped to preserve the Arctic as a zone of peaceful co-operation have started to prioritise security in the high north.

China's response is to play down the security-related aspects of its Arctic plans. Back in 2018, it portrayed them as part of the Belt and Road Initiative, a trillion-dollar programme to reshape global trade by building transport, energy and other infrastructure. Declaring itself (neologistically) a "near-Arctic state", it said that as polar ice retreated, new sea routes and opportunities to exploit minerals could "have a huge impact on the energy strategy and economic development of China". China's Arctic activities went "beyond mere scientific research", spanning security and governance, it declared.

Now, China presents itself as a partner in climate-change research (unlike Trumpian America). Zhang Beichen, the deputy head of the Polar Research Institute of China, told the Tromso conference that China might allow other countries to join ➤

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**— Chaguan is away**

its future Arctic expeditions. China is ready to “strengthen transparent and open scientific collaboration with Nordic partners and all other Arctic stakeholders”, he said. Zhao Long of the Shanghai Institutes for International Studies, a Chinese think-tank, accused Western countries of “oversecuritising” China’s activities. European governments must understand that “China has very limited goals regarding the Arctic,” he told *The Economist*.

Some at the meeting, and afterwards at a bigger “Arctic Frontiers” get-together, expressed sympathy for China’s position. Many accused America of exaggerating the Chinese regional presence. Norway’s prime minister, Jonas Gahr Store, said there was no evidence of Chinese naval ships off Greenland. He also noted that China’s Arctic scientists had only a limited presence in Norway: one research station in the Svalbard archipelago. Nonetheless, he said, Russia and China do pose the chief intelligence threats “and their prime focus is in the north”. He also said Norway had intensified monitoring of China’s activities after previous research was found to be for potential military purposes.

China’s activities are drawing ever closer scrutiny from Norway’s neighbours, other NATO partners and the EU. Kaja Kallas, the EU’s foreign-policy chief, raised a widely shared fear that China could weaponise Arctic shipping routes and mineral supply chains. Sweden stopped China from gaining access to an Arctic space station in 2020 and withdrew from the China-Nordic Arctic Research Centre in 2023. Finland has scaled back projects involving China, too. Danish spies warned in December that China aimed to operate naval ships and submarines in the Arctic within five to ten years.

The challenge facing China is two-fold. First, many countries in the region recall its earlier, more aggressive Arctic approach. That entailed efforts to invest in projects including three airports in Greenland, another in Finland and a vast tract of land in Iceland. Many were put off by the

scale of those plans, as well as China’s policy to demand co-operation between its civilian entities and armed forces. Norway was also upset by nationalistic displays at China’s research station in Svalbard.

The second, bigger problem for Europeans, especially, is China’s troubling relationship with Russia. Russia has grown increasingly reliant on China because of Western sanctions and Chinese support for the war in Ukraine. The two countries now work together to develop the Northern Sea Route by investing in ports, technology and training. Dozens of the 90-odd ships which used that route last year are part of a sanctions-busting “shadow fleet” ferrying Russian oil to China. The countries also collaborate more on science, joint expeditions and data-sharing.

Although both say these efforts are purely civilian, Western officials believe otherwise. Data on water temperature and salinity are critical for submarine opera-

tions as well as research on climate change; atmospheric research helps to guide missiles. “They’re not studying the seals and the polar bears,” General Alexus Grynkewich, NATO’s top commander in Europe, declared in January. China and Russia have also expanded overt security co-operation in the region, conducting their first joint coastguard patrols there and their first joint flight of strategic bombers off Alaska, both in 2024.

An end to war in Ukraine could ease tensions with Europe, letting China expand its Arctic collaboration and maximise its access to the region. That would ease its reliance on Russia, which controls most of the Northern Sea Route’s coastline and charges steeply for using ports and icebreakers. Europe, however, fears further Russian aggression, possibly in the high north. So until China reviews its Kremlin ties, its outreach to other Arctic states will meet an icy response. ■

### Traditional Chinese Medicine

## What's the point of AI in acupuncture?

BEIJING

**China wants to bring old remedies into the modern age**

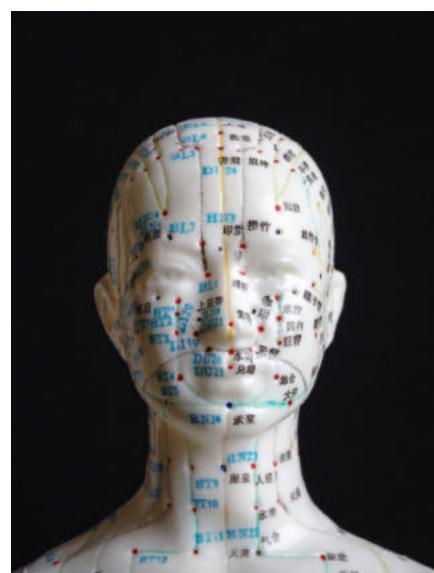
A CUPUNCTURE IS A traditional medical practice in which needles are stuck into parts of the body. It once seemed more connected to China’s ancient past than to its high-tech present. No longer. On February 4th a company from Tianjin, a city in northern China, said it had developed a glove-like gadget, controlled by the user’s brainwaves, which can perform acupuncture on their hands. The company says the product, which is intended to help in the recovery of stroke victims, is undergoing clinical trials at hospitals in the city.

Such gizmos are part of a wave of efforts by Chinese companies and officials to meld traditional medicine (known as TCM) with new technology. Last month the government released a new five-year plan for the TCM pharmaceutical industry calling for digitised “smart factories” to produce TCM concoctions, more R&D to develop substitutes for rare ingredients and the use of artificial intelligence (AI) to discover new treatments. TCM, the plan said, is “a jewel of Chinese civilization”, and as such should be “modernised”.

At first glance TCM is an unlikely thing to drag into the modern world. Some of its teachings have scientific backing: a compound in a herb known as *qinghao* is an effective treatment for malaria; much advice doled out by TCM doctors boils down to eating healthily. But many TCM medicines

and treatments are probably no better for your health than a placebo. And a few TCM brews are downright harmful—if not to the patient, then certainly to the bears, snakes and other animals that are killed to provide their ingredients.

Nevertheless, TCM is booming in China. The Communist Party supports the industry as a source of national pride. And ►



Facing change





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many see it as a way to stay healthy, with conventional medicine (known locally as "Western medicine") seen as more suitable for treating serious illness. They also value TCM's philosophical underpinnings, which emphasise a holistic approach to health that does not sharply distinguish between food and medicine. Nearly 90% of Chinese public hospitals have TCM clinics. Some 700,000 TCM practitioners operate in the country, receiving over 1bn visits from patients every year.

Such a big industry may be ripe for disruption. TCM clinics still feel old-fashioned, with their herb-scented, wood-panelled rooms filled with exotic ingredients, such as wrinkled sea cucumbers, slices of deer antlers and dried orchids. But technology is creeping in. Some clinics have sensors which can detect the speed, strength and rhythm of a pulse (an essential element to a TCM health diagnosis) and interpret the results. AI chatbots are helping TCM doctors choose the right concoctions to offer (however weak the evidence of their efficacy). A mini-program on WeChat, a messaging app, offers dietary advice based on TCM to users who upload a picture of their tongue.

Making TCM increasingly high-tech could make sense for some clinics. It is cheaper to use a machine than to train a TCM doctor. It may also benefit the environment: officials hope that modernising the production of TCM medicines will make the use of ingredients more efficient and so lessen the impact on ecosystems. But building up trust will be a long process. Many of the Chinese who rely on TCM do not want to be treated by a robot. Some parts of TCM treatments, such as massages, need the "human touch", says an employee of a clinic in Beijing.

One challenge is that TCM knowledge is scattered across thousands of ancient books (and in the brains of doctors who might prefer to keep their techniques a secret). As a result, two TCM doctors who were trained in different schools might have completely different judgments of a patient's condition and how to treat it, explains one Beijing-based software engineer who is building AI models for use in TCM clinics. But teams like his are collecting data to train their models. At the moment, AI-powered diagnoses have reached the level of an "average" TCM doctor, he says. But that may not be saying much given the lack of high-quality trials to support TCM treatments.

Adherents hope that technology will make TCM increasingly objective and standardised. But that is unlikely without more trials—no amount of algorithmic refinement can serve as a substitute for them. Without the evidence base that Western medicine relies on, TCM modernisation will be mostly a high-tech mirage. ■

### Rock concerts

## Enjoying the boom times

**China's ticket sales for music shows have tripled since the pandemic**

FOR MUCH of the year the main attraction of Zhuji, a city in Zhejiang province, is its status as the birthplace of Xi Shi, a woman of great classical beauty who lived some 2,500 years ago. But since 2023 tens of thousands have been descending on Zhuji around the new year for the Xi Shi Music Festival, an extravaganza that has little to do with the legendary woman. For two days, fans from all over China greet the new year by rocking out to indie bands. More than 133,000 visitors stayed overnight during this year's extravaganza, a 29% increase over the one in 2025.

China is enjoying a concert boom. Last year the box-office intake from performances totalled 62bn yuan (\$9bn), up from 20bn in 2019, according to figures from the China Association of Performing Arts, an industry body. Some 640,000 shows, big and small, were played, up from 197,000. Not only are there more offerings, but better ones, too. Ms Sun, a 28-year-old, attended three concerts last year by Mayday, a Taiwanese rock band that is among the most popular in China. Band members popped up as giant avatars on a huge 3D screen; they also wowed the crowd on a bus, on which a stage was set up, as it circled its way around the Bird's Nest stadium in Beijing.

What is striking, apart from the scenes of euphoria (likely to irk those of a conservative bent), is that almost everywhere else consumers are loth to spend. Like many other industries, entertainment was hit hard by the pandemic. China's consumer-confidence index plummeted after the draconian "zero-covid" lockdowns. Although this still remains at the lows of 2022, concerts have roared back to life.

Local governments love them. Visitors lift the economies of the spots they go to as they splash out on food and accommodation. Some places have started offering subsidies and incentives to attract artists to perform. On February 2nd the island province of Hainan awarded Eason Chan, a Hong Kong popstar, 1m yuan for selling 68m-worth of tickets last year for his concert in Haikou, on the island's coast. But the overall boon to the economy was much bigger: visitors to Haikou spent a total of 3.2bn yuan while attending the concert. The performing arts association suggests that one yuan splurged by a reveler on concert tickets can trigger nearly seven yuan of additional spending.

Some fans are particularly hardcore. Last year Ms Wang, a 35-year-old, followed Mayday to different cities to watch their shows, together with her husband, spending 20,000 yuan on tickets and the same again on flights and accommodation. Before each concert she would carefully prepare handicrafts and banners, and take part in gatherings with other fans. Going to shows is one of the things that she looks forward to most. "It's already been almost two months without a concert. It feels like nothing happened, like I just skipped over them," she explains. She also recalls sobbing uncontrollably during her first Mayday concert after the pandemic.

Chinese commentary has come to call this kind of spending "emotional consumption": paying for experiences to soothe the soul, rather than hoarding material possessions. This kind of spending is rising in spite of, or perhaps even because of, a gloomy economic outlook. Some may dismiss the trend as a quirk of Gen-Z mopers; if it gets young people to consume, though, the Communist Party might just rock and roll with it.



Very bright prospects

## Middle East & Africa



Tanzania

### Africa's newest despot

DAR ES SALAAM

**Samia Suluhu Hassan has caused her country's most dangerous crisis since independence**

THE PARTY that has ruled Tanzania since independence from Britain in 1961 is a strange beast. Under Julius Nyerere, the country's founding father, Chama Cha Mapinduzi (CCM), which translates as "party of the revolution", forced millions onto collective farms. Yet faced with a wrecked economy and a population chafing under single-party rule, it changed course. After Nyerere stepped down in 1985, CCM oversaw Tanzania's turn to flawed but competitive democracy. As recently as 2024 it was the country's most popular party, according to Afrobarometer, a pollster. Its 65-year rule is the longest of any party in Africa.

But for how much longer? Under Samia Suluhu Hassan, Tanzania's president and the party's chairperson, CCM is facing the most severe legitimacy crisis in its history. An election in October sparked the first-ever mass protests in the usually placid population more than 70m. Hundreds,

possibly thousands, of people were killed by state security forces. As Tanzanians died in the streets, Mrs Samia claimed a ridiculous 98% of the vote. Dan Paget, a British academic specialising in the country, reckons the last time mainland Tanzania experienced such brutality was under German colonial rule more than a century ago.

The party, which is in effect synonymous with the Tanzanian state, finds itself at an inflection point. The EU has frozen aid. America, which worries that Christian churches are under threat and that American investors are being unfairly treated, is

reviewing bilateral relations. The government's lack of public sympathy for the victims, compounded by its alleged destruction of incriminating evidence, has "created a very angry nation", says a prominent opposition figure.

Mrs Samia, who took office after her autocratic predecessor, John Magufuli, died in 2021, was long seen as weak. A Muslim from the semi-autonomous archipelago of Zanzibar, whose population is about 3% of the national total, she has no base within the party and little charisma. She first styled herself as a liberal-minded reformer, welcoming opponents home from exile and mending ties with foreign investors. Many Tanzanians believed her.

Yet it was clear long before the violence in October that Mrs Samia was no moderate technocrat. A promised review of the constitution, which gives the president enormous power, quickly stalled. When opposition parties threatened to boycott the election, the government arrested Tundu Lissu, Mrs Samia's most prominent opponent, and put him on trial for treason. (He remains behind bars.) Scores of critics, including a CCM bigwig and a Catholic priest, disappeared over the course of 2025. Many are feared dead.

It was once suggested that, hailing from a marginalised island, Mrs Samia had been forced to ally with hardliners in the party ➤

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▶ and the security services. But following repeated reshuffles, Mrs Samia is “increasingly in command of every arm of the regime”, notes Mr Paget. A Western diplomat in Dar es Salaam, the commercial capital, says she has shored up her position by surrounding herself with “Zanzibaris, her family and her neophytes”. She recently appointed her daughter as deputy minister of education and installed her son-in-law as minister of health.

Further repression is likely. But to stay in power for much longer, the CCM knows it needs to deliver material benefits. For the past two decades Tanzania has achieved annual GDP growth of 6% on average. But with the population growing at nearly 3% each year, some officials acknowledge that is not enough. Too few young people have formal jobs, so they are easily “triggered” into joining protests, says Kitila Mkumbo, the state minister for planning and investment.

Fixing this requires higher growth, such as China—a close CCM ally—managed in the years following the protests and massacre near Tiananmen Square in 1989. The government’s priority since October has been to “reassure the existing investors in the country that their investments will remain safe”, says Mr Mkumbo. Officials also appear keen to speed up negotiations over a long-delayed liquefied natural gas plant, on which a final investment decision is expected this year.

That may not be enough to see off dissent. Corruption is widely thought to have increased under Mrs Samia. “Everyone is rent-seeking,” says Aida Kiangi, a Tanzanian business and energy expert. Foreign firms complain of shake-downs. “Things are better for the corrupt oligarchs here,” says a Western diplomat. “Things are not better for foreign investors.”

Another problem is the president herself. Some of the criticism stems from misogyny and Islamophobia. But whereas Magufuli was widely seen as serving the interests of ordinary Tanzanians, Mrs Samia is often accused of serving the rich. In the past the CCM has responded to public discontent by reforming itself. Mrs Samia established a commission to investigate the violence around the election, which is due to report later this month. She has promised another commission to pursue national conciliation, and, yet again, a review of the constitution.

Change may come in other ways, such as a coup within the CCM. Some in the party worry about another uprising. A former minister recently warned that unless the security forces show “humanity...CCM will be removed from power.” Outsiders cannot know how widespread such feelings are. But the politics of a country known for stability are less predictable than they have been in decades. ■

## Violence in Nigeria

# Unwelcome guests

ABUJA

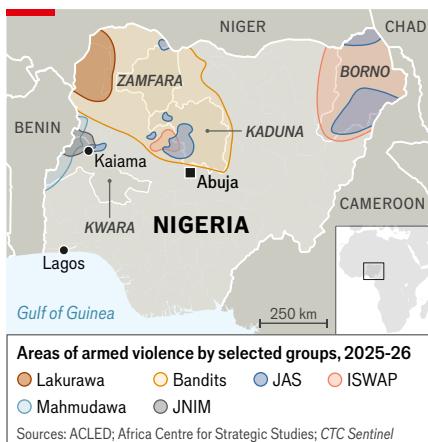
### Jihadists and bandits are moving closer to the big cities

**W**HEN RESIDENTS of Kaiama region in Nigeria’s mid-western Kwara state followed the call to prayer on February 3rd, many never made it to the mosque. Armed men attacked two villages near the border with Benin, shooting people at close range, slitting their throats or burning them alive. The men killed around 170 people and destroyed the villages before they left. Bola Tinubu, Nigeria’s president, put the blame on “Boko Haram”, a moniker that used to refer to a specific jihadist outfit but has come to describe a myriad of armed groups wreaking havoc across the country.

Working out which group is really responsible for the massacre in Kaiama will take time. But Mr Tinubu’s initial reaction illustrates that jihadist groups have expanded far beyond the areas where they have traditionally been active. Nigeria has long faced several interlocking security crises, especially in the north. The attack in Kaiama is a reminder that the violence has spread alarmingly close to urban centres farther south.

One factor driving this grim trend is the evolution of jihadism. When the leader of Boko Haram died in 2021, the group split into two factions that now fight each other as well as other armed outfits. One of them, known as JAS, targets Muslims as well as Christians and is a plausible culprit for the Kaiama attack. It has been setting up cells in north-western Nigeria to raise money and gain influence beyond its north-eastern core. Conflicts with other bandits have forced it farther west.

Another possibility is Jama’at Nasrullah wa al-Muslimin (JNIM), a group linked to al-Qaeda that has been active in



the Sahel and across the border in Benin. It formally announced its presence in Nigeria in October with an attack in Kwara state. More recently, new militant groups have emerged in the forests along the Benin border (see map).

The biggest threat facing Nigerians in the north-west and increasingly in the central regions is still the hundreds of armed groups known as bandits. Motivated by money rather than ideology, they find willing recruits in the abjectly poor communities they terrorise and have little to fear from law enforcement in areas that are barely governed. Their business is evolving, too. Traditionally, they have focused their attentions on stealing cattle and crops. But many have become more directly involved in illegal gold mining, especially in Zamfara state, which has made them richer, better armed and more violent.

All this has also intensified traditional dynamics between bandits and jihadists. One way jihadists are able to gain influence is by offering protection to communities menaced by bandits. But where the grip of bandits proves too strong, civilians are less likely to be “protected” and more likely to end up in the crossfire.

There is a small chance that both types of groups run out of steam as they move ever farther south. Jihadist groups rely on ethnic and kinship networks to recruit their rank and file, which will be harder the farther they veer from traditional strongholds. Bandits, who thrive on weak governance, will struggle to deepen their influence in the more urban and better governed south. But that will not help anyone they are currently terrorising.

The government’s attempts to quell the violence have largely failed. Residents of Kaiama say they repeatedly pointed out the increasing threat from armed groups before the latest attack without receiving a response from the authorities. Following the assault, Mr Tinubu has dispatched troops to Kwara. But past experience illustrates the limits of military solutions. When the army last launched operations against several armed groups in the area in 2024 and 2025, the reprisal attacks were so brutal that it was forced to withdraw. Another jihadist group soon filled the void. America has dispatched a small team to Nigeria to help with counter-terrorism, but it is unclear what its precise role will be. In addition, the diffuse nature of the threat makes it hard to decide whom to target.

Ultimately, what would help is better governance. Mr Tinubu’s government is hiring more police and plans to allow states to run their own security so that they can address local threats directly. That is welcome. But the government has limited resources, and both bandits and jihadists have powerful regional supporters. Their grip will be hard to break. ■

## Art and politics in Africa

# Bust-up over bronzes

BENIN CITY

**The continent's hottest new museum risks being undone by local politics**

BEHIND THICK earth walls a small team of Nigerians are archiving fragments of their country's past. The Museum of West African Art (MOWAA), an exhibition space and research institute, was built on what was once the royal heart of the Benin empire. In 1897 Benin City, as the metropolis in southern Nigeria is now called, was razed by the British; 129 years later, MOWAA's archaeologists and scientists are busy probing the earth below. Curators are preparing high-tech storage rooms for the sculptures, manuscripts and other wonders that MOWAA is waiting to receive.

Yet whether that will ever happen is up in the air. The multi-million-dollar museum was supposed to open to the public in late 2025. Instead, the inauguration has been postponed indefinitely because of a long-running dispute with Benin City's traditional king, the oba. Though its archaeological work continues for now, MOWAA's fate hangs in the balance.

Things came to a head in November, when protesters stormed a glitzy preview event for officials and foreign guests. The intruders, echoing the oba, demanded that the museum be suspended pending an "investigation" into its provenance, funding and legality, prompting an inquiry. But the dispute goes back further.

It begins with Benin's famous bronzes, a stunning collection of plaques and statues looted by the British and bought by museums (and private collectors) across Europe and America. On February 8th the University of Cambridge became the latest institution to say it would return its collection of bronzes to Nigeria as part of a global drive for restitution. In 2018 Godwin Obaseki, then the governor of Edo state, which includes Benin City, announced plans for a new museum that could house them. That undercut the argument, made by opponents of returning the bronzes, that Nigeria has nowhere to keep them safe and on view for locals.

Yet not everyone was happy. In 2021 Ewuare II, the current oba, accused the team behind the project of attempting to hijack the restitution process. He was particularly exercised by the museum's new name, which he believed severed the link between the bronzes and the palace. "It started as the Benin Royal Museum, not MOWAA—that is the foundation of the argument," says his spokesman. In 2023 Muhammadu Buhari, then Nigeria's president,



A touchy subject

declared the oba "the original owner and custodian of the culture, heritage and tradition of the people of Benin kingdom". Any returning bronzes were to be handed to him rather than the government.

MOWAA's leaders strenuously deny ever trying to exclude the palace. A trust established to oversee the museum included the crown prince. When that proved insufficient to placate the palace, the museum team decided to widen the project's focus, says Phillip Ihenacho, the Nigerian financier who runs it. MOWAA would be just one museum among many, and it would not house the bronzes.

The argument may not be primarily about the bronzes. The oba has claimed that MOWAA's leaders duped foreign donors into investing in a project they knew would never host the artefacts. The state government suggests Mr Obaseki abused his power by appointing his "business partners" to the project "without due consultation". (Mr Obaseki and Mr Ihenacho, who are friends, deny any wrongdoing.)

The oba's critics claim that he is really motivated by money. In October the new state governor partially revoked MOWAA's land title. Some fear the next step might be to seize it and hand control to the oba. The royal palace, which lost its tax-raising powers under colonialism, is a scruffy shadow of its former self; goats bleat in the courtyard. A fancy museum could give it a useful new source of revenue.

Many locals would be fine with that. While the oba is revered, MOWAA is seen as an elite project that is "totally foreign to the everyday man in Benin", says a local businessman. Nigeria's federal government has set up a panel to broker a compromise that could save the museum. But it would not be the first such project to be undone by local politics. ■

## Syria v Iraq

# Awkward neighbours

ABU KAMAL

**The current antipathy between Syria and Iraq has deep roots**

AHMED AL-SHARAA'S international charm offensive has been impressive. Syria's interim president has basked in applause at the United Nations and held court in private members' clubs in New York. In May he was warmly welcomed to Paris by France's president. A closer neighbour, however, remains unswayed.

In another age, Iraq and Syria might have been natural allies: twin nations astride the Euphrates, blessed with diverse populations and historic cities. In practice, the relationship has been poisonous for decades. The Baath party, socialist and Arab nationalist, might have bridged the division. Instead it deepened it. By the 1970s, rival Baathist regimes ruled in Damascus and Baghdad. Hafez al-Assad, then Syria's president, dismissed Saddam Hussein and his allies in Iraq as a "gang". Saddam accused Syria of treachery. After America invaded Iraq in 2003, Bashar al-Assad sent busloads of jihadists from his prisons into Iraq, hoping to bog America down in a 21st-century Vietnam.

Mr Sharaa makes such history hard to forget. He once waged jihad against American occupiers in Iraq and spent five years in Iraqi prisons. In Shia-majority Iraq, where Iran, the Middle East's leading Shia power, holds great sway, his decision to join the jihadists is not easily forgiven.

The rise of Islamic State (IS), which was Sunni, in 2014 prompted the growth of Iran-backed militias in Iraq. Over a decade later, many of these sectarian armed groups remain deeply embedded in the Iraqi state, still implacably opposed to the Sunni militants who helped Mr Sharaa topple Mr Assad in December 2014. Syrians, for their part, remember that those militias fought beside the Syrian dictator.

In recent years, Muhammad Shia al-Sudani, Iraq's prime minister, has overseen ambitious plans for construction and infrastructure, including digital services, in Iraq while trying to convince the militias to get rich by doing business instead of fighting. But Mr Sharaa's rise has prompted a rethink. Some of the militias, still loyal to the Islamic Republic, see a chance to distance themselves from a weakened Iran, and re-cast their domestic legitimacy as protectors against Mr Sharaa's Sunni militants. Others worry that Iraq's own Sunnis, who make up 40% of the population, might find inspiration in Mr Sharaa's victory.

Recent events have deepened the an-

tipathy. This month Syrian government forces regained swathes of territory held by the Syrian Democratic Forces, a Kurdish-led militia. American officials began transferring up to 7,000 of the highest-risk IS detainees, held in prisons in the region, into Iraq. Some in Iraq were furious, but the government insisted it was only temporary—and better than their escaping.

Mr Sharaa's ascent has stirred deep unease in Baghdad. Last month Iraq's intelligence chief claimed that 10,000 IS fighters are at large in Syria, up from 2,000 a year ago. Mr Sudani is one of the few Arab leaders yet to roll out the red carpet for Mr Sharaa. A vast concrete wall 350km long now runs along their once-porous border.

Iraq still bears the scars left by Mr Sharaa's former comrades in Mosul and Fallujah. Many in Baghdad wince when they see Western leaders embrace the Syrian leader. "He is not trusted, and not welcome here," warns an Iraqi diplomat. ■

## Saudi Arabia

# The more things change

RIYADH

**Why Saudis feel squeezed even as the country's economy booms**

THE BILLBOARDS still line the motorway from the airport to the Saudi capital. They promise a "new modern downtown" for Riyadh, to be dominated by the world's most voluminous building. Developers pressed on despite warnings that the cube-shaped skyscraper, known as the Mukaab, would collapse under its own weight. The "giga-project" was a centrepiece of Vision 2030, the kingdom's scheme, introduced in 2016, to diversify its oily economy.

But with oil prices stubbornly low, Saudi Arabia can no longer afford such ventures. Last month the kingdom halted work on the Mukaab. Construction has largely stopped on The Line, a fanciful \$500bn-plus "linear city" in the desert. The 2029 Asian Winter Games have just been moved to Kazakhstan because a ski resort being built in Saudi Arabia's mountainous north-west will not be ready on time.

Authorities now promise a tighter focus on a few sectors of the economy, notably tourism, manufacturing and logistics. That would be a welcome (and overdue) shift away from science-fiction schemes that gobbled up enormous amounts of capital.

The giga-projects are not the only area where Vision 2030 is stuttering. The scheme is meant to steer Saudis away from state sinecures and into the private sector, which often means pushing them towards low-wage jobs once filled by migrants. Mu-

hammad bin Salman, the kingdom's crown prince and de facto ruler, is keen to see Riyadh grow. That has strained housing and services in the capital. He also wants to woo skilled expats, making Saudis compete with foreigners. These contradictions amount to a rupture in the social contract.

People are particularly concerned about jobs and wages. At the beginning of Vision 2030 the average Saudi worker took home 10,045 rials (\$2,679) in monthly pay. Nine years later the mean wage is 11,197 rials, an 11% increase. But cumulative inflation during those same years amounted to slightly more than 17%. Some families have compensated by adding an extra job. Vision 2030 aims to boost female employment, and Saudi women have responded enthusiastically. In 2016 just 19% of the female labour force was employed; by 2025 that figure had climbed above 34%.

Women still earn less than their male counterparts, and the wage gap has grown, in part because women have piled into service jobs (selling lingerie and perfume in malls is now the exclusive preserve of female citizens). Still, the surge in women's employment has topped up household incomes. A survey in 2018 found that the average Saudi family earned 14,800 rials a month, while in 2025 it was 18,100 rials.

If families are earning more, they are also paying more. The Gulf Co-operation Council, a club of six petro-monarchies, decided in 2015 to introduce a uniform 5% value-added tax. Saudi Arabia imposed one in 2018, then tripled it during the covid-19 pandemic, ostensibly temporarily, to offset plunging revenue elsewhere, but the rise was never reversed. Subsidies on electricity, fuel and water have been slashed. Young workers will retire at 65, up from 58.

Higher prices are a particular strain on Saudis who moved to Riyadh in search of

work. Before Vision 2030, Jeddah was the kingdom's commercial capital, thanks to its role as a trade hub and the entry point for pilgrims to Mecca. The eastern province, Saudi Arabia's oil patch, was vibrant, too. Riyadh, in-between, was a sleepy seat of government and a few national champions. No longer: the crown prince is pouring billions into the capital. For young Saudis job hunting, Riyadh is the place to be.

The influx of both Saudis and expats has sent house prices soaring. Rents in the capital are up by more than 50% since 2020. Last year Prince Muhammad imposed a five-year freeze on rents in Riyadh, a nod to the growing strain on household budgets. Perhaps because of soaring costs, many Saudi families no longer rent: around two-thirds now own their homes. But prices of flats in Riyadh have doubled since 2020. Meanwhile, those in Jeddah and the east have barely budged.

For decades the state was the largest employer of Saudis: a government job was seen as a birthright. Civil servants were not rich, and their salaries and benefits fluctuated with the oil price. But they made a decent living. Expats were mostly low-paid labourers from Africa and Asia. The social contract now looks quite different. Young people move to Riyadh for low-paid service jobs in the private sector, then watch expats land cushy contracts.

Young people are frustrated with precarious, tedious service jobs that pay too little for them to consider starting a family. Income inequality is a growing problem for the kingdom's rulers. Such complaints might be new to Saudi Arabia—but they are familiar to people in the rest of the G20. It is a curious accomplishment for Vision 2030: in trying to diversify the Saudi economy, it has introduced dilemmas that exist everywhere in the rich world. ■



Boundless and bare, the lone and level sands stretch far away

## Europe



### European defence

## Flying on empty

A crucial European fighter-jet and drone partnership is on the verge of a break-up

POLITICIANS HATE to admit it when their pet projects are unravelling. So it is not surprising that on February 9th Emmanuel Macron, France's president, rejected reports that a European effort to build a sixth-generation fighter jet is near collapse. The Future Combat Air System (FCAS), which he conceived in 2017 with Angela Merkel, then Germany's chancellor, had an expected price-tag in the high tens of billions of dollars. It has only become more urgent amid threats from Russia and fears of American abandonment. Europe's rising defence budgets ought to make it easier. But for months it has been likened to a dead man walking. Mr Macron plans to talk to Germany's chancellor, Friedrich Merz, in hopes of restoring it to life.

The FCAS project was hailed as Europe's opportunity to boost its air power after failing to develop a rival to America's fifth-generation F-35. It involves more than the fighter jet itself, intended to replace

France's Rafale and the Eurofighter Typhoon flown by Germany and Spain (which joined in 2019). FCAS also aims to develop a swarm of autonomous drones to support the fighter and a communications "combat cloud" linking all its elements.

It was always going to be hard for three big countries to work together on such a complex system. What is killing FCAS is a form of dysfunctional collaboration between firms that has doomed several European defence projects in the past. Sebas-

tian Laiseca Segura, a former director of FCAS at Indra, the consortium's Spanish partner, says it is not just the fighter programme that is in trouble. Three other joint projects in the past five years are all, he says, virtual write-offs.

Last October France pulled out of a €7bn (\$8.3bn) drone programme involving Airbus, Dassault and Italy's Leonardo. Franco-German squabbling has delayed a plan for a new tank by years. A Franco-German project to develop a maritime patrol aircraft fell apart in 2021 when Germany selected an American plane instead.

FCAS is hobbled in part by disputes over work share. The idea was for Dassault, which built the Rafale, to take the lead on the jet. Airbus (which had been a partner in the Typhoon) had the main responsibility for the combat cloud and its remote carriers. Indra would focus on sensors.

But the French and Germans disagree on how to work together. "I will not accept three people round a table deciding on all the technical aspects," said Eric Trappier, Dassault's boss, in September. Dassault thinks the leaders should call the shots, while the Germans want to use the project to develop capabilities. But Dassault sees no obligation to surrender its intellectual property to Airbus. An insider says other big French firms involved in FCAS are behaving similarly. ➤

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The Germans are ready to walk. The only thing keeping FCAS limping along is that neither Mr Macron nor Mr Merz has worked out how to cancel it while saving face. Despite what Mr Macron says, Dassault will probably go its own way. The only part to survive may be the “combat cloud”, as a discrete project.

With Germany nearly doubling its defence budget in the next three years, Airbus could go it alone, says Ben Schreer of the International Institute for Strategic Studies, a British think-tank. It prefers a heavier fighter than the one conceived by Dassault, which wants it to operate from France's aircraft-carriers. Or Airbus might partner with Sweden's Saab, maker of the Gripen fighter, whose interest in joining a rival British-Italian-Japanese project has cooled. For all the talk of reducing industry fragmentation, Europe could end up with four different sixth-generation fighters.

Two other crucial European joint projects are in better shape. The European Long-Range Strike Approach (ELSA), launched in 2024, is developing ballistic and cruise missiles. It has seven partners: Britain, France, Germany, Italy, the Netherlands, Poland and Sweden. The European Sky Shield Initiative (ESSI), which began in 2022, is a German-led procurement scheme for air-defence systems which over 20 countries have joined.

Neither is as ambitious as FCAS. ELSA is a loose coalition that will encourage programmes between two or three partners at a time. Thus France, Italy and Britain are developing a stealthy cruise missile, while Germany is building a more powerful version of its Taurus missile with Sweden.

ESSI is different again. It will source off-the-shelf kit for the purposes it has identified: European systems for short and medium-range roles; American Patriot and Israeli Arrow interceptors for long-range capabilities. France has not joined, saying Europe should not rely on American systems even if building its own takes longer. But Mr Schreer says pooling resources to buy available systems is preferable to com-

plex joint schemes to develop new ones.

Camille Grand of ASD, Europe's aerospace, security and defence industry trade organisation, says that, counterintuitively, rapidly growing defence budgets in some countries may reduce the pressure and make collaboration less likely than when money was tighter. “They can weigh the benefits of a national strategy against the complexity of co-operation,” he notes.

For years France has taken Europe's most nationalistic approach to military procurement. But soon Germany may be spending twice as much as France does on defence. The German refusal to be the junior partner in FCAS reflects that new financial muscle. “The question”, says Mr Grand, “is how much co-operation is desirable, and in what framework?” ■

Stéphane Séjourné, the European industry commissioner (and a longtime friend of Mr Macron). The president argues that it would offer “protection, not protectionism”. Germany and Italy worry that protectionism is exactly what it amounts to. The Baltic and Nordic countries and the Netherlands have warned that such rules risk “pushing investments away from the EU”.

When he first campaigned for office in 2017, Mr Macron called for a “Buy European” act. He insisted this was the foundation for industrial self-reliance; his critics dismissed it as a wheeze to prop up French firms. Mr Macron hopes that a new sense of urgency will help to win them round. Europe, he says, is facing a “geopolitical and geo-economic state of emergency”. If the continent does not invest in its economy and help its firms grow more quickly, it will be “swept aside” by technology from America and imports from China.

The president terms it a “Greenland moment”: fellow Europeans have begun to understand the gravity of the stakes. But there is a risk, he warns, that the initial moment of trauma, as Europeans worry that America is abandoning them, turns to “a cowardly relief” when the crisis passes. That would be a mistake. Europe is dealing with an “openly hostile” American administration, which wants its “dismemberment”. “Everyone needs to understand”, he says, “that the crisis we are living through is a profound geopolitical rupture.”

Ultimately, Mr Macron argues, Europe should not underestimate its strengths: as a market of 450m people, but also as a region governed by the rule of law. The challenge it faces is to transform these strengths into levers of geopolitical force, before other powers pull so far ahead that it can no longer compete.

Mr Macron's appeals have met with some scepticism. His political situation is weak. He is unpopular, has no parliamentary majority, and has only 15 months left in office. His insistence that there is still a future for the troubled Future Combat Air System, a joint effort with Germany and Spain, baffles those close to the collapsing project (see previous story).

The president's call for “Eurobonds for the future”, to be invested in defence, green technology and AI, particularly irritated Berlin. Friedrich Merz, the German chancellor, is also under pressure domestically, and his party would not countenance another big European borrowing scheme. Germany would prefer to focus on Mr Macron's other remedies for European weakness, such as the deepening of the single market, which it fully supports.

For all the criticism, few would dispute Mr Macron's central warning: that Europe is too slow and too fragmented, and that it is running out of time to fix its problems. So, for that matter, is he. ■

## European competitiveness

# Don't call it protectionism

PARIS

**Emmanuel Macron wants to boost Europe's economy by buying local**

WHEN EUROPEAN leaders gather to discuss competitiveness, they agree on a lot more than they used to. (The latest such meeting was due to convene at a Belgian castle as *The Economist* went to press on February 12th.) Most think that the European Union should spend more, borrow to rearm, and curb reliance on single foreign suppliers. Strategic autonomy, of a sort, has become a shared catchphrase. But one point remains prickly: France's insistence on achieving this ambition with rules on “European preference”.

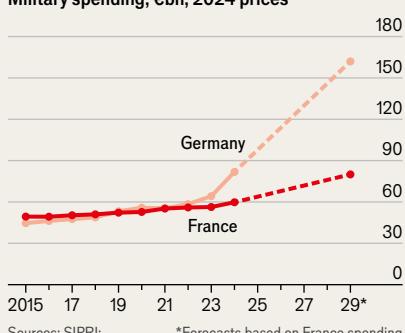
Emmanuel Macron wants this policy to form a central part of the union's pro-growth strategy, which the French president laid out in an interview with *The Economist* and other European media on February 9th. The idea, he says, is to protect the union's “critical industries”, such as steel, chemicals and defence. This can be done by tying state subsidies to a minimum share of European inputs, depending on the sector, as well as enforcing “buy European” rules for public procurement.

In many respects the EU is heading Mr Macron's way. SAFE, the union's new joint defence-procurement scheme, mandates (at French insistence) that at least 65% of the components of many systems it pays for must come from countries that are members of the EU or have association agreements with it.

France is facing pushback, however, over its desire for strong rules favouring European firms in the EU's “Industrial Accelerator Act”. This is being negotiated by

## Pulling away

Military spending, €bn, 2024 prices



Sources: SIPRI;  
IMF; press reports

\*Forecasts based on France spending  
2.3% of GDP and Germany 3.5%

## Germany's economy

# SAMs tomorrow

BERLIN

### Can Germany rearm its way to growth?

FOR SOME time, Germany's economic recovery has been just around the corner. Rosy-ish forecasts have succumbed to repeated headwinds, from pricey energy to Donald Trump's tariffs to Chinese dumping. Last month the government led by Friedrich Merz, the chancellor, downgraded its growth forecast for 2026 from 1.3% to 1%. Ambitious reform pledges have given way to low-grade rows within the coalition over dental insurance and inheritance tax. Just nine months into the government's term, a sense of drift has set in. Firms are fed up. "Euphoria [at Mr Merz's election] has given way to sheer horror at the development of Germany," was the recent verdict of one business chief.

That may be excessive. But some certainly hoped for a speedier rebound, given the extraordinary fiscal stimulus on which Germany has embarked. Last March, at Mr Merz's instigation, the Bundestag approved a €500bn (\$595bn) debt-financed fund for climate and infrastructure, and excluded most defence spending from the constitutional "debt brake", which caps deficits. Promising to build Europe's "strongest conventional army", Mr Merz laid out a plan to reach the NATO goal of devoting 3.5% of GDP to defence by 2029, six years earlier than required. Last year the country once known as Europe's austerity champion ran a deficit worth 2.4% of GDP; it will yawn yet wider in the years ahead. Overall defence spending has risen from €47bn in 2021 to a projected €108bn this year, or 2.8% of GDP.

German rearmament began in 2022, after Russia invaded Ukraine and Olaf Scholz, then chancellor, declared a *Zeiten-*

*wende* (turning-point) in security policy. Mr Merz accelerated the ramp-up. For all the gloom, his government's largesse has inspired signs of recovery. Last year the economy eked out growth of 0.2%, after years of stagnation or worse. Two-thirds of this year's projected growth is credited to fiscal policy. Manufacturing orders have begun to boom, probably owing largely to outlays on weapons and ammunition. Spending on big-ticket items such as armoured vehicles, air defence and space technology will help further. "We need to wait for more numbers to know whether this is a flickering light or something more," says Johannes Binder at the Kiel Institute for the World Economy. "But there is reason to be optimistic."

The biggest question is how fast Ger-

many can convert those orders into production. Its armsmakers have done a decent job responding to increased demand, argues Oliver Rakau at Oxford Economics, a consultancy, but have not moved fast enough to avoid huge backlogs (see chart on next page). Bottlenecks in facilities and labour supply, as well as red tape, are a scourge across the economy; defence is no exception. Some firms complain it takes too long to gain security clearance for the workers they hire. Still, Carsten Brzeski, a Germany-watcher at ING, a bank, regards Germany as a "ketchup-bottle" economy: shake it for ages and nothing happens, until suddenly it all comes out.

Can this state-driven rebound inspire broader recovery? Orders are one thing, but overall manufacturing output remains ➤

## Norway

# Northern exposure

### The Epstein files sully a squeaky-clean Scandinavian image

NORWAY IS KNOWN for wealth, beautiful landscapes and do-gooding mediation in far-off wars. Even other Scandinavians see it as annoyingly wholesome. But the country's image has taken a knock from revelations of prominent Norwegians' chumminess with Jeffrey Epstein, a dead sex offender.

The royal family had already been having a rough time. Crown Princess Mette-Marit, who married Prince Haakon, heir to the throne, in 2001, has a son from a prior relationship who is on trial on 38 criminal counts, including four of rape. Last month it turned out Epstein's files included flirtatious exchanges with the princess. "U are very charming u know," she wrote to Epstein in 2012, four years after his conviction for soliciting sex from a minor. She apologised, saying she had shown bad judgment; Jonas Gahr Store, the prime minister, agreed.

Politicians and diplomats have been caught up too. "Putin is welcome to join for dinner," Epstein wrote to Thorbjorn Jagland, a former prime minister, in 2013. Mr Jagland seemed to discuss visiting Epstein's island, and to apologise for bringing his wife: "I can't keep it going only with young women as you know." At the time he was head of the Nobel peace-prize committee and the Council of Europe, a democracy watchdog. Norway's office of economic crimes is investigating him for possible corruption.

It is also investigating two diplomats, Mona Juul and her husband, Terje Roed-



But her emails

Larsen. They helped negotiate the Oslo peace accords between Israel and the Palestinians in the 1990s. Mr Roed-Larsen called Epstein his "best friend". Ms Juul wrote she was "forever grateful for all you are doing".

A survey in 2018 found that Norwegians, more than any other western Europeans, rate their culture as superior to others'. They may not appreciate how much of their wealth is due to oil rather than virtue, says Ketil Raknes of Kristiania University in Oslo. The revelations are forcing a look in the mirror. At least Norway's authorities are taking action, unlike those in some other countries.

## Panzer, on fire

### Germany, weapons and ammunition 2021=100, 12-month moving average



► stagnant, having fallen by 15% since its peak in 2018. The traditional industrial workhorses of cars and chemicals are underpowered. Germany is shedding around 14,000 manufacturing workers a month. The defence and infrastructure splurge should have downstream effects on other parts of the economy. Some laid-off workers, or idle car plants, might be redeployed to produce arms and munitions. But not everyone in the auto industry can hope for a defence job, says Mr Brzeski.

Still, smartly targeted spending will in time drive innovation across the whole economy, notes Constantin Häfner, a board member of the Fraunhofer Society, an applied-research institute, "especially as the gap between defence and civilian tech disappears". A big chunk of Ger-

many's defence spending will go to established firms like Rheinmetall. But encouraging, for example, the lattice of startups in and around Munich working on drones, robotics and AI-enabled defence tech could have substantial spillover effects. Mr Binder says Germany should set a benchmark for the share of defence spending devoted to research and development.

For now, though, a gloomy Germany eagerly awaits its long-delayed recovery. Thanks to the difficulties in turning orders into output, Mr Rakau thinks growth this year will prove to be even slower than the government predicts, at just 0.8%. But it will pick up speed as the German machine judders into gear in the second half of 2026, and accelerate further next year. Not quite around the corner, but not far off. ■

cabin shelters, where they are given food, a new SIM card and a grant of 10,800 hryvnia (\$250), provided the funds are available. They are then put on minibuses and taken to trains, buses, hospitals or relatives. Serhiy, an ex-convict who found God during the pandemic, says he draws on his own story to give the refugees hope, but it is difficult. Those who crossed in the summer had been hoping things in the occupied territories would improve, but "those travelling now, in winter, see no changes. It is getting worse, worse, worse."

Many of those crossing are afraid to speak. Those who do begin in whispers, before caution gives way to confession. Alvetina, a pensioner in her 60s, travelled from a village in Donetsk region. She hopes to see her family in Kyiv for the first time since the invasion. The journey, which once took hours, lasted three days.

The road took her through Mariupol for the first time since Russia annihilated much of the city. "It's hell, a truly terrible sight." She cries as she describes her "invisible life" in her own village, hiding her Ukrainian passport in a jar of flour "like contraband". She knows better than to reveal her loyalties to neighbours, many of whom now support Russian rule.

Four years into the war, Russia's occupation is changing. Last month marked the end of a three-year "transition period" intended to absorb the occupied territories into Russia. Moscow still mistrusts their loyalty. The FSB is omnipresent.

Yet the imprint of annexation is visible. Courts, pensions, taxation, policing and business and property registers have been folded into Russia's electronic bureaucracy. A new edict requires Ukrainian owners to register their homes by July 1st or face seizure; those deemed "unoccupied" will be expropriated regardless. Propaganda banners promote the idea of "one nation", reunited under Russia. "You must never speak well of Ukraine," says Sofia. "Sit quiet, or risk being taken away or locked in your own basement."

The occupation is cruel but effective. "No one has mastered the art of occupation like the Kremlin," says a source in Ukrainian intelligence. Early in the war occupied regions had a strong underground pro-Ukrainian network. Now it has thinned: "They filtered and frightened them." Alongside Russia's creeping battlefield advances, this has created facts on the ground. In American-led peace talks, Ukraine is being pushed to accept the de facto loss of millions of its citizens' homes.

Recent polling suggests a growing minority, perhaps 40%, of Ukrainians, might accept such a deal if it led to peace. But it finds limited support among those leaving the territories. "We know it is difficult," says Alvetina. "But we are still waiting for Ukraine. We still hope to be liberated." ■

## Occupied Ukraine

# The last border crossing

DOMANOVA

A checkpoint in Belarus is a path back for refugees from occupied territories

TWO SILHOUETTES appear on the snow-covered road that leads from Belarus to the Ukrainian border crossing. The first is a man in a wheelchair; behind him is a young woman. She pushes the chair a distance before returning to drag suitcases through the snow. She does this over and over again. Ukrainian guards offer assistance on the final 100 metres of the 2km trek. Sofia, 17, is crossing to begin a new life in government-controlled Ukraine after four years under Russian occupation. Serhiy, a retired engineer in his 70s from Sloviansk, had hoped to visit his daughter in Simferopol, in occupied Crimea, but was turned back by border guards and suffered a stroke in the process. He debates returning to his home, though it has been hit by Russian drones. "The walls are still mostly intact," he says.

The Mokrany-Domanove crossing, 60km from Poland, has become a lifeline for some of Ukraine's most desperate. Officially closed, in practice it serves as a humanitarian corridor for people escaping Russia's occupation. Reaching it is hard: the circuitous route runs through Russia and Belarus and takes days. To cross into Ukraine, those without valid Ukrainian documents (dangerous to carry in Russia) must first have papers issued by the Ukrainian consulate in Minsk. Some never make it, stopped at "filtration points" run by the FSB, Russia's state security service, or turned back after border interviews.

Roughly 30 to 40 people are crossing each day. Most are women, children or the

elderly, though military-age men also make it over, knowing they will be sent straight to Ukrainian army officers for possible recruitment. Some are terminally ill and returning home to die. Some bring things they could not abandon, including horses and in one case a small group of Kamori goats. All arrive with stories of a homeland being sealed off and Russified.

The reception team on the Ukrainian side is marshalled by a local volunteer, also called Serhiy. Once the travellers clear security checks, they move to Serhiy's porta-



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# CHARLEMAGNE

## *The European Onion*

*How to make Europe work better, without the tears*



OVER THEIR eight decades of lurching towards ever-closer union, European federalists have marched under a succession of lofty banners. At first there was a “Council” of Europe, later several European “Communities” of various guises alongside a free-trade “Association”. In 1993 the European “Union” was born. To many the obvious next step could only be a United States of Europe. Not so. Instead, a new and unexpected mode of continental togetherness has now sprouted: the European Onion.

The idea that European integration should take this bulbous form started as a joke by Bart De Wever, a continental wit who moonlights as Belgian prime minister. Recently he quipped that for years he had misheard Charles Michel, a heavily accented compatriot who formerly chaired meetings of EU leaders, talk of *ze Euh-ropean Euh-nion*. The European...Onion? The confusion turned out to be fortuitous. “I think this is exactly what Europe needs to become,” Mr De Wever said, “an onion of multi-layers.”

It is not just Mr De Wever who thinks the eye-watering pantry staple—the base of recipes across the continent, from risotto to Swedish meatballs and Polish dumplings—offers a tasty way to get dozens of European countries to work together better. As things stand, the continent is generally governed by the EU’s one-size-fits-all model, which tends to move only as fast as its slowest member allows. A stratified approach, with some countries forming a federalising core while others stay in the looser outer layers, would help Europe keep up in a newly harsh geopolitical world. The European Onion is a joke worthy of serious times.

In part the EO approach has already taken root. “Coalitions of the willing” abound these days. A new “E6” of heavy hitters, made up of France, Germany, Italy, the Netherlands, Poland and Spain, is branding itself as a pioneering kernel of economic integration. For informal discussions of security matters there is the even more selective E3, comprising France, Germany and Britain—a country outside the EU. When, in December, a package of €90bn (\$106bn) in assistance to Ukraine was blocked by a small minority of the EU’s 27 national governments, 24 of them decided to push ahead regardless, leaving Hungary, the Czech Republic and Slovakia aside. Accepting that some countries would stay on the onion’s

outer layer prevented the whole scheme from ending in tears.

Groups of countries “forging ahead” are not entirely new in Europe. For one, the EU is not the only show in town. The NATO alliance encompasses most but not all EU members, and a few countries outside the club (notably Britain and America). Even within the EU proper, two big federalising milestones, the single currency and the Schengen passport-free area, include most but not all the members. But although more EU decisions have shifted to qualified-majority voting, where big countries count more and objecting ones can be forced to play along, the thorniest decisions usually require hashing things out until everyone agrees (or can live with it). The idea of a two-speed Europe—or of “variable geometry”, to use an ugly bit of Euro-jargon—has long been dismissed as a second-best option.

Purists still prefer it when Europe moves forward as one. For them, *à la carte* integration undermines the worth of the single market at the EU’s heart. Member states left out by the federalising core, notably in central Europe, sometimes grouse that they are treated as second-class. Multiple layers add complexity to a set-up that is already hard for many to grasp. (Who outside of a few buildings in Brussels knows the difference between the Council of Europe, the European Council and the Council of the European Union?) Transforming continental governance into a multi-dimensional Venn diagram of overlapping schemes risks turning the opaque into the impenetrable. That is why relatively little use has been made of an existing provision in the EU treaties allowing for “enhanced co-operation” (yet more ugly jargon) among some member states but not others. A simpler, one-speed Europe going slowly was preferred to a multi-speed one that risks division.

No longer. These days concerns around internal fragmentation have been trumped by the fear of inertia. Given the world’s unforgiving new realities, Europe must reform rapidly. It needs to tackle its sluggish economy and puny defence abilities, for starters. Because that requires greater co-operation, France, Germany and others cannot wait until every member state signs up to everything. (Hungary, under the cantankerous leadership of Viktor Orbán, already wields too much veto power.) Even well-meaning EU members sometimes differ over how much sovereignty to pool. Mario Draghi, a former Italian prime minister, speaks of “pragmatic federalism”, with a core pushing further ahead to get things moving. Where some countries lead, others may follow (many holdouts on the euro have since joined, for example). But the reticent should not stand in the way of pioneers.

### Or is it a garlic bulb?

The European Onion approach could help even more when it comes to the continent’s crinkly outermost layers. A multi-tiered system would help the EU deal with those who are outside the union but need to work more closely with it. Ukraine, for example, is being promised EU membership as part of a peace deal to end its war. But it will be years before it can meet the exacting standards expected of full members. A sort of “outer-tier” membership would help. Britain might find it attractive, too.

With multiple cores sitting side by side, perhaps Europe will become not so much an onion as a garlic bulb, or even a grapefruit. Whatever the favoured metaphor, it is clear something needs to change. Further across-the-board federalism looks unfeasible. Building the continent layer by layer is the most sensible plan. Europe is in a pickle. Going the way of the onion will help. ■

## Britain



**Labour's near-mutiny**

### A zombie prime minister

Sir Keir Starmer's leadership crisis is about far more than just Peter Mandelson

THE PRIME MINISTER has survived the most perilous moment of his time in office. On February 9th Anas Sarwar, the leader of Scottish Labour, became the most senior figure in the party to call for Sir Keir Starmer to resign. But cabinet ministers rallied around their boss, potential rivals blinked and Sir Keir gave a fighting talk to his MPs. The crisis cost Sir Keir two top advisers: Morgan McSweeney, his chief of staff, and Tim Allan, his communications director. Sir Chris Wormald, the cabinet secretary, is on his way out, too.

Sir Keir is the most unpopular British prime minister since records began, his ratings even worse than Liz Truss's during her 49-day stint in office (see chart 1 on next page). He is the sick man who cannot afford to catch a cold. That is why the scandal around Peter Mandelson's relationship with the convicted child sex offender Jeffrey Epstein has been so destabilising. Sir Keir's decision to appoint Lord Mandelson

as Britain's ambassador to America left him perilously exposed once fresh revelations emerged. Though Sir Keir sacked Lord Mandelson in September, files released recently have revealed the extent of the former cabinet minister's friendship with Epstein—including evidence that he appeared to share confidential government information during the global financial crisis. Sir Keir has apologised for believing Lord Mandelson's "lies".

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The task of governing was always going to be hard. Like many other rich democracies, Britain struggles with sluggish economic growth and an increasingly hostile American administration. In addition, Sir Keir inherited creaking public services and looming crises in social care and special-education funding.

Now he is paying the price for years of political manoeuvring. He was elected leader of the Labour Party as a successor to the hard-left Jeremy Corbyn, promising to keep Mr Corbyn's radicalism without his incompetence. Instead, in opposition Sir Keir expelled his socialist predecessor and avoided any policy announcements that might attract criticism.

In government, his approach changed again. Fearing the rise of right-wing populist Reform UK, the prime minister adopted a tough posture on immigration. This proved unpopular with his own voters. For the past year Sir Keir has styled himself as more of a technocrat (all the while pushing through left-wing legislation, for example on workers' rights). After a dramatic week of crisis for his leadership, yet another iteration of Sir Keir is likely: as a tribune of Labour's soft-left backbenchers.

His pivots helped Labour secure a thumping parliamentary majority (albeit on a small share of the vote), but they did little to prepare the party for government. ➤

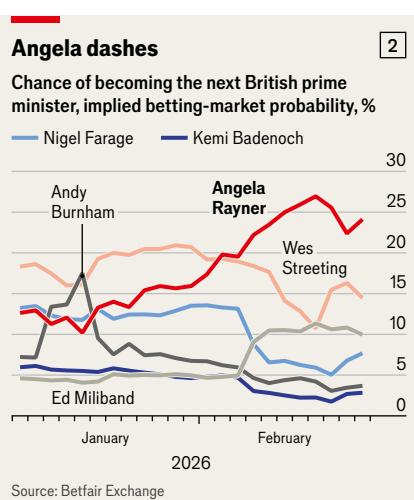
Labour pledged not to increase taxes on “working people”, but taxes are expected to rise to the highest levels since the 1940s. The party claimed it would stop the arrival of migrants crossing the channel in small boats; the numbers are higher than when Sir Keir took office. A lack of realism in advance means the government has no mandate for difficult choices in office. Sir Keir’s own MPs—never sold on a Starmerite project—have turned into a rebellious bunch. Unpopular policies incur political damage before (too often) being abandoned.

The problem is compounded by a dysfunctional operation in Downing Street. MPs and ministers privately complain that the prime minister’s team is both overbearing and erratic. In 19 months Sir Keir has lost two chiefs of staff, four directors of communications and 11 ministers. With no coherent project or ideology to fall back on, the prime minister has appeared to be paralysed by events, often outsourcing strategy to Mr McSweeney.

Voters are left feeling that nothing has changed. As the cost of living spiralled from 2021 onwards, Britons despaired at a Conservative government which was consumed by scandals and infighting. Sir Keir’s pitch in 2024 was that it was time to end the chaos and “put the country first”. Yet the disorder has continued. At the height of this week’s leadership drama on February 9th a former Conservative minister in the May and Johnson years said: “I’m getting terrible flashbacks. Awful. Repressed memory syndrome.”

Almost half of Labour’s 2024 voters now say they would vote for another party. Nigel Farage’s Reform has led every opinion poll since May 2025. Scared of losing their jobs, many Labour MPs are openly mooting the end of Sir Keir’s premiership.

In the short term he is helped by the lack of an obvious successor (see Baghot). Prospective challengers need to secure the support of one-fifth of Labour MPs (81 of them) before the matter goes to a ballot of the party’s members. Wes Streeting, the health secretary and figurehead of the La-



## Charles and Andrew

# Brotherly shove

The palace tries to limit the fallout from Andrew’s Epstein mess

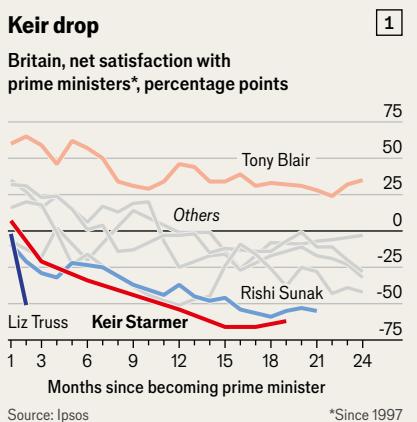
LAST MONTH Sir Keir Starmer, the prime minister, suggested that Andrew Mountbatten-Windsor, formerly Prince Andrew, should testify before America’s Congress on his dealings with Jeffrey Epstein, a convicted child sex offender. On February 11th Gordon Brown, a former prime minister, waded in, urging police to interview Andrew. The king is feeling the fury. Twice in a week he has been heckled over his brother’s vices.

After the latest release from the Epstein files Thames Valley Police is assessing two separate allegations relating to the former prince. First, that Epstein trafficked a woman to the Windsor Castle estate for sex with Andrew. Second, that he forwarded Epstein confidential documents relating to his time as trade envoy. On February 9th a spokesman for Buckingham Palace said the king stands “ready to support” a police investigation (Charles had already stripped his brother of his royal status and home). Earlier Prince William, next in line to the throne, let it be known that he and his wife, Catherine, were “deeply concerned by the continuing revelations”.

The Peter Mandelson affair has yet to implicate civil servants in the former Labour politician’s dealings with Epstein. The same cannot be said for some of Andrew’s aides. Amanda Thirsk, his former private secretary, is mentioned 64 times in the files, facilitating meetings with Epstein and inviting him to Andrew’s 50th birthday party years after his conviction. David Stern, an aide who was made director of a royal charity, helped Andrew’s ex-wife, Sarah Ferguson, secure Epstein’s assistance in paying off debts. He is mentioned over 7,000 times.

That these revelations stem from America’s Justice Department is itself an indictment. Once notorious for hounding the subjects of their reporting, royal correspondents have largely defaulted to deference. Official barriers don’t help. Even as a trade envoy, a member of the royal family is exempt from the Freedom of Information Act.

In polls the king has barely been tarnished by Andrew’s antics. But it is not only Andrew who may be sweating.



bour right, is suspected of preparing a leadership bid—though he denies it. On February 9th he released a transcript of messages with Lord Mandelson, to neutralise criticism of his proximity to the disgraced peer. The messages include a number of swipes at his own government, (conveniently) including statements that might endear him to Labour members.

The punters’ favourite is Angela Rayner, Sir Keir’s former deputy (see chart 2). A campaign website for Ms Rayner briefly appeared online in January, though she dismissed it as a fake. The working-class northerner is popular with grassroots members but remains under investigation by tax authorities. Andy Burnham, the Manchester mayor who is popular among party members, cannot stand because he is not an MP. Ed Miliband, the energy secretary, has told journalists that his previous experience as Labour leader has “inoculated” him from ever wanting to stand again.

So, for now, Sir Keir will struggle on, doubling down on left-wing policies to maintain the support of his MPs. Backbenchers now reason that they stand to benefit from a weak and malleable prime minister, especially with Mr McSweeney (whose political instincts were at odds with many of theirs) out of the way.

Local elections on May 7th could bring renewed peril for the prime minister. More damaging information might emerge from the documents relating to Lord Mandelson’s appointment, which the government has agreed to release. Already, a fresh scandal has emerged over Matthew Doyle, another of Sir Keir’s former communications directors, and his links to a child-sex-offender Labour councillor.

Few in Labour are calling on the party to confront hard problems, such as soaring welfare spending. Given the government’s huge majority, a general election is unlikely soon. So more Labour drift and drama beckon—to the dismay of voters, who were promised something better. ■

## BAGEHOT

### *The Labour alternatives*

*Eventually the improbable, the implausible or the once-impossible will become inevitable*



“TWENTY-EIGHT, twenty-nine, thirty!” Al Carns, a junior defence minister and a colonel in the Royal Marines, polished off the pull-ups with ease. The fireman he had challenged on camera was defeated. Military men hold a mysterious allure within British politics. People mention Mr Carns as a future Labour leader, even though he entered Parliament only in 2024. In the land of the nerd, the jock is king. In his crop of junior ministers, Mr Carns is a warrior among wonks. How many pull-ups can Josh Simons, a Cabinet Office minister, do? Has Torsten Bell, the pensions minister, ever killed a man?

Desperate people do desperate things. And there are few more desperate than the typical Labour MP, who faces electoral misery. Sir Keir Starmer is, already, the most unpopular leader in British polling history, embroiled in scandal over the appointment of Peter Mandelson and steering Labour to electoral catastrophe over both the short term and the long. Absurd scenarios are being proposed. Why not install a man with 18 months’ experience in Parliament, such as Mr Carns, as prime minister? Normally, there is a “Break Glass In Case Of Emergency” figure, ready to step into Downing Street. Not this time. There is no Gordon Brown, who spent a decade as chancellor glowering at the back of Sir Tony Blair’s head. Every alternative to Sir Keir ranges from the implausible to the insane, yet one will eventually become inevitable.

Andy Burnham, the mayor of Greater Manchester, would make sense. Among the pretenders, he alone polls above Sir Keir. Unfortunately for Mr Burnham, he is not an MP. And he can become a Labour MP only with the say-so of Sir Keir, whose political clout now extends to a grip over Labour’s internal structures and little further; Mr Burnham tried once, and Sir Keir said no. Should he become an MP, Sir Keir would swiftly stop being prime minister. While Sir Keir wants to prolong his stay in Downing Street, he will prolong Mr Burnham’s shift in Manchester.

Labour MPs want rid of the prime minister and yet abhor anyone engaged in the icky business of doing it. This paradox haunts Wes Streeting, comfortably the most ambitious cabinet minister. Ambition is no crime; ministerial ineptitude is. As health secretary, Mr Streeting is guilty of the collective sin of this government:

a failure to prepare for power. A sweeping change to the National Health Service—abolishing the quango that ran it—came not as an immediate big bang but a belated whimper, Mr Streeting having tiptoed for the first year.

Angela Rayner, Sir Keir’s former deputy prime minister, is the favourite. This is striking enough given that HM Revenue and Customs has a live investigation into her (at best) disorganised tax affairs, for which she left the government. Before her fall, Ms Rayner’s rise was remarkable. She left school with no qualifications and crawled from society’s scrapheap to the brink of Downing Street via her wits. Ms Rayner has life experience. Possibly too much. “Angela Rayner is not a suitable person to lead the country because she is not sufficiently educated,” said one caller, on a radio phone-in. “She doesn’t have the vocabularyability,” exposing the caller’s own lack of vocabularyability. British voters love the idea of a working-class politician until they meet one.

Politics rather than prejudice stands in the way of others. In a government that has been rather left-wing, Shabana Mahmood, the home secretary, is an exception. She has overseen a dramatic tightening of Britain’s immigration policy. For Labour MPs who wince at the idea of doing anything nasty, she would be a strange choice. Sir Keir and Morgan McSweeney, the prime minister’s former chief of staff, tried to push Labour’s MPs to the right on immigration. Some, such as Ms Mahmood, moved happily. The rest pushed back and pushed Mr McSweeney out of a job.

Ed Miliband, the leftie energy secretary, has proved the most competent minister in the cabinet, diligently setting a path for the next two decades of energy policy, for good and ill. Other challengers to Sir Keir struggle for name recognition; Mr Miliband suffers from it. Voters have rejected Mr Miliband once already, when he led Labour to defeat in 2015. Perhaps it is all for the best that Mr Miliband professes not to want the job.

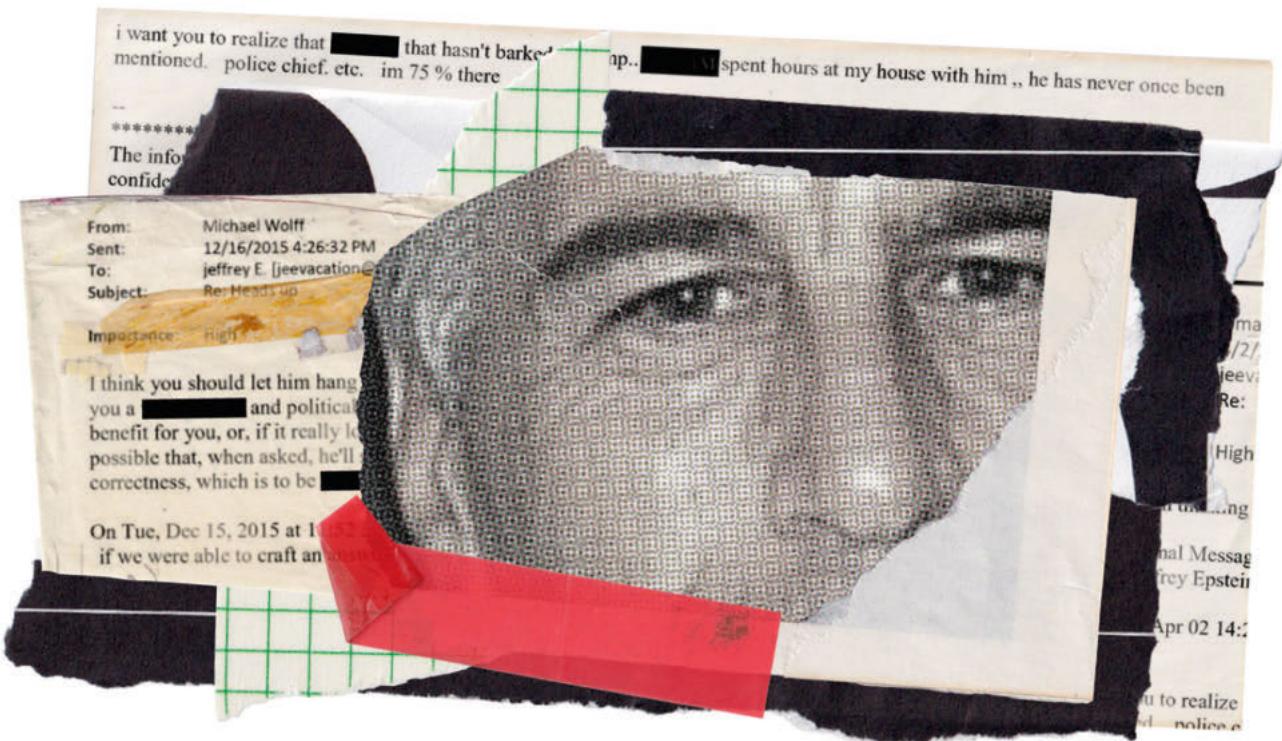
After all, why would he? Labour already has a new leader: Sir Keir. Sir Keir was always a weak prime minister, in so far that his own views mattered little. “There is no such thing as Starmerism,” he said, often and accurately. Sir Keir did what he needed to in order to be elected, such as talking tough on immigration; now he will say what he needs to, to have a chance of staying in power. A lurch to the left is inevitable. Mr Miliband and his ilk are in power, but not in office. Why bother making it official?

#### Sir Keir is dead. Long live Sir Keir!

Britain is in the midst of a constitutional experiment. The prime minister does not command a majority; the majority commands him. Labour’s backbenchers—that mix of former trade-union officials, lobbyists and people who attend seminars on The Third Sector best labelled the “soft left”—now run the country. To govern is to choose and Labour MPs have to pick who will be the face of this new government.

Herein lies the problem. Labour’s MPs have proved incapable of taking any tricky decision voluntarily. They faint at modest reforms to welfare and wince at spending restraint. When it comes to the prime minister, external circumstances will, eventually, force a choice. Perhaps a mortifying by-election defeat to the Green Party in a Manchester suburb later this month will jolt them, or a May massacre in Scotland, Wales and London. Maybe the remorseless prospect of defeat in 2029 will foist action upon them. Until then, they can grumble, brief and watch videos of Mr Carns doing pull-ups while wondering what could be. ■

## International



**A nightmare, quantified**

## Jeffrey's network

**What 1.4m emails reveal about America's most notorious sex offender**

FOR NEARLY a decade information about the life of Jeffrey Epstein has emerged in dribs and drabs. Now, in the wake of an American law passed in November compelling the release of prosecutors' files, the trickle has turned into a torrent. On January 30th the Justice Department published over 3m pages of documents. The release has claimed scalps, including Brad Karp, head of a large law firm in New York; Miroslav Lajcak, Slovakia's national-security adviser; and Jack Lang, boss of the Arab World Institute, a Parisian cultural centre. More are likely. Following complaints by members of Congress, the Justice Department has begun exposing names it had blacked out.

The archive is too big for anyone to have read even a fraction. Fortunately, a group of software engineers has turned the PDFs into a format that is easier to analyse. Using Reducto, an AI tool, they have identified which files contained emails; extracted the listed senders, recipients, dates, subjects and message bodies; and

posted them on a website ([Jmail.world](http://Jmail.world)). In total, the group processed 1.4m emails, finishing its work on February 11th. *The Economist* has collaborated with it to assign each message to unique individuals regardless of spellings or email addresses, and researched the backgrounds of the 500 people who appear most often. We then used a large language model (LLM) to score each email chain on how disturbing its content would be to a typical reader, creating an "alarm index".

Most of Epstein's correspondence was with his staff, service providers and business contacts. People who worked for or with him made up a third of the top 500 names and accounted for nearly 60% of his messages. Chief among them were Lesley Groff, his assistant; Richard Kahn, his accountant; and Larry Visoski, his pilot.

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Homes in New York and Palm Beach, and his private Caribbean island, required armies of contractors and housekeepers.

The rest of the emails, however, depict a remarkable network. The top 500 correspondents span industries. Some 19% of messages were with financiers; 10% with scientists or doctors; 8% with people in media, entertainment or public relations; 7% with technologists; 6% each for lawyers, politicians, academics and other businessfolk; and 5% with property magnates. The share of contacts in finance peaked at 25% in 2014 and then fell as those in academia and law rose. Most were in America, though Epstein kept ties with Britain, France, Germany, Nordic countries, Gulf states and even a Venezuelan oil trader.

He did not waste time on middle managers. A quarter of his top non-staff contacts have a Wikipedia page. He traded emails with at least 18 current or former billionaires, including Peter Thiel and Elon Musk; celebrities like Woody Allen and Deepak Chopra; and political figures such as Ehud Barak, a former Israeli prime minister. Most back-and-forths were balanced, with similar numbers of emails sent and received; an exception was Bill Gates, whom Epstein bombarded despite few responses. (Mr Gates was happy to meet Epstein on a number of occasions, however.)

Many relationships went far deeper than the occasional cocktail-party photograph. Epstein and Kathryn Ruemmler, ➤

White House counsel under President Barack Obama, swapped 11,300 emails from 2014 to 2019, with at least one direct message on 70% of days. Ariane de Rothschild, a banking billionaire, sent or received 5,500 emails; Larry Summers, a former treasury secretary, 4,300. In some cases Epstein grew close to family members: he was in touch with both Noam Chomsky, a linguist, and his wife, Valeria, and chatted with Soon-Yi Previn, Woody Allen's wife, more than with Mr Allen himself.

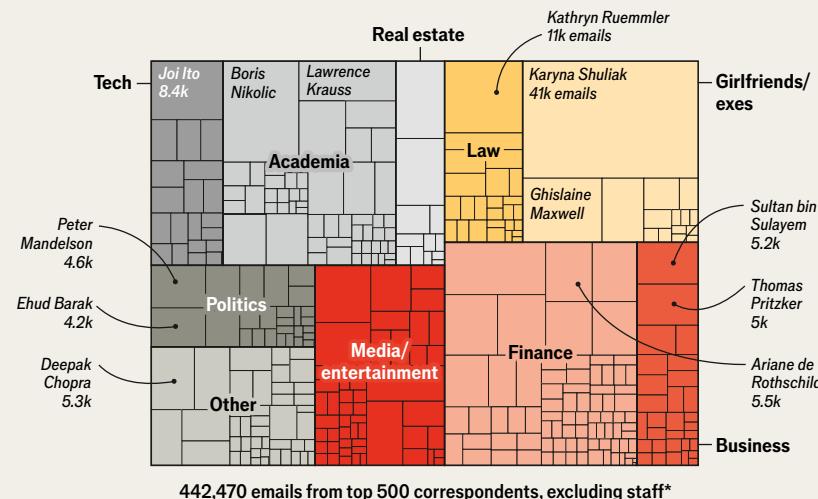
The vast majority of Epstein's emails contain nothing more worrisome than typos. But buried in a million mundane missives are hundreds that our LLM flagged as disturbing. There are sexual messages between Epstein and women with redacted names, often involving requests for nude photos. In some cases, there are also references to avoiding parents. Epstein reviews a draft agreement "governed by French law" with an "apprentice", requiring "sexual games". One message from a redacted sender reads: "Thank you for a fun night ...Your littlest girl was a little naughty."

People in Epstein's orbit frequently claim ignorance. An email in 2010 from the brother-in-law of Ghislaine Maxwell, an accomplice of Epstein, lends some credence to the idea. It cites an effort to remove details from his Wikipedia page and Google. Some messages with famous friends are boorish; others talk strategies for his criminal cases, including a few where he seems to admit to paying for sex. Prosecutors should prioritise the handful where associates, including rich friends with unredacted names, discuss evenings with "girls" he arranged for them to meet.

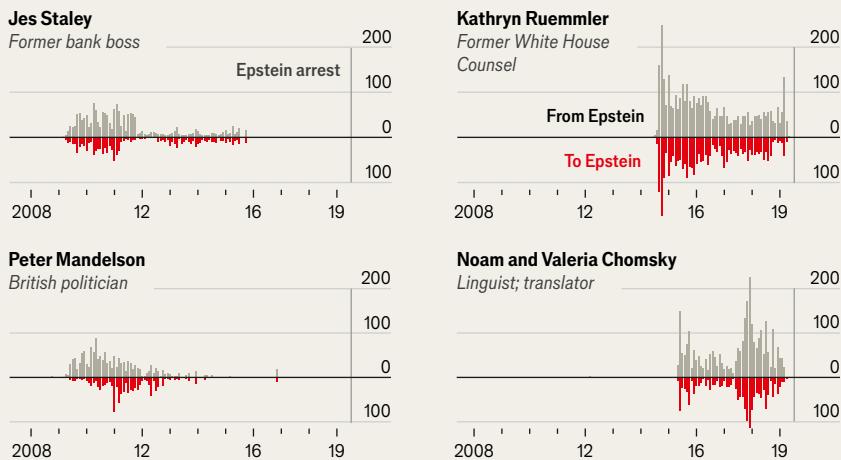
But most often flagged emails were with young women or little-known accomplices. (A typical example: "Sometimes I meet nice girls, I will let you know if I have someone.") This pattern may be because our LLM failed to spot incriminating messages sent to prominent contacts or because redactions are protecting people. Epstein was also careful. When discussing women with Steve Tisch, owner of an NFL team, whom Epstein calls "a new...shared interest friend", Epstein requests a phone call because "I dont like records of these conversations" (Mr Tisch says he regrets his relationship with Epstein and that all emails concerned "adult women").

The latest release leaves questions about Epstein unanswered, including how he secured a sweetheart plea deal in 2008 and killed himself in jail despite surveillance. Still, some are already satisfied. Like a normal inbox, Jmail is sorted from newest to oldest messages. The very first email is thus one that arrived three days after Epstein's death, from someone called Cody Rudland, whose name does not appear earlier. "You are dead," reads the subject, followed by the body: "Lol good riddance." ■

### → Frequent correspondents in the Epstein files span a range of industries



### → Some correspondents exchanged hundreds of emails a month



Rank†	Monthly total	Send/receive ratio	Total
7	Lawrence Krauss Physicist	1.2	7,593
11	David Stern Aide to Prince Andrew	1.4	6,364
14	Ariane de Rothschild Banker	2.7	5,532
20	Thomas Pritzker Hyatt Hotels chairman	0.6	5,029
22	Michael Wolff Journalist	0.8	4,831
29	Larry Summers Former US treasury secretary	0.6	4,294
49	Steve Bannon Former White House strategist	0.6	1,974
54	Peter Thiel Venture capitalist	0.4	1,880
58	Reid Hoffman LinkedIn founder	0.3	1,737
140	Bill Gates Microsoft founder	0.1	542
161	Elon Musk Tesla/SpaceX CEO	0.7	447

\*Manually coded based on public information and email content. Some classifications, particularly those in which women count as consensual romantic partners, are subjective. †Out of non-staff correspondents

# THE TELEGRAM

## *The temptations of tyranny*

*Yes, China has impressive high-speed trains. That is no reason for the West to adopt iron-fisted rule*



**A**CROSS THE democratic world, politicians and public intellectuals have a bad case of Chinese-train envy. A cottage industry has sprung up, involving books and podcasts by important people recounting silk-smooth rail journeys begun in Shanghai or Beijing, and wondering why America, Britain and other erstwhile industrial giants find public works so hard.

"We are talking 200-plus miles an hour and you can sit with a cup of coffee and it will not move," sighs Adam Tooze, a historian at Columbia University, in a much-shared online discussion about China's fast trains and other marvels. The host of that conversation, Ezra Klein, is the co-author of "Abundance", a book that blames lawsuits, growth-killing regulations and squabbling politicians for saddling America with creaking power grids, shabby airports and slow trains. True, China's Communist Party-controlled legal system is capable of high-handed abuses, the book allows. But it also allowed the country to roll out a high-speed network extending more than 23,000 miles (37,000km), at the same time as the state of California tried and failed to build a 500-mile rail line.

Some Western politicians draw still broader conclusions. Shaken by personal encounters with world-beating Chinese technology, they wonder why liberal democracies have fallen so far behind. Some sound ready to suspect that Western societies have become soft and spoiled. Leo Varadkar, a former prime minister of Ireland, recently wrote about glimpsing the future on trips to Asia. "For the first time since the 1800s, the rules of the world will not be written by Europeans or Americans alone," he predicted. Mr Varadkar was dazzled by a fast Chinese train (in his case, boarded in the southern metropolis of Guangzhou) and impressed by Chinese and Indian students who work hard and do not expect the state to "cater for their every need for little or no charge".

The propaganda value of trains that run on time is not lost on China's rulers. Xi Jinping once hosted Russia's president, Vladimir Putin, aboard a high-speed train, serenely pouring tea for his guest in this rolling metaphor for Chinese stability. Not a drop spilled, as a sign showed 301kph as their speed.

Alas, train-envy is not the only cause of Western self-doubt. Increasingly, when European officials tour Asia or meet Trump

administration officials in Washington, they hear variants of the same scornful question: when will you realise that liberal values are a luxury you cannot afford? In the Middle East hosts mock Westerners for imagining that a liberal, rules-based order ever existed. In some European capitals officials who have long hankered for greater state intervention mutter that, if only the European Union abandoned foolishly liberal economic Euro-rules, it would be as dynamic as China. Nifty infrastructure is good for growth. But hangdog democrats are wrong to think that autocracies have cracked the code of economic dynamism, just as Mussolini fans mistakenly believed his claim to abolish train delays.

To authoritarians, fast trains are a glimpse of an ideal China: modern and orderly, with every passenger tracked by identity card. This columnist once pulled into a station in Xinjiang aboard a packed high-speed train, when a voice ordered passengers to stay seated for a police check. Hundreds sat meekly as officers marched up the aisle to escort this writer off for questioning.

China paid a price for its gleaming modernity. Economists and even retired senior officials admit in private that vast sums were wasted on underused bridges, trains and airports, in a country that still has hundreds of millions of poor people. Modernisation had winners and losers, including those living in the path of railway lines who were publicly shamed by party cadres, threatened with the loss of a job or roughed up by thugs until they moved. The best of a slew of books comparing America and China, "Break-neck" by Dan Wang, defines America as a "lawyerly society", held back by litigious special interests. It also describes grave harms caused by China's "engineering state", run by planners and ideologues frightened by the creative energies of their own people.

### **The move fast, break things approach to democracy**

More importantly, when Western democracies become less liberal, there is no reason to think they will magically become stern but efficient technocracies, as China or Singapore claim to be. The best case for Singapore's governing system is that it puts the majority interest ahead of individual rights, in a spirit of bossy paternalism. But that compact draws on long-standing Asian traditions of family, clan and collective social bonds. When a Western liberal democracy becomes more repressive, it risks turning into the Hungary of Viktor Orban, or Mr Putin's Russia.

There is an analogy to be drawn with those who lose or renounce a religious faith. A Catholic atheist may be very different from an Anglican or Jewish atheist, or from a Muslim non-believer. People are durably marked by that which they no longer believe. So it is with countries that once embraced liberal values.

In a democracy with a long history of free elections, traditions of sturdy individualism and scepticism of authority can be a check on high-and-mighty elites. But when such traditions are hijacked by populists, dangers follow. Silver-tongued demagogues peddle conspiracy theories and urge supporters to believe them, not "the experts". The dark twin of pluralism is a society divided along angry factional lines. Don't imagine a wise industrial policy will emerge, once the powerful pick winners and losers in a free-market economy. Brace instead for corruption.

Liberal democracies are in a funk. That is no reason to think they will be better off if they become less free. Indeed, for once-free countries, the journey into repression can be an especially perilous one. As every train passenger knows, the starting-point matters, as well as the destination. ■

## AMERICA AT 250: *Chapter 1*



## ENLIGHTENMENT IDEALS MEET AMERICAN REALITY

*A brief history of the world's oldest democracy*

**W**HY ANYONE would want to leave Britain is beyond us. But in 1776 the 13 colonies declared their own version of Brexit, with muskets but notably with the pen, besmirching our king. Out of this act of youthful defiance came a great liberal experiment. Ideas taken from the Enlightenment—natural rights, the rule of law, government by consent—became the scaffolding for a new country.

To mark the 250th anniversary of the Declaration of Independence, *The Economist* offers not fireworks but something far more British—a review. An arch, authoritative, occasionally patronising review.

Every few weeks until July 4th, in print and online, we will pass judgment on America's triumphs and hypocrisies, booms and busts, from the founders to Donald Trump. Some judgments will be contemporaneous, from after we began publishing in 1843. (Our first American correspondent was ejected from a hotel in the 1840s for preaching free trade. We hated tariffs then as now.) And we asked historians, even Americans like Jon Meacham, to weigh in (see By Invitation). He says the Declaration was written for America's most challenging moments. Never a better time, then, to assess the great liberal experiment. ■

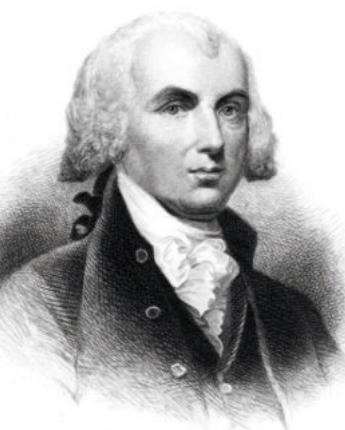
**1776**  
**The break-up**

Twelve score and ten years ago—on July 4th 1776—the Second Continental Congress in Philadelphia approved the Declaration of Independence (signing would take weeks: this was before email). The United States of America, as the troublemakers styled their new creation, had already been at war with Britain for more than a year. Good King George III was not the tyrant of American legend, but we grudgingly admit that his insistence on asserting authority and raising revenue in the colonies helped turn protest into revolution.

The Declaration became America's first great statement of liberal principle, espousing those Enlightenment ideals of natural rights and government by consent. It proclaimed that “all men are created equal”—though many of its signatories owned slaves. With rare exceptions, white women and black people were excluded from voting, as were many poor white men. Indigenous nations were ignored or exploited. The world's first liberal republic was, in practice, a narrow aristocracy (without the noble titles). But, as George Washington said, the government's true character would emerge only with time.



Why are we going to New Jersey at 3am?



**1787**  
**Revolution accomplished, now what?**

Having won their little war, the founders convened a constitutional convention in Philadelphia to take on a new challenge: turning Enlightenment principles into an enduring political structure. Using a blueprint from James Madison (pictured), they eventually settled on a republican system with three branches of government each checking and balancing the power of the others. The constitution's framers also wrote in protections for slavery. Some northern delegates who opposed the institution on principle nonetheless yielded to their southern, slaveholding colleagues for the sake of unity. In doing so they ensured that slavery would endure for generations.

An ideal that the constitution's northern and southern framers could agree on was a national executive strong enough to be effective but not so strong as to become tyrannical. This was the original No Kings movement (though the French revolution would soon go a little harder on that point).

**1789**  
**So you're holding elections now?**

The first ballot for president was, like in modern elections, conducted via the odd institution of the electoral college, rather than by a direct popular vote. In virtually all other ways it was unrecognisable to anyone following American politics today: very few people could vote, and there was no public campaign, not even a Swift Boat advertisement painting Washington's crossing of the Delaware in a nefarious light.

There was no sweating the count on election night either. Having led the Continental Army to victory, Washington was a shoo-in for the presidency (even as he claimed not to want the job). He was selected on all 69 electoral-college ballots; John Adams, marked on 34 ballots (each elector could list two names), became vice-president. Only one presidential election has been decided unanimously since: Washington's own re-election.



The largest ever inaugural crowd (at the time)

1791

**Ten things they left out**

The Bill of Rights, ratified in 1791, transformed the constitution from a merely republican charter into a liberal one, enshrining freedoms of speech, religion and due process, to name but a few.

The authors' vague language ensured that Americans, among them Supreme Court justices, would still be arguing about it 250 years later. Even the use of punctuation is the subject of intense legal debate. In the 21st century the Supreme Court's interpretation of the Second Amendment, reached in part on its placement of commas, ensures that individual Americans, and not just militias, have a constitutional right to own guns. The founders could scarcely have imagined AR-15s.

**Which amendment are you?****In the end they were both on the money**

1790s

**Clash of the founders**

By 1790 the founders were still arguing over how much power the central government should have. The Broadway musical "Hamilton" told the story through epic rap battles between Alexander Hamilton and Thomas Jefferson. (The actual debates were not conducted in verse.)

Hamilton was a New Yorker, the first treasury secretary—and our kind of guy. He wanted a strong federal government that paid its debts (also very much our thing). Jefferson was a Virginian farmer, a slaveholder and the first secretary of state. He argued for states' rights, fearing that centralisation would bring tyranny. Hamilton won, and thankfully that was the last time there was any disagreement about federal power in American history.

**By Invitation****Parties are a feature, not a bug**

The quarrel between Hamilton and Jefferson did more than shape the nascent government—it spawned the country's first political parties. Americans may not thank the two founders. But parties remain a sign of the republic's rude health, argues H.W. Brands, a historian.

"Nowadays, political parties are largely viewed as tribal, toxic and obstructive," Mr Brands notes. (Fair enough.) And there was some of that dark energy in the early spats between Hamilton's Federalists and Jefferson's Republicans. Still, Brands concludes that political parties ended up serving as necessary checks on government power and on each other. (For the full text, see the digital version of "America at 250".)

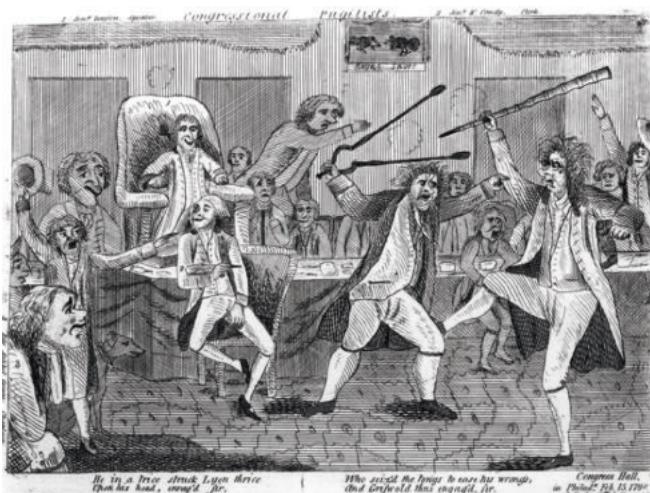


1798

### How to save a republic: jail your critics

An early reactionary moment in America arrived in 1798. Those excitable French were in the midst of revolution. Tensions between France and America were high. President John Adams's Federalist Party viewed its critics at home—namely pro-French Jeffersonians—as potential traitors. With Adams's support Congress (pictured below in its natural state) passed the Alien and Sedition Acts, four laws giving the president power to deport "dangerous" foreigners and making it a crime to publish "false, scandalous and malicious writing" about the government.

The laws were used to silence opposition journalists and pamphleteers. One tell that they were undemocratic and illiberal was that Congress set two of the laws to expire on Adams's last day as president in March 1801. The controversy helped Jefferson win the race to succeed Adams as president, and hastened the decline of the Federalist Party.



**Talk about fighting words**



1803

### The original dealmaker-in-chief

Donald Trump could learn a thing or two from Jefferson. Today's president muses about acquiring Greenland; Jefferson doubled the size of America in a single transaction. In 1803, after negotiations with Napoleon Bonaparte, he purchased the vast Louisiana Territory from France for \$15m (\$314m in today's dollars). The tract of land stretched from the Mississippi river to the Rocky Mountains and encompassed 828,000 square miles, or more than 20% of modern America.

The Louisiana Purchase secured land for the yeoman farmers whom Jefferson considered the backbone of the country. But he also worried that the deal might be unconstitutional. Jefferson himself had long argued that the federal government had no power not explicitly granted by the constitution, and the charter was silent about the notion of buying half a continent. The deal was made using executive power—on Hamiltonian terms.

1812-15

### That time we burned down your White House

Talk about Trumpian. Having declared war on Britain in 1812, America dispatched troops to invade Canada, expecting that they would be greeted as liberators from British oppression. (They were not.) The war itself had been triggered by Britain's repeated interference in American affairs: on the western front, aiding Native Americans' resistance to US territorial expansion; on the eastern front, interdicting American ships and pressing sailors into the Royal Navy to fight in the Napoleonic wars.

Britain notoriously set fire to the White House, but America in many respects "won" the War of 1812, as the British thereafter left the North American mainland largely to American ambitions. Native Americans were doomed to military subjugation. The war also made a national hero and future presidential contender of Andrew Jackson, who won the Battle of New Orleans in 1815.



**You guys should write a song about this**

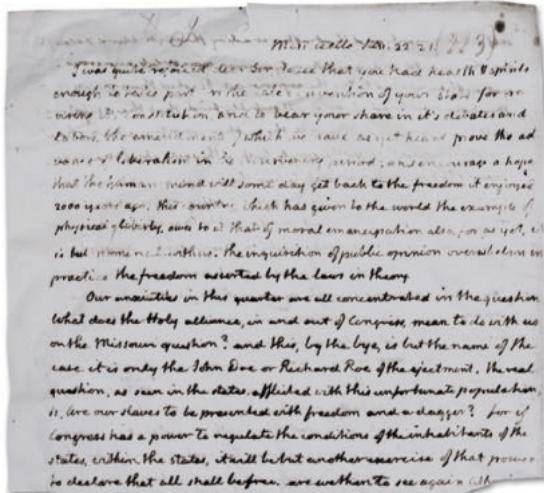
**1776-1865**  
**The stain of slavery**

At the time of America's founding, an estimated 500,000 of the roughly 2.5m people living in the 13 colonies were enslaved—about one in five Americans. By 1800 that number had risen to nearly 900,000. In the South, just before the civil war, enslaved people made up more than one-third of the population. Slavery, as much as freedom, would shape America's first century.

How did the country's founders, so enamoured of "liberty", justify it? By applying self-serving logic to liberal principles. Some invoked the idea that property rights were essential to freedom—that is, the freedom to keep slaves as property. Others argued that slavery was a temporary evil worth tolerating for the sake of keeping a young country together. Still others said slavery was an economic engine that the country could not do without. Many simply believed all men were not created equal, despite their soaring revolutionary rhetoric to the contrary.



**The original sin of the founders**



**This letter could have been an email**

**1820**  
**Secrets of the ex-president group chat revealed**

Jefferson's record on slavery was particularly troubling. Though he professed opposition in principle, he fathered several children with one of his own slaves, Sally Hemings. He also favoured extending slavery into new western states, arguing—under his peculiar theory of "diffusion"—that dispersing slaves would reduce their concentration and make emancipation less frightening to slaveholders.

Jefferson summed up these anxieties in a letter to his frequent late-in-life pen pal, John Adams, asking rhetorically: "Are our slaves to be presented with freedom and a dagger?" Adams replied that slavery had been a "black cloud" hanging over the country for half a century. In 1820 the Missouri Compromise drew a line across the map, with slavery permitted below and banned above. The compromise postponed the reckoning. Slavery would endure for nearly another half-century.

**The Economist reads**  
**Six books to understand the Founding Fathers**

**John Adams.**

By David McCullough. *Simon & Schuster*; 704 pages; \$30 and £14.99.

**Founding Brothers: The Revolutionary Generation.**

By Joseph J. Ellis. *Knopf*; 304 pages; \$24 and £12.99.

**The Radicalism of the American Revolution.**

By Gordon S. Wood. *Knopf*; 464 pages; \$23 and £17.50.

**The Revolutionary: Samuel Adams.**

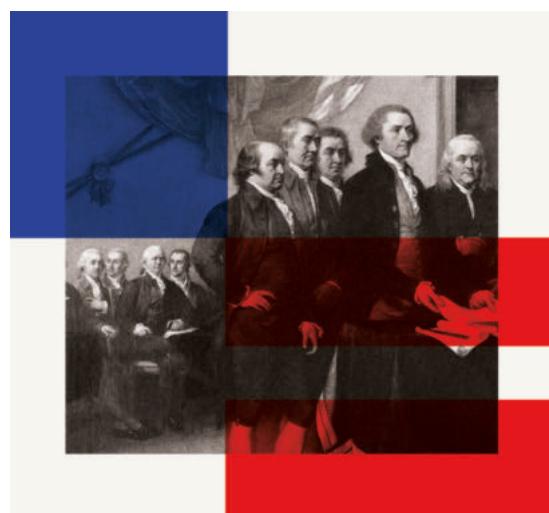
By Stacy Schiff. *Little, Brown*; 421 pages; \$23 and £16.99.

**A Magnificent Catastrophe: The Tumultuous Election of 1800, America's First Presidential Campaign.**

By Edward J. Larson. *Free Press*; 335 pages; \$22 and £18.99.

**The Hemingses of Monticello: An American Family.**

By Annette Gordon-Reed. *W.W. Norton*; 802 pages; \$28 and £16.99.



## BY INVITATION

### *Jon Meacham*

*The Declaration of Independence still defines America's purpose*



**I**N THE BEGINNING, no one paid all that much attention to it—and, if they did, they were not particularly impressed. And yet since its signing the Declaration of Independence—drafted by Thomas Jefferson and edited by Benjamin Franklin in the summer of 1776—has served as a kind of north star for Americans, especially in hours of strife. “I have said that the Declaration of Independence is the ring-bolt to the chain of your nation’s destiny; so, indeed, I regard it,” Frederick Douglass said in 1852. “The principles contained in that instrument are saving principles.” That a man who had escaped enslavement and was not included in the Declaration’s assertion that “all men are created equal” could hail that crucial American document even amid the darkness of the antebellum order is testimony to its power and possibilities.

What explains the Declaration’s potency? I think Americans are drawn to it for the same reasons human beings are so often drawn to sacred scripture. Commandment and covenant, the Declaration is the biblical base of America’s civic religion, offering precept and promise. We return to it in remembrance of battles won—beginning with the Revolutionary War itself—and to arm ourselves for battles still to come.

It is our oldest assertion of national aspiration, an articulation of the principle for which a disparate group of New World colonies chose to take on the world’s mightiest empire in armed struggle. The causes of the American revolution were varied, and not all were noble. Independence was declared after years of battles over power and money in the wake of the Seven Years’ War, when London assumed a larger burden in defending its American colonies. “The Americans have made a discovery, or think they have made one, that we mean to oppress them,” Edmund Burke remarked in 1769. “We have made a discovery, or think we have made one, that they intend to rise in rebellion against us...We know not how to advance; they know not how to retreat.” By the summer of 1776—after Lord Dunmore, the British governor of Virginia, had promised freedom to any enslaved person who rose against the colonists—war had come. Yet for all the American limitations on who was included in the Declaration’s assertion of equality, the ideal of individual liberty, an inheritance from the British tradition, was—

and is—at the heart of the national experiment.

And when that experiment is under stress, the Declaration has proved useful in defining national problems and inspiring popular effort to solve those problems. In the same way the Gospel of John linked the Christian story of a divine Jesus to the familiar Genesis account of creation by evoking the phrase “In the beginning”, American leaders from Douglass and Abraham Lincoln to Franklin D. Roosevelt and Martin Luther King have found Jefferson’s words essential in framing the present in terms of the past.

In his first major public speech, in 1838, Lincoln spoke of the sanctity of the founding; and in 1859, on the eve of his presidential campaign, he described the Declaration and its major author with reverence. Jefferson, Lincoln wrote, “had the coolness, forecast, and capacity to introduce into a merely revolutionary document, an abstract truth, applicable to all men and all times, and so to embalm it there, that to-day, and in all coming days, it shall be a rebuke and a stumbling-block to the very harbingers of re-appearing tyranny and oppression”. At Gettysburg in 1863, Lincoln brilliantly grounded the Union cause not in the prose of the constitution but in the poetry of the Declaration: “Four score and seven years ago our fathers brought forth on this continent, a new nation, conceived in Liberty, and dedicated to the proposition that all men are created equal.” One could debate the constitution, which was the means of America. Lincoln’s rhetorical gamble—which he won—was that one could not question the purpose of America, which, in this rendering, was Jefferson’s “proposition”.

Eighty years later, amid a global war against totalitarianism, Franklin D. Roosevelt turned to the Declaration to clarify Allied aims. On April 13th 1943, Roosevelt dedicated the Jefferson Memorial in Washington by linking Jefferson and the American revolution with himself and the second world war. “He faced the fact that men who will not fight for liberty can lose it,” Roosevelt said. “We, too, have faced that fact. He lived in a world in which freedom of conscience and freedom of mind were battles still to be fought through—not principles already accepted of all men. We, too, have lived in such a world. He loved peace and loved liberty—yet on more than one occasion he was forced to choose between them. We, too, have been compelled to make that choice.”

And Jefferson supplied King with the substance of the things hoped for. “I have a dream”, King intoned at the March on Washington for Jobs and Freedom in 1963, “that one day this nation will rise up and live out the true meaning of its creed: We hold these truths to be self-evident, that all men are created equal.” There, in the midst of the 20th century, in the heat of a freedom movement, King—like Lincoln and Roosevelt before him—could find no clearer articulation, no better summary of the American promise, than Jefferson’s ancient words.

In our own illiberal hour, the Declaration offers a measure of hope—which has always been part of the point. “The assertion that ‘all men are created equal’ was of no practical use in effecting our separation from Great Britain; and it was placed in the Declaration, nor for that, but for future use,” Lincoln remarked in 1857. “Its authors...knew the proneness of prosperity to breed tyrants, and they meant when such should re-appear in this fair land and commence their vocation they should find left for them at least one hard nut to crack.” As it was in the beginning, so it remains. ■

*Jon Meacham holds the Rogers Chair in the American Presidency at Vanderbilt University.*

## Business



### Shareholder primacy

## Shaking up the boardroom

SINGAPORE

**Asia's investors have long suffered from abysmal corporate governance. Will efforts to change that succeed?**

WHEN ABE SHINZO set out to revive Japan's economy as prime minister in the 2010s, he couldn't ignore the torpor of its companies. Profits were meagre. Enormous cash piles sat idle on balance-sheets. Cross-holdings between businesses kept activist investors at bay.

The reforms he pursued breathed fresh life into Japan Inc. In the ten years prior to the introduction of a new corporate-governance code in 2015, Japanese companies delivered a return for shareholders, including dividends, of roughly zero. Since then they have returned around 170%, comfortably outperforming their European peers. Activists have flocked to Tokyo and shaken management teams into selling off underperforming businesses and handing cash to shareholders through buy-backs. Last year listed Japanese firms generated a return on equity of 8.6%—not spectacular, but up from an average of 6.3% between

2010 and 2015. In the past five years they have paid out dividends and buy-backs equivalent to a respectable 33% of operating cashflow.

Yet Japan's still unfinished corporate-governance revolution may now be under threat. On February 8th Takaichi Sanae, prime minister since October, won a decisive victory in a snap election. Equity investors, cheered by her promises of fiscal stimulus, sent stocks up by 3% the next

day. Ms Takaichi, however, is hardly a champion of their interests. "I think there has been a trend of too much focus on shareholders," she said in November, imploring firms to consider "their contribution to the broader society". Ms Takaichi has promised changes to the corporate-governance code that would steer money towards employees.

A reversal in Japan would reverberate across Asia. Inspired by the country's success, others in the region have started making similar efforts. They are sorely needed. Profits and the portion of them paid to shareholders are underwhelming in many countries (see chart 1 on next page). Insufficient disclosure, insider dealing and deferential boards are common. Families or the state often hold majority stakes in big companies, and pay little heed to the interests of minority shareholders. The portion of shares that can be bought, known as the "free float", averages 63% across the region, compared with 77% in Europe and 94% in America (see chart 2). Many countries' politicians know change is required. But as America's shareholder revolution a half-century ago shows, lasting change cannot simply be mandated.

Asia's demography makes corporate reform an urgent task. Japan, South Korea and Taiwan are already grappling with the ➤

#### → ALSO IN THIS SECTION

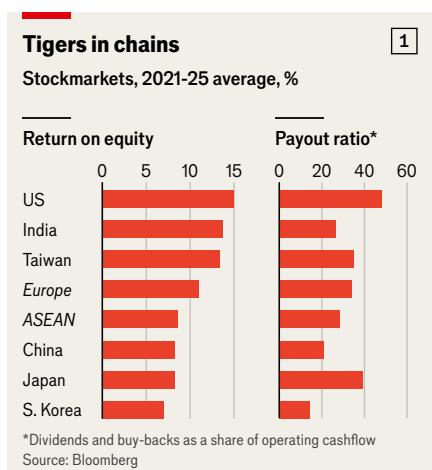
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shareholders. Independent audit committees—the standard in the West—are being introduced. As in Japan, China's securities regulator now requires companies whose shares are trading below the book value of assets to disclose plans to boost their price and report on progress. Over 200 have done so. In addition, Chinese officials have shown interest in reforming the governance of state-owned enterprises (SOEs), which make up about a quarter of listed firms. They have added “market-value management” as a criterion on which SOE bosses are evaluated.

Progress elsewhere in Asia, however, has been slower. In some countries, favourable winds have cooled interest in reform. Many of Taiwan's biggest companies have benefited from roaring demand for data centres needed for artificial intelligence. India's stockmarket has been propelled by a surge in interest from retail traders.

Then there is South-East Asia. Last year Thailand established a programme aimed at small listed firms. It offers sweeteners such as tax perks and publicity roadshows in exchange for releasing plans to boost valuations. It is, however, voluntary. In December Malaysia concluded its own three-year programme in which participating businesses attended gabfests and received best-practice guidebooks. In its review, the government boasted of widespread uptake—but did not find a clear trend of companies improving their profitability or valuations.

The softly-softly approach of South-East Asia's governments may reflect reluctance to upset their countries' politically connected tycoons. But some investors are losing patience. In January MSCI, an index provider, said it was concerned about the “fundamental investability” of Indonesia amid concerns that majority owners had used opaque holding structures to exaggerate their free float, get their companies included in share indices and, as a result, boost their market value. That was followed by a fire sale, after which Indonesia's securities regulator said it would double

the minimum free float to 15%. Progress on corporate governance in Asia has been uneven in part because it has relied on the zeal of politicians and regulators. Whereas the shareholder-primacy revolution that began in America in the 1970s was led from the bottom up by swashbuckling corporate raiders, in Asia it has been led top-down by the state.

### Capitalists of the world, unite!

Wider and deeper reform may require a shift in approach. “Ultimately, corporate governance is a cultural issue,” says Christopher Leahy of the Asian Corporate Governance Association, an advocacy group. On this it is South Korea, more than Japan, that may offer inspiration. In recent years its many retail investors have become increasingly vocal, co-ordinating grassroots activist campaigns and pushing politicians such as Mr Lee to pursue reforms. If Asia's capitalists want their revolution, they will need to fight for it. ■

### Semiconductors

## Elbow grease

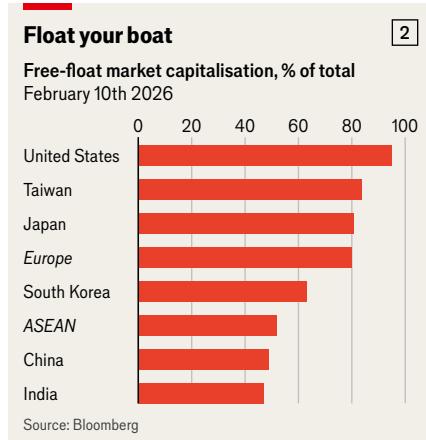
SAN JOSE

Artificial intelligence is causing Arm to rethink its winning formula

**I**N THE SEMICONDUCTOR industry, Arm is everywhere and nowhere. Designs from the British-based, American-listed, Japanese-controlled firm sit in almost all the world's smartphones and most other connected devices. Yet Arm does not sell a single chip. Customers license its designs, tweak them if they wish and produce the chips themselves (or have them made). Arm pockets an upfront licence fee and a slim per-chip royalty. The model has made it ubiquitous. More than 300bn chips built on its designs have been shipped—over 30bn of them last year alone.

Ubiquity, however, is not thrilling investors. Weak demand for smartphones and consumer electronics has weighed on Arm's shares: since the start of 2025 their price has declined by 2%, even as the benchmark Philadelphia semiconductor index, fuelled by enthusiasm for artificial intelligence, has climbed by 65% (see chart on next page). Even so, Rene Haas, Arm's boss, remains optimistic—largely because of AI. It positions the company for a new era of growth, he says, even if the payoff is not yet visible.

The AI boom should indeed rev up demand for Arm-designed chips. But it also presents the company with an awkward choice. Its licensing model spreads its designs widely, but leaves most of the



burden of ageing populations. China is not far behind. Even poorer countries such as Thailand are quickly getting old. Without rising equity markets, supporting Asia's growing number of retirees will become ever harder. Pensions are already stingy in much of the region.

Many countries have thus closely watched Japan's reforms. Overseas capital has flooded into its market: since 2023 foreigners have bought ¥8.7trn (\$55bn) more of shares listed on the Tokyo Stock Exchange than they have sold, helping to lift valuations. Other Asian countries want in on the action.

Closest behind is South Korea. Since 2024 it has introduced various changes including a new fiduciary obligation for company managers and a tax perk for businesses that pay significant dividends. Last year its companies bought back a record \$14bn-worth of shares. Some hold on to them, making it easier to fend off pesky activists. But a law currently under debate in the national assembly would require repurchased shares to be torched. Although foreign investors were put off by the declaration of martial law in late 2024, they have begun wading back in since the election in June of Lee Jae-myung, a shareholder-friendly president, notes Peter Kim of KB Securities, a broker in Seoul.

China has also begun pursuing reform. Its companies are beating foreign rivals at home and abroad. Yet over the past decade they have, as a whole, generated next to no return for shareholders. Profits remain elusive and are rarely distributed. Ferocious domestic competition is part of the explanation. But so is poor corporate governance. Officials have published a flurry of new rules over the past two years in an effort to improve the situation. The focus has been to tighten constraints on corporate insiders collectively known as *guan-jian shaoshu* (“the crucial few”).

Controlling owners, which the vast majority of listed Chinese companies have, are now vested with a fiduciary duty to all



► value with its clients. To make the most of AI, Arm may have to move beyond selling blueprints and inch closer to developing chips of its own. That promises higher returns, but at the cost of upsetting customers who have long valued Arm precisely because it does not compete with them.

Arm's speciality is general-purpose chips called central processing units (CPUs). Its power-efficient designs have proved especially useful in smartphones. Designing a new CPU can cost hundreds of millions of dollars and take 12-18 months. An off-the-shelf blueprint spares customers, such as Apple, much of that burden.

The data centres at the heart of the AI craze are built around graphics processing units (GPUs), the chips which power AI models. But they also need CPUs. Nvidia, the leading maker of GPUs, uses Arm designs for its CPUs, as do cloud giants such as Amazon and Google. Mr Haas argues that this is only the beginning. As AI workloads shift from training to inference, where models respond to user queries, demand for efficient, general-purpose processors should rise. Much of that work, Arm's boss expects, will spread beyond data centres into phones, wearables and cars, again favouring CPUs.

Yet Arm's current model captures only a sliver of the value it creates. Analysts expect revenue this fiscal year to be around \$5bn, with half from royalties and the rest from licensing fees. That is up by about 20% from 2025, but still dwarfed by those of bigger chipmakers such as Nvidia, Broadcom or Intel. According to Visible Alpha, a data provider, last year Arm earned royalties of \$0.86 per mobile chip, or 2.5-5% of the price.

The company is eager to extract more value. But how? To illustrate, Mr Haas uses an analogy. For most of its history, Arm sold designs for individual processors. Think of them as "Lego bricks". Recently it has also started selling blueprints for pre-assembled blocks of processors known as "subsystems". Bloomberg Intelligence, a research group, estimates that these bring

the company three times as much revenue per chip. Arm believes that subsystems could make up over half of its royalties within a couple of years.

At some point, however, subsystems become whole toys. One option is to develop custom chips for cloud providers. That has proved lucrative for Broadcom: making bespoke chips for Google and Amazon has helped push its market value above \$1.6trn (Arm is worth \$135bn). Some analysts think Arm will go further and design and sell its own chips. Rumours suggest that Meta, a social-media giant, will be the first customer. Mr Haas is careful not to be drawn.

Either route would bring Arm a bigger cut from its designs, but would entail risks. Creating finished chips, or moving in that direction, would undermine the claim that it does not compete with its customers.

Arm's ownership could affect its choices. SoftBank, the Japanese conglomerate that owns over 85% of the firm, has been assembling its own chip portfolio, buying Ampere, which makes server processors, and Graphcore, which designs AI chips. In August it bought 2% of Intel for \$2bn. Masayoshi Son, SoftBank's boss, is said to be keen to build an AI champion to rival Nvidia. Mr Haas, who sits on SoftBank's board, talks up synergies across the group's chip businesses. But all this may push Arm away from being a neutral supplier of designs.

Another risk is that the AI boom fizzles out. Announcements of big data-centre investments are coming thick and fast—not least from SoftBank. For now, Arm does not bake them into its forecasts, Mr Haas says, because it is unclear how many will "actually see fruition". The big test is whether the revenues of those pouring money into AI rise fast enough to justify the spending. At some point, "the math needs to square".

A separate concern lies in China, source of a fifth of Arm's revenue. China's government is promoting RISC-V, an open-source chip architecture pitched as a domestic alternative to designs from Arm and Intel. But Mr Haas says the vast software ecosystem around Arm's chips, with millions of developers writing applications based on them, gives it a big advantage.

Mr Haas says his biggest worry is whether Arm is investing fast enough to take advantage of the AI opportunity. Chips take years to design and build; AI models evolve in months. Whether the company can move quickly enough is one question. Whether it can make the most of AI without undermining the model that put its designs everywhere is another. ■

**Correction:** Last week, in "Reaching for the stars", we wrote that Elon Musk owns a majority stake in both SpaceX and xAI. He owns a controlling stake, but not a majority. Sorry.

## Intellectual property

# Copycat crisis

SHANGHAI

China is waging war on stolen ideas

CHINESE OFFICIALS are at war with a fiendish little creature that stands about six inches tall and bears a striking resemblance to a Labubu doll, the sensational plush toy created by China's Pop Mart. Factories around the country are churning out knock-offs known as "Lafufus". The infestation has prompted a nationwide "Lafufu-catching" campaign as officials conduct raids and shut down online shops that sell them. Shanghai police hit a jackpot in July when they discovered a local company sitting on a stash of the fake toys worth 12m yuan (\$1.7m).

China has long been a counterfeiting hub. Shoppers do not have to look far to find fake Nestlé food seasoning or imitation Nike sneakers. And brands are not the only form of intellectual property (IP) that is readily pilfered. Foreign multinationals that set up shop in the years after China opened its economy to the world often complained of their trade secrets being stolen. General Motors, an American carmaker, discovered in 2003 that a Chinese partner was rolling out a model strikingly similar to one of its own. Kawasaki, a Japanese industrial giant, and Siemens, a German one, believe their technology was nabbed to help build China's extensive high-speed rail network.

In the past few years, however, lax protection of trademarks and patents has become a growing problem for the many ►



Menaces

► Chinese companies that have emerged as IP powerhouses in their own right. Lafufus are but one example. Makers of everything from smartphones and motorbikes to solar panels and batteries are battling to protect their IP. The fight is going global.

Chinese courts have been inundated with IP cases, which now exceed 550,000 a year, making the country the world's most litigious when it comes to such disputes. Judges often have to work at a speedy rate of a case per day. Shanghai is typically the preferred location because its judges are well versed in relevant laws. But companies and lawyers find the process in the city excruciatingly slow. It can take three months simply for a case to appear on a court's docket.

Excess industrial capacity has fuelled the problem, as owners of idle factories look for ways to put them to use. Li Hongjiang of Guantao, a law firm in Beijing, says he has been representing a motorcycle-maker in the south-western city of Chongqing in its fight against factories copying its bikes. The city is a hub for vehicle manufacturing, but has many plants gathering cobwebs. As soon as he wins a case against one factory another starts making fakes, he says.

China's copycats are not just menacing their countrymen. Excess manufacturing capacity has also led to a flood of imitation goods abroad, leading to more clashes with Western companies whose IP has been pinched. In America, for example, patent-related cases involving Chinese businesses surged by 56% in 2023, according to data collected by GEN, another Chinese law firm. Many of these centred on merchants selling products on Amazon, an American e-commerce platform. But cases linked to communications and electronics equipment were also common.

These clashes partly reflect a lack of experience with stricter IP protections abroad. Often Chinese companies will enter a country without running "freedom-to-operate" assessments, which look at whether a product will infringe patents in a new market, says Xia Feng of GEN. More recently, some have started hiring senior in-house lawyers with responsibility for international IP disputes; they "pay really well for these positions", Mr Xia adds.

In a break from the past, though, it is increasingly Chinese companies that are the ones accusing foreign competitors of stealing their ideas. Luckin, a coffee chain, successfully sued a business in Thailand that had opened cafés under the same name with an almost identical logo. Trina Solar, a Chinese renewable-energy company, has sued Canadian Solar, a rival based in Ontario that makes most of its solar panels in China, for IP infringements in America. As Chinese businesses venture abroad, expect more such battles. ■



Erehwon

## Posh nosh

LOS ANGELES

**America's hottest grocery store is testing just how much wealthy shoppers will pay for chicken soup**

THE TABLES outside Erehwon in Silver Lake, Los Angeles, are crowded with beautiful young people dressed in athleisure. Inside the swanky store there are long queues at the smoothie and salad bars. The grocery aisles are Instagram-ready: carrots carefully lined up; bananas suspended in orderly bunches; nuts stored in chic mason jars. The beauty section glitters with pricey supplements and vegan protein powders. "Erehwon is somewhere I want to be seen," confesses Paul, a 27-year-old customer. "It says: I have taste."

In the past few years Erehwon, a micro-chain of ten stores around LA, has emerged as the grocer of choice for celebrities from Hailey Bieber to the Kardashians. Social media is flooded with posts about its products, which include chicken-noodle soup (\$16.50), a strawberry smoothie (\$21) and sea-moss gel (\$44). The retailer has benefited from a shift in luxury spending away from big-ticket items such as handbags towards smaller indulgences. But much of its success is down to canny strategy.

Erehwon has humble roots. It was founded in the 1960s in Boston by a Japanese couple who were devotees of the "macrobiotic" movement, which encourages followers to eat the simplest foods. Its name, nowhere backwards, comes from a utopian novel by Samuel Butler. Bill Tara, who worked there in the late 1960s, recalls a "food museum" run by hippy volunteers. Shelves were stocked with products includ-

ing whole grains and miso, with labels that explained "what it was, who grew it and who blessed it on the full moon", Mr Tara chuckles.

A vibe shift came when Tony and Josephine Antoci, a Californian couple, bought Erehwon in 2011. By then the Boston shop had closed and the retailer had a single LA outpost. They hiked prices and set about remaking Erehwon as a luxury grocer.

That has taken more than photogenic produce and clever social media. Erehwon has been carefully cultivating a sense of exclusivity. Its membership programme—which offers discounts and free smoothies for a fee of \$200 per year—is a status symbol akin to joining a private members' club. Popular products are available only for limited periods. Erehwon plans to add another six stores over the next two years but remain confined to LA. Shoppers elsewhere in America can pay to have its goods delivered. But many choose to journey in person. "It's, like, the main reason I came," says Grace, visiting the Silver Lake store from New York.

Erehwon has also been clever in how it has tapped into the "wellness" craze. Many youngsters these days follow diets that baffle their parents—keto, paleo, flexitarian. As inflation has pushed up grocery bills, splurging on healthy food has also become a way to signal affluence. Erehwon's shelves, heavy with strange-sounding ingredients, meet the moment. ►

## BARTLEBY

### *The quest for a meeting room*

*A tale of territorial ambition, power dynamics and water bottles*

**W**HAT'S THE scarcest resource in business? Good people? Patient capital? Uncontested markets? The correct answer is meeting rooms. (Or, more accurately, meeting rooms when you actually want to have a meeting; when you have no need for one, they are always completely empty.)

When rooms are in demand, the top of every hour ushers in the same scene. First, lots of people rise from their desks and start to walk around with water bottles. The risk of dehydration is not high if you are sitting in a conference room for an hour. But you never know.

Someone asks a colleague which meeting room has been booked, a reminder that rooms should not be given names. "Are we indecisive?" "What?" "Are we in Decisive?" "Oh. No. We're incapable." "What?" And so on, until someone reverts to normal speech: "It's the big one by the lift."

As the participants gather outside Capable, the people inside practise an important office skill: pretending not to notice that their time is up. Room bookings are like motorway speed limits. In theory, everyone should stick to the rules, and be out on the dot. In practice, you can stay a little longer than the allotted time but you don't know exactly when you will get into real trouble.

As the seconds tick past, the group outside stop talking among themselves and edge closer to the threshold. Finally, someone knocks on the door, opens it and says: "I'm afraid we've got the room now." There is a brief moment of tension. But the game is up. The people inside pack up and slope off. Capable is in different hands. A faint air of exultation takes hold as people sit down. Someone from the previous meeting creeps back in to retrieve their water bottle, a final

capitulation. "Does anyone know how to make the screen work?" someone asks, and the mood darkens.

The new rulers of Capable knew where they were headed. Less organised groups are still walking around trying to find a place to meet. These people all forgot to book a room, and are now competing for whatever space might be available.

One group heads to Effective. The display panel outside says that it has been booked but the room is empty. It could be a no-show: some colleagues are known for booking rooms weeks in advance just in case. The booking will be cancelled automatically after 15 minutes, as though this were not a meeting about the budget assumptions but a table at a Michelin-starred restaurant. Another cluster of people is approaching. Are these the people who booked or just interlopers? The group decides not to wait to find out, and stampedes into the room. "We're ineffective!" someone calls to a latecomer.

The approaching group had not booked the room. They now scurry off to Considerate. There's only one person in



there, when the room can hold ten, but that one person has clearly worked out how to use the automated booking system. The bigger group could ask her to move, but rules are rules. Someone belatedly tries to download the meeting-room app. Despite ten years of service, the system insists that he does not work at the company. He gives up.

Energy levels are running low: people take swigs from water bottles. The group next heads to Tolerant. They find to their relief that the display panel outside is a welcoming green. But the participants in the previous meeting, which is now over-running by several minutes, include two very senior executives. Rules are rules, but feudal systems are feudal systems. So the group outside doesn't edge towards the door, let alone open it. They just try to get in people's eyelines and hope for the best.

Someone sends a quick message to the people who are dialling into their meeting remotely, to explain that they are just finding a room and won't be a moment. The virtual participants are too absorbed in a conversation about the Winter Olympics ("curling is surprisingly fun to watch, isn't it?") to notice.

While the group waits outside Tolerant, the display panel on the door suddenly changes from green to red. Someone else has managed to get into the meeting-room app and jumped ahead of them. The culprits round the corner. Fingers clench around water bottles. But the group that hasn't booked the room eventually backs down, as it must, and reluctantly heads to the kitchen area. It will take them 15 minutes to accept that no one online can hear anything over the noise of everyone else. They agree to meet again next week. Same time, same lack of place.

► But the retailer, which under its new owners has shaken off its earlier macrobiotic dogma, has avoided the puritanism that sinks many health-food shops. Take its popular buffalo cauliflower bites, which are made from organic ingredients but are covered in rice flour and fried.

At the same time, the posh grocer has recognised the growing demand for convenience. Data from NielsenIQ, a research firm, show Gen Z and Millennial Americans are more likely than older generations

to eat on the go and less likely to plan dinners. Erewhon is designed for the quick, frequent shopping trips they prefer. The average store is about 12,000 square feet, roughly one-third as big as a full-size Whole Foods, another grocer for affluent urbanites. Erewhon doesn't disclose what share of revenue comes from its drinks counter and salad bar, but Kabir Jain, an executive at the company, says it is far higher than for conventional grocers; to him, Erewhon is part grocer, part café.

Where to from here? Erewhon's unhurried expansion may only partly be by choice. There aren't many neighbourhoods with a large cohort of young people willing to queue for exorbitantly priced produce. Mr Jain thinks there are only four or five cities in America where opening a branch makes sense. High-end fashion labels, suffering from sluggish sales following a period of rapid post-pandemic expansion, should take note. Luxury, by definition, is not for the many, but the few. ■

## SCHUMPETER

### *Barbarians v bots*

*The private-equity industry has a giant software problem*



DURING THE 2010s there were two reliable ways to make a fortune. The first involved selling enterprise software, the countless computer applications which now dominate office life. Businesses subscribe to these applications, as you might a magazine, as opposed to buying them only once, as you would a book. This “recurring” revenue explains the interest of private-equity funds, the second great gold mine of that era. During the past decade buy-out funds spent one in every three dollars on technology firms. As software ate the world, private equity drank champagne.

Central banks fractured this alliance when they raised interest rates in 2022. Now Claude Code threatens to shatter it. The judgment in public markets has been definitive—and the selling indiscriminate. Traders expect customers and startups armed with AI-coding tools like Anthropic’s Claude to beat up incumbent software firms. Marketing tools? Thwack! Legal tech? Crunch! Financial-data providers? Pow! The value of listed software firms has fallen by a fifth this year, and the chill is drifting through the few public windows investors have onto private markets, where assets change hands less frequently. Loans to software firms owned by private equity have tumbled, along with the value of funds that own those loans and the asset managers which run those funds.

When private-capital firms reported their earnings in recent days, analysts’ questions about their exposure to software forced bosses to go against their instincts and offer the lowest number they could. TPG admitted that 18% of the money from its buy-out funds was in the software industry. KKR and Blackstone tanned a lucky 7% to the market, calculated across their vast asset-management operations. Nothing to see here, said Carlyle: 6%. Brookfield went for “less than 1%” and Apollo, which has encouraged the rout by short-selling software loans, crowed that exposure to software in its private-equity funds “rounds to zero”.

There are good reasons for private-equity bosses to downplay the importance of a business that made them rich. The biggest have refashioned themselves, with varying levels of success, as safe, all-weather lenders to every part of the economy, rather than leveraged equity investors beholden to cyclical performance fees.

But the troubles will not be easily brushed aside. Applying the

valuations of traded software firms to private-equity portfolios is a stomach-churning exercise. During the past five years the value of software firms in the S&P 500 index has fallen from 13 to eight times their revenue over the previous 12 months; across all listed American software firms the figure has gone from eight to three times. Compare that with the 25 largest private-equity buy-outs of traded software firms between 2019 and 2022, for which the median deal was struck at nine times the target firm’s revenue. This class has so far yielded the odd disaster (Pluralsight, which makes video-training courses for software engineers, messily restructured its debt in 2024) and the occasional success (the revenue of SailPoint, a cyber-security firm, doubled in the three years after it was taken private by Thoma Bravo). Mostly, though, the software firms remain stuck in ageing funds with investors worriedly guessing their true worth.

More important than the fate of the funds which own software firms is the debt that paid for their deals. Analysts reckon more than \$500bn of borrowing tied to software firms is lurking in America’s credit markets. A popular comparison is with the energy industry a decade ago. During the shale boom, exploration businesses borrowed heavily before an oil-price crash in 2014 caused defaults to spike in the bond market. If things go wrong this time, who will be left holding the bag?

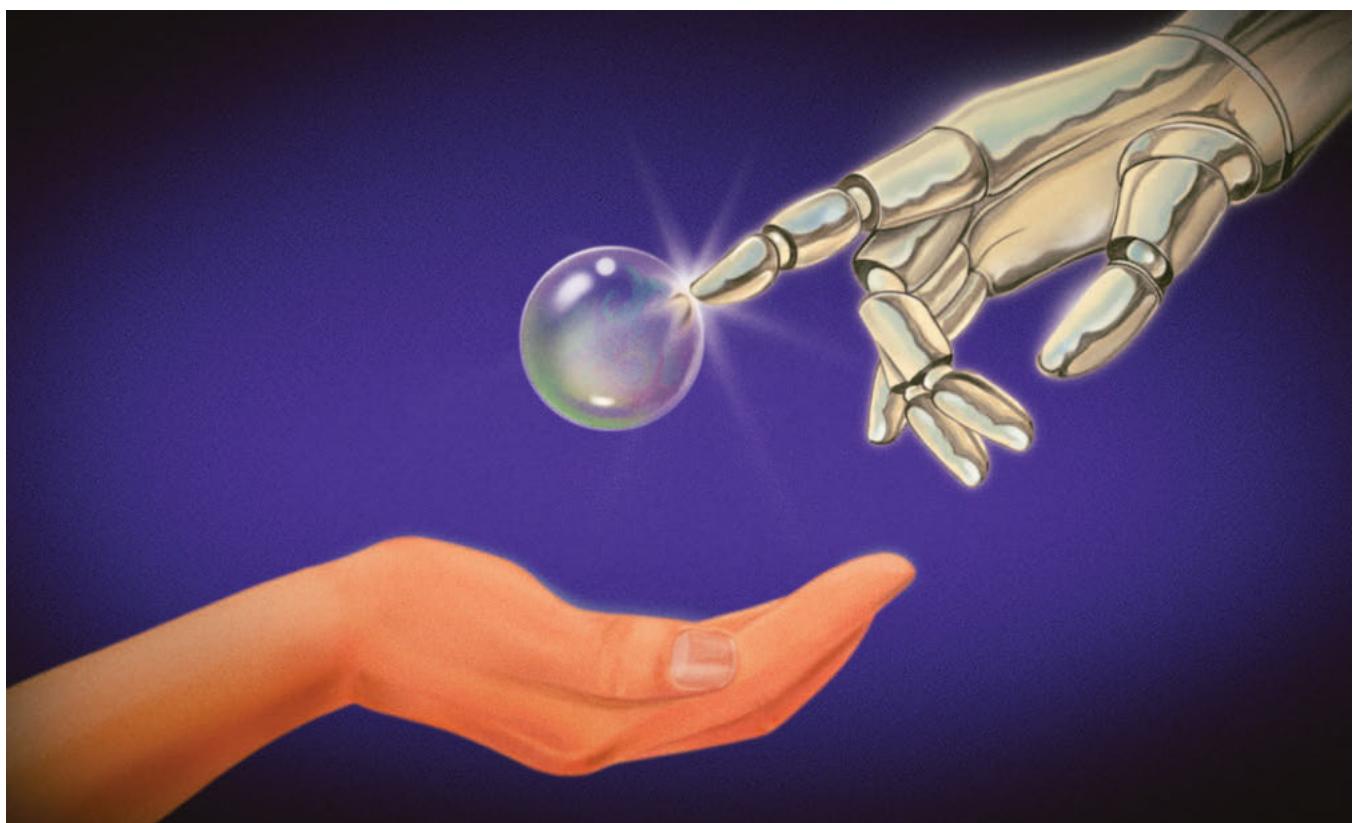
Unlike during the shale boom, and the hyperscalers’ current data-centre debt binge, software borrowers make up only a sliver of the bond market. Instead, buy-out deals were funded primarily by loans, which have floating rates and place more restrictions on the borrower. Perhaps 16% of the leveraged-loan market is tied to software deals, much of it housed in collateralised-loan obligations, an instrument similar to the one that broke financial markets in 2008. The largest bets on software debt, though, are found in business-development companies (BDCs), a type of corporate-lending fund often run by the biggest private-markets firms.

BDCs come in two types. The majority of assets sit in vehicles that are not publicly listed. Investors can redeem their shares in the fund each quarter. The largest is Blackstone’s BCRED which, were it a standalone bank, would be America’s 34th-biggest. Fully 26% of its loans are to software firms, mainly owned by private-equity funds. Other BDCs are traded on the stockmarket, which means investors can sell their shares whenever they want. The largest is run by Ares and has invested 24% of its assets in software loans. In recent weeks some investors have panicked. Listed BDCs trade at a growing discount to the value of their assets (net of debts). Last month investors in an unlisted BDC run by Blue Owl that has at least 29% of its portfolio in software debt pulled 15% of their money out. If funds start to prevent (or “gate”) redemptions, a downward spiral may follow.

#### Model behaviour

Soul-searching financiers looking for a bullish case for software companies might find one by looking at their own industry. Traders mostly rely on a single piece of technology, the Bloomberg terminal, which has proved impervious to efforts by customers and competitors to create their own replacements. The work of investment bankers and private-equity bosses has been largely immune to changes in office software. They still spend much of their days labouring over Microsoft Excel, just as they did a generation ago. Even so, if the software crash persists, they may have to refresh their models. ■

## Finance & economics



**Frothy stockmarkets**

### Fit to burst

#### How to hedge your portfolio during a bubble

ON FEBRUARY 8TH sports fans watching the Super Bowl, an American football game, were treated to an ad for Claude, an artificial-intelligence chatbot. That might have given investors with long memories an unsettling sense of *déjà vu*. The Super Bowl of 2000 passed into market folklore as having epitomised internet-stock mania: no fewer than 17 “dotcom” firms paid millions of dollars each for 30-second advertising slots. Weeks later share prices fell into a brutal bear market.

Back in the present, investors’ confidence in today’s emerging technology—AI—has already begun to wobble, just as companies prepare to spend jaw-dropping amounts of money to develop it. In recent weeks Alphabet, Amazon, Meta and Microsoft have said they will spend a combined \$660bn on AI in the coming year. Investors who a year ago might have cheered such plans are getting cold feet. Each firm’s stock price has fallen since its an-

nouncement, though Meta’s shot up a first. Microsoft’s is down by 16%.

It is no wonder that markets feel jittery. Everyone knows that shares are expensive—especially in America, but increasingly elsewhere, too. When stock prices are high relative to underlying earnings, expected returns are low and shareholders have more to lose from a crash. The trouble

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is knowing which other assets might offer refuge. The price of gold, investors’ time-honoured safe haven, has swung wildly of late. One-time fans of bitcoin, a digital pretender, are losing the faith (see *Buttonwood*). Just as investors are searching for ways to hedge their equity risk, hedging opportunities seem few and far between.

The most obvious way to protect yourself from a stockmarket crash is to sell your stocks. Yet for most professional investors this is not an option. Some swashbuckling hedge funds can allocate their portfolios however they please, but most money managers face strict limits. When someone entrusts their capital to an equity fund, for example, they expect it to be invested in equities. Often, the portfolio manager’s mandate will prevent them from sitting on a pile of cash; if not, doing so would still invite angry calls from clients, followed by withdrawals. They can keep cash in their own bank accounts, after all, without paying the manager’s fees.

Individuals have no such restrictions, but selling up because stocks look pricey can still be a bad strategy. During the dot-com bubble, the valuation of the tech-heavy NASDAQ index relative to expected underlying earnings rose to multiples of its current level. In the five years to its peak in March 2000 the index suffered corrections of 10% or more on at least a dozen occa- ➤

sions. Any of these might have prompted the nervous to cut their losses. Over the same period, however, it ultimately rose nearly 12-fold. Even at the bottom of the subsequent plunge, investors who had simply bought at the start of 1995 and held on would have doubled their money.

A good strategy for hedging stockmarket risk is one that does not suppress returns too much on the way up, then cushions losses on the way down. Sifting through the wreckage of the dotcom crash is a helpful way to think about how the various candidates might perform today. Broadly, they fit into three categories: the classic split between stocks and bonds; exotic strategies involving derivatives; and the use of alternative diversifiers.

For asset allocators with the freedom to do so, buffering stocks with bonds would have worked well during the late 1990s. The borrowing costs of rich-world governments were falling as the high inflation of the 1980s faded into memory, granting windfall gains to bondholders (since prices move inversely to yields). From early 1995 to the NASDAQ's March 2000 peak, Bloomberg's index tracking the total returns from a basket of American Treasuries rose by nearly 50%. As share prices plummeted, central bankers slashed interest rates and bondholders benefited from falling yields again. As the NASDAQ fell from peak to trough, the Bloomberg Treasury index rose by another 30% (see chart 1).

It is not clear, however, that government bonds are still as useful for hedging equity risk today. During the last prolonged bear market, in 2022, both asset classes suffered as inflation rose sharply and interest rates followed (see chart 2). Ask investors today what might end stockmarkets' bull run, and resurgent inflation—and the hawkish response it would require from central bankers—will top plenty of lists. That would mean share and bond prices falling in tandem once more.

#### Feeling liberated

Others will recall the short-lived panic that followed the unveiling of President Donald Trump's "Liberation Day" tariffs last April. Then, for a brief spell, Treasuries and stocks also dropped together as investors worried that the White House's erratic policymaking would endanger the bonds' status as a haven asset for international investors. It is easy to imagine the next leg down in share prices being triggered by similar concerns, or by questions over the sustainability of rich-world governments' vast borrowing. In either case, stocks and bonds would both be in the firing line.

A second category of hedging strategies involves derivative contracts called options. These have long been used by hedge-fund managers and other professional investors, but are increasingly sold

#### Bubble rap sheet

Indices, log scale



by retail brokers, too. "Overlaying" a stock portfolio with options allows an investor to harvest most of the profits when share prices are rising, then to restrict their losses once the cycle turns.

A "put" option on a stock, for example, confers the right but not the obligation to sell the stock at a pre-agreed "strike" price on some specified future date. If you also own the underlying stock, the effect is to cut off your potential losses beyond a certain point. Set the strike at 90% of the current price, say, and the option to sell at that strike means you cannot lose more than 10% of your initial holding. A put option on the S&P 500 share index that limits losses to 10% over the coming year currently costs 3.6% of the underlying amount to be protected. In other words, an investor who agrees to give up 3.6 percentage points of their returns can be protected from a crash.

The trouble is that the performance of such hedges depends heavily on the choice of strike price and expiration date. Analysts at Goldman Sachs, a bank, compared how two strategies using put options on the S&P 500 would have performed from 1996 to 2002. One involved buying a series of one-year options, each limiting losses to 10%; the other, a series of one-month options limiting losses to 4%. Though both would have offered protection as the dotcom bubble burst, the costs of repeated option purchases would have snowballed. Overlaying a stock portfolio with the one-year options would have resulted in roughly the same annualised return as unhedged stocks (albeit with less volatility). Overlaying it with one-month options would have generated a substantially worse return, despite the crash.

Some of the most effective strategies the Goldman analysts found fell into the third category: combinations of stocks and non-bond diversifiers. In fact, the best diversifiers were mostly filtered baskets of stocks, such as the S&P 500 "low volatility" subindex, which includes the 100 least volatile stocks in the main index. A 50/50 split between this and the S&P 500 would,

from 1996 to 2002, have generated nearly twice the annualised excess returns (over cash) of the S&P 500 index alone. So would a similar split with the S&P 500 "dividend aristocrats" index, which includes only companies that have increased their dividends every year for the past 25. Diversifying into "quality" stocks (with high returns on equity, stable earnings and low net debt) would have brought similar returns.

Today, the idea that the best way to hedge equity risk is with equities feels unsatisfying. Considering the alternatives, though, it might just be the best shareholders can do. ■

#### Tariff negotiations

## Comparative advantage

**Who wrangled the best trade deal from America's president?**

**I**N RECENT WEEKS President Donald Trump has struck trade deals with Argentina and India. Both countries have obtained partial relief from tariffs by making it easier for American firms to sell goods to their citizens in return. The backlash was swift. Indian farmers' unions branded the deal a "total surrender"; an opposition politician warned that India risked becoming "a dumping ground". Such charges have become familiar. France's former prime minister described the EU's deal with America as an act of "submission".

Though Mr Trump has fallen far short of the "90 deals in 90 days" his administration promised last April, he has signed a flurry of them. America has concluded five final reciprocal trade deals—including with Argentina, Cambodia and Malaysia—plus around a dozen looser "frameworks" with partners such as the EU and India. These are deliberately thin: fewer than eight pages long and heavy on vague com-

gements. None has congressional approval, binding enforcement or a clear dispute-settlement mechanism. Even so, they have set new terms of access to America's market. Who came out ahead?

Cambodia and Malaysia paid the highest price. Lacking size and leverage, both rushed agreements through. In return for new reciprocal tariff rates of 19% and exemptions for many exports, both countries offered sweeping concessions. Some were conventional, such as scrapping some tariffs and easing sanitary rules. Others went much further. Malaysia agreed to mirror American export controls against "non-market" third countries (meaning China) and consult Mr Trump before signing digital-trade deals. Moreover, America can terminate the pact if Malaysia strikes another deal it dislikes. One former Malaysian politician called it "the worst agreement" Malaysia has entered since independence in 1957. Even Malaysia's current trade minister has spoken of "unfair" clauses.

Those with more leverage over America—including the EU, Japan, South Korea and Taiwan—conceded less. This group controls everything from industrial supply chains to advanced semiconductor chips. Each faces reciprocal tariffs of 15% and secured relief from levies on goods including cars, drugs and semiconductors. In exchange, they will eliminate many industrial and agricultural tariffs and lower non-tariff barriers on American vehicles. They also made eye-catching pledges—like the EU's to buy \$750bn-worth of American energy, or Taiwan's to invest \$250bn there—which are unlikely to be fulfilled.

India, too, negotiated a middling deal from a position of limited dependence, offering targeted liberalisation rather than sweeping concessions. It secured a reciprocal tariff rate of 18%, plus conditional exemptions for generic drugs, and aircraft and car parts. In return it will ease market access for American industrial goods and some politically sensitive exports, such as genetically modified corn products.

The countries to obtain the greatest access to America's market at the lowest cost were Argentina and Britain. Both received capped tariff rates at 10% with big carve-outs, such as being able to sell large quantities of untariffed beef to Americans. British firms can sell 100,000 cars a year at the 10% rate, and secured cuts to levies on car parts and steel. In return, both countries widened access to their markets, yet avoided many obligations imposed elsewhere.

For those who think trade deficits signify failure and surpluses success, Mr Trump is the clear winner. America has obtained greater market access for its exporters, promises to dismantle non-tariff barriers and vast investment pledges. Nearly every agreement also prescribes co-operation on export controls and unfair practices by



third countries, meaning China. Many also restrict digital-services taxes and extend the reach of American regulation overseas.

Yet that mercantilist thinking—exports good, imports bad—is a poor way to keep score. America's tariffs squeeze consumers and reduce competition. Its trading partners, by contrast, are being forced to open up. These changes will outlast the deals themselves. In the end, the countries that made the largest concessions may be the ones which gain the most. ■

### Business formation

## Diversity hires

### Ethnic minorities in America are driving a startup boom

KRIS HALE founded Dope Pieces, an artisanal puzzlemaker, in 2018. But the company really took off, she says, after the covid-19 lockdowns sent people "puzzle crazy". They also prompted millions of other Americans to launch startups, and today the boom is still going. The Census Bureau counted a record-breaking 5.7m applications to establish new businesses in 2025. That poses some puzzles for economists. Why have entrepreneurs been so busy since the pandemic? And why has the surge been almost entirely among those who, like Ms Hale, are in ethnic minorities?

The Census Bureau's monthly Current Population Survey shows that, since 2019, the share of all American adults who are self-employed has increased from 9.4% to 9.8%. This is equivalent to around 1.3m new entrepreneurs. Yet the self-employment rate among white Americans has barely budged (see chart), while that for black ones has risen by a percentage point.

That for Hispanic Americans has leapt by 1.8 percentage points.

Several aspects of the pandemic made it a good time to start a new business. Widespread layoffs prompted millions of people to consider a career change. Stimulus cheques and fewer opportunities to spend money boosted savings, providing would-be entrepreneurs with seed capital. Rock-bottom interest rates made it cheap to borrow more. And working from home was useful for those pursuing side hustles.

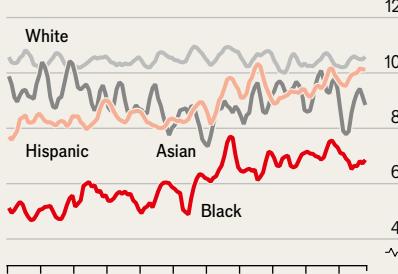
People from minority groups were more likely to have seized the moment. Catherine Fazio of Boston University, together with colleagues, has analysed data on 2.8m business registrations filed in 2019 and 2020. They found that business formation grew faster in neighbourhoods with more black people. Another study by the Brookings Institution, a think-tank, used data from the Federal Reserve's survey of consumer finances. This showed that, between 2019 and 2022, the share of business-owning families that were black rose from 5% to 8%. The share for Hispanics and Latinos jumped from 4% to 7%; white Americans' share fell from 80% to 73%.

To explain the trend, first consider the "George Floyd effect". Mr Floyd's murder by police officers, in 2020, sparked a reckoning on race that left many Americans eager to show support for black people, including those who are business owners. Consumer spending, charity support and bank lending all boosted demand—and probably inspired would-be founders, too. "I think that's part of the story for why attitudes towards entrepreneurship in those communities may have changed," says David Robinson of Duke University.

Some of the boom might also be down to "necessity entrepreneurship". Black Americans were hit especially hard economically by the pandemic: in late 2020 their unemployment rate was 10%, nearly twice that of white Americans. Some of the jobless may have struck out on their own not because they wanted to, but because they had no choice. "There's the good kind

### Bubbling up

United States, workers who are self-employed\*, %



\*Three-month moving average, excluding agriculture  
Sources: Census Bureau; *The Economist*

► [of self-employment] where...you're an entrepreneur," says Victor Bennett of the University of Utah. "And there's the less good kind where you're struggling to find something in the workforce."

Perhaps the most convincing explanation for all the new minority-led businesses is that poorer neighbourhoods, which had fewer startups to begin with, are catching up. Entrepreneurs from minority groups often used to struggle to attract capital. Now that may be changing, suggests research by Dr Fazio, Jorge Guzman of Columbia University and Scott Stern of the Massachusetts Institute of Technology. "We believe that there was pent up potential in neighbourhoods that historically have faced much higher obstacles to starting and funding businesses," says Dr Fazio.

Unfortunately, America's startup boom is unlikely to create many jobs. Census Bureau data show that firms that are less than five years old account for just 14% of total employment; those less than a year old account for a mere 3%. Even this appears to be shrinking. Since 2021 such startups with paid employees have on average employed just 4.7 of them, down from 5.4 in the preceding decade. The furious pace at which Americans are establishing new firms will be cold comfort to those who remain jobless. Then again, it may spur some to strike out on their own. ■

## Sex and pay

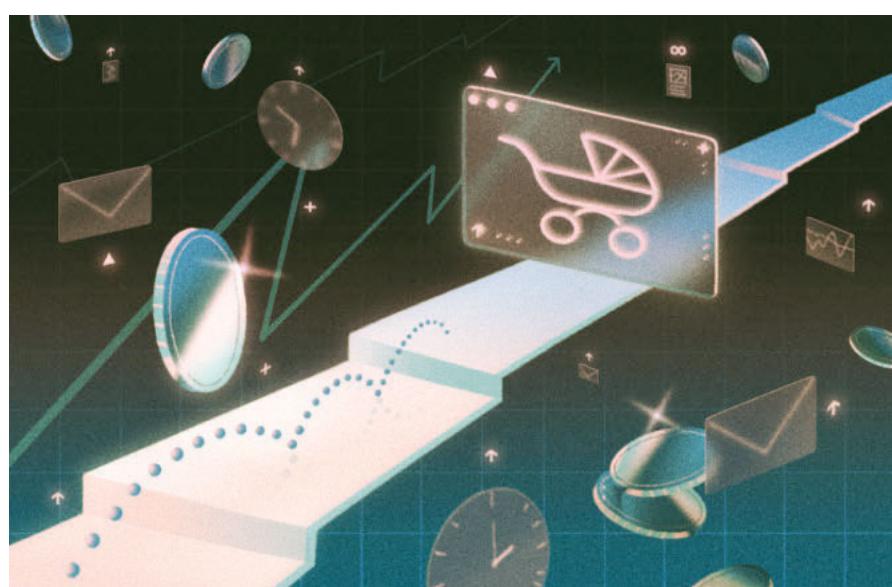
### Mother's ruin

WASHINGTON, DC

**Why do women earn less than men?**

“THE LEFT HAND OF DARKNESS”, a classic science-fiction novel by Ursula K. Le Guin, imagines a faraway planet called Winter on which all people are “ambisexual”. Each month adults undergo “kemmer”, a few days in which they develop sexual characteristics determined at random: either male or female. Anyone, in other words, might fall pregnant. After the kemmer, all sexual characteristics fade. The dualism—the protected and protector; the dominant and submissive—that “pervades human thinking”, writes Le Guin, is almost entirely absent on Winter.

Such a planet would help answer an enduring question: why do men earn more than women? Perhaps male “dominators” succeed where female “submissives” do not. Yet the weight of research suggests that, after accounting for the constraints women face from bearing and rearing children, there is little left to explain. The most effective economist in the field, Claudia



Goldin of Harvard University, who won a Nobel prize in 2023, seemed to settle the debate. Motherhood, her work suggested, explains basically all of the wage gap.

A handful of papers published over the past two years have reignited the debate. They were based on powerful and novel datasets, which matched health records with income data in Scandinavian countries. This new evidence allowed economists to exploit the powerful natural experiment provided by variation in women's fertility. Researchers took women undergoing in vitro fertilisation (IVF)—who clearly wanted children—and examined the difference in long-term wages between those who fell pregnant and those who did not. At first the mothers earned much less, but this gap shrank over time. Around 10-15 years after the children were born, the mothers even earned a small premium.

Now this approach of exploiting natural variation in fertility has been used in a new study, by Camille Landais of the London School of Economics and others. It looks at women with Mayer-Rokitansky-Küster-Hauser (MRKH) syndrome, a rare condition in which a girl is born without a uterus but otherwise develops normally. These women know early in life that they will not bear children, and so differ from those who discover this after failing to conceive naturally or through IVF. This could influence their future wages, since women who plan to conceive may make different investments in their human capital. They might, for instance, spend less on education, knowing they might step back from their careers after giving birth.

Such early knowledge seems to make a big difference. The study of women with MRKH found they earn much the same as other women and men in early adulthood. Then, in their 30s and 40s, as the wage gap between men and women opens up, the

women with MRKH follow a different path. Their wage trajectory is almost identical to that of their male peers. In other words, remove both motherhood and any decisions women might make while anticipating it, and the wage gap seems to vanish. It is hard to imagine a better way to isolate the effects of childbearing from other female characteristics, and study their impact on earnings. At least on this planet. ■

## Property markets

### Bringing the house down

SHANGHAI

**Chinese homebuyers are enraged by shoddy building standards**

WHEN STEVEN SHI got the keys to his new \$1m flat in northern Shanghai, in December, things were not quite right. The walls were crooked. The balcony's tiles had not been installed properly. The power outlets did not have an electrical connection but the mirror in the bathroom did, delivering a shock when he touched it.

In January he and hundreds of neighbours banded together to insist that China Resources, a powerful state-owned real-estate developer, fix the most glaring problems. Some 200 angry homeowners gathered for hours outside a local government office, flanked by police. “I feel like I've been tricked,” says Mr Shi. He points out that the development was one of the most popular in Shanghai, which has perhaps China's healthiest property market. “If it can happen here, it can happen anywhere.”

China does indeed have widespread, long-standing problems with expensive but shoddily built homes. A cap on the ►

► price developers could charge per square metre was put in place in 2016, prompting builders to cut corners. Two years later an executive at one of the country's biggest developers described the homes then entering the market as some of the worst ever built. Then things got worse. In 2020 the central government restricted developers' access to funding, triggering a crisis. Investment, construction, home sales and prices all collapsed. The funds raised by developers in 2025, including bond financing, were half those raised in 2021. Housing's share of national fixed-asset investment shrivelled to 11%, from 19% in 2020.

One result of the funding crisis has been that developers have been unable to finish building millions of homes for which buyers have already paid. Many of those companies that continue to build seem to have dramatically cut costs for materials, and to be employing fewer, less experienced workers. Meanwhile, local bureaucrats across the country have insisted to developers that they must hand over the keys to flats on time—imposing tight deadlines that make it even more tempting to cut corners. The officials' fervour is understandable, since households making payments on homes they cannot live in can lead to social problems.

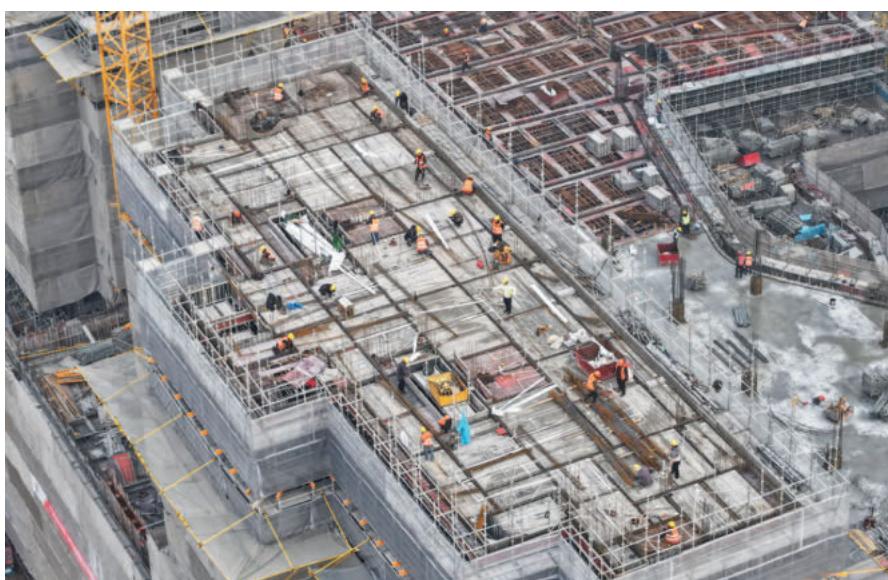
The scramble to finish homes with straitened budgets helps explain Mr Shi's predicament: he feels like he has become an unpaid worker for China Resources, tasked with finishing their development project. The firm has acknowledged that not all its buildings are up to snuff, and has therefore given Mr Shi and many other families two years to request refurbishments to their units. After that, the company will shrug off any responsibility for carrying out such work. And so homeowners have had to hire third-party inspectors to

investigate whether their homes have hidden problems. Mr Shi has so far identified 80 in his, and some of his neighbours need more than 200 things fixed.

Shoddy construction is not just a problem for disappointed homebuyers. It is also causing people to think twice about buying newly built flats at all, thereby reducing the prospects of a recovery in the housing market. There are no official statistics on complaints from buyers, but their dissatisfaction has become common knowledge. Chinese people therefore prefer to buy existing homes rather than those which might end up incomplete or badly built. Less than a quarter of sales last year were for new homes, down from half in 2022. One common refrain among second-hand homebuyers is that they want a flat built between 2005 and 2016. Any earlier and buildings appear dilapidated; any later and they will have been victims of the price cap, so possibly of lower quality.

The situation is a stark illustration of how policies set in Beijing can conflict with each other. The government last year removed the price cap and set out requirements for improving housing quality, such as standardising the height of ceilings. It has acknowledged that people are more likely to buy new homes that are in better shape. But the crackdown on borrowing by developers continues to undermine these goals. And local regulators seem unbothered by inferior work. Mr Shi says his district-housing regulator signed off on China Resources' construction. This may have helped the developer meet its deadline.

For the time being, he and his wife would be satisfied just by being able to live in the home for which they are already making payments. Their goal is to move in by the end of the year. They have a lot of work to do. ■



What's gone wrong this time?

## China's economy

# Marginalia

## Why China's central bank won't save the country from deflation

**F**OR DECADES Americans have fretted that China might dump its vast holdings of Treasuries, undermining the dollar. Global investors therefore snapped to attention when Bloomberg, a news agency, reported on February 9th that China's regulators have warned commercial banks against holding too many American government bonds. Some banks have been told to cut their exposure. In response to the news, the dollar fell against China's yuan and Treasury prices wobbled.

Are fears of Sino-American financial warfare finally coming true? Thankfully not. In guiding its banks, China was not making a fresh geopolitical threat. At most, it was trying to limit the banks' vulnerability to the many geopolitical threats that already exist. Dollar bonds have been a tempting asset for Chinese lenders, offering higher returns than similar securities at home. But any hit to the dollar could inflict heavy losses on overexposed lenders.

No wonder China's authorities feel nervous. As well as hurting the banks, a weaker, more competitive dollar will curb the appeal of China's exports, a vital source of growth. Together with cheaper imports, that could also worsen China's deflationary tendencies. According to figures released on February 11th, consumer prices rose by only 0.2% in the year to January. The falling cost of pork (down by 14%) offset the rising price of bling (gold jewellery increased in price by 77%). An alternative measure of prices as charged at the "factory gate" has been falling for years.

Although recent currency movements could worsen this problem, they remove a troublesome constraint on the central bank. In the past, worries about the yuan have prevented the People's Bank of China from aggressively cutting its policy interest rate, which has remained at 1.4% since last May. It feared that monetary easing would add to downward pressure on the currency. Now that would probably be welcome. "The exchange rate doesn't pose a strong constraint overall," said Zou Lan, deputy governor of the central bank, at a press conference last month.

Unfortunately, another obstacle remains: bank profitability. Banks make money by borrowing cheaply and lending more expensively. But in China the margin between deposit rates and lending rates is at a record low of 1.4%, far below the 1.8% recommended by regulators. To win busi-



ness, banks are sometimes tempted to underprice their loans and overcompensate their best depositors. The central bank worries that disorderly competition (or “invention”, as the Chinese call it) now afflicts the country’s financial institutions, just as it plagues manufacturers, e-commerce firms and high-school exam-takers.

Mr Zou hopes that this pressure will ease this year. Many three- and five-year deposits will mature in 2026, allowing banks to reprice them at lower rates. That

should allow the central bank to reduce its own policy rate, but not by much. Most economists expect it to make just one or two cuts of 0.1 percentage points each.

The central bank might ease more if the economy deteriorates. If growth looks like it will fall short of this year’s official target (which will probably turn out to be 4.5–5% when revealed next month) the central bank will recalibrate. It is in “wait-and-see” mode, says Helen Qiao of Bank of America. She cites an old Chinese idiom (*ke zhou*

*qiu jian*) which refers to a hapless traveller who loses their sword overboard when crossing a river. To mark the spot, they foolishly carve a notch in the side of the boat. Ms Qiao trusts that China’s central bank will not make the same mistake.

If the economy weakens further, the People’s Bank will be quicker to dive in. But perhaps not quick enough. According to some measures, China fell into deflation over two years ago. There has been a lot of water under the bridge since then. ■

## BUTTONWOOD

### *Feel the chill*

*Why this is the coldest crypto winter yet*

**C**HILL WINDS have been battering America’s eastern seaboard for weeks, driving temperatures in places to their lowest in decades. But that has nothing on the deep freeze into which investors have shoved crypto assets. The value of a bitcoin has dropped from \$124,000 in early October to around \$70,000 today, and the market value of all cryptocurrencies has fallen by more than \$2trn. Though the asset class has slumped before, its boosters now seem more despondent than ever.

In some ways, the extent of their misery is puzzling. Bitcoin’s 45% plunge is by no means the deepest on record: from a peak in late 2021 its price fell by a whopping 77%. It took around three years for the crypto industry’s market value to reach a new high. Today’s bear market is barely four months old.

But look at how much better other asset classes are doing. In 2022 crypto investors could take comfort from the fact that plenty of others were nursing their own losses. From peak to trough, the tech-heavy NASDAQ 100 index fell by over a third that year. Now it is not even 4% below the record high it set a few weeks ago (though some software firms have been battered). Crypto fans are sad because they are lonely.

The forces driving such a volatile and speculative market are always somewhat mysterious. It is clear, however, that leverage and liquidation are playing important roles. At the end of September, just before the plunge began, measurable borrowing against crypto assets amounted to some \$74bn—and had more than doubled over the previous 12 months, surpassing its level in late 2021.

Then, starting on October 10th, around \$19bn-worth of leveraged bets on crypto were quickly liquidated after

falling deep into the red. A steady succession of smaller positions has since been unwound. Worries about Strategy Inc, a firm that borrows and issues shares to buy bitcoin, have intensified. Its share price has dropped by almost 70% since July.

Some relatively new crypto products may be deepening the slump. The advent of crypto exchange-traded funds (ETFs) in 2024 was supposed to support prices by broadening the pool of potential buyers. It worked, for a while. The iShares Bitcoin Trust ETF (IBIT) became the fastest-growing ETF in history, with assets worth almost \$100bn by October. Now, though, ETFs are pulling prices down. Over the past 80 trading days IBIT has seen outflows worth \$3.5bn—its first extended sell-off. Most of the capital invested in the fund has now suffered losses.

The final factor weighing on crypto is the hardest to quantify: the vibe is off. For a speculative asset class with no fundamental value or income-generating potential, intangible aura is everything. And the aura of excitement that once surrounded digital assets seems to have vanished.

That is partly because they have lost their rebellious streak. If America’s president and his family are knee-deep in an asset class, how counter-cultural can it be? Charles Hoskinson, a co-founder of Ethereum, a blockchain platform, put it well last month. “We all basically became part of the system, and you know what the system does when you become part of it? They make it not cool.”

For some firms, crypto’s newly stodgy reputation has upsides. Institutionalisation has helped issuers of stablecoins, which ease digital payments. Assets like bitcoin, though, have lost their cool allure while gaining little in return; they might seem to be part of the “system”, but they have not actually been adopted by it. Professional, strait-laced investors still eschew crypto. A survey by Bank of America in September suggested that the vast majority of fund managers had no allocation to crypto at all. Digital assets accounted for just 0.4% of the total portfolio value of respondents.

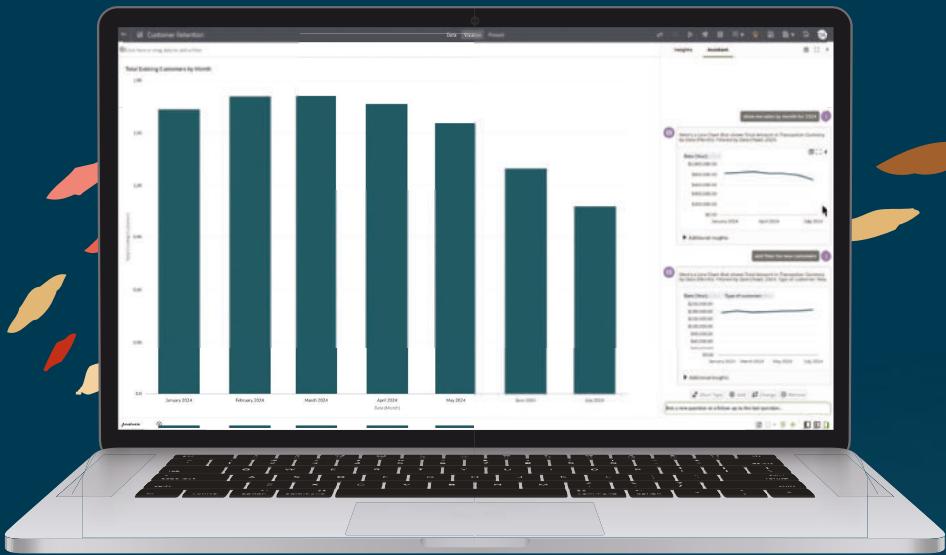
Central banks, meanwhile, are buying gold to protect themselves from inflation, geopolitical threats and the risk of sanctions. The digital assets that once promised an alternative to “fiat” money have been left out in the cold. The Czech central bank became the first to advertise any purchases of crypto last year, snapping up an experimental (and piddling) \$1m-worth of bitcoin. It has announced no plans to buy more.

Digital assets have proved far harder than many financial columnists—always keen to write obituaries for them—once suspected. Despite bear market after bear market, they have always defied predictions of wholesale collapse. But this crypto winter feels unusually bitter for good reason. Unless the vibes improve, do not expect a thaw.



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### *Not cold-hearted, but cool-headed*

*How to put a price on a human life*



**H**OW MUCH is fresh air worth? Some, taking a deep, restorative breath at the top of a mountain or an Atlantic cliff-edge, might think it priceless. Fighting air pollution nevertheless costs actual money. Businesses need to spend on new devices; some industries might need to shrink or vanish; households need cleaner ways of cooking and heating their homes. On the other side of the ledger are the benefits from avoiding the health damage that breathing polluted air causes—especially to children, the already sick and the old. Deciding how much to spend on clean-up efforts is a classic economic problem, in that solving it involves weighing one side of the ledger against the other. But how can you perform cost-benefit analysis when the benefits involve people avoiding sickness or early death? Pricing fresh air turns into an even harder problem: putting a value on a human life.

It is one that America's environmental watchdogs have decided to stop grappling with. The Environmental Protection Agency (EPA) announced last month that, when carrying out cost-benefit analyses of regulations, it would no longer put a price on the health benefits of clean air. There is simply too much uncertainty, officials argued, over how much such benefits are worth. Sceptics see this as a means by which to water down regulation. What is not counted does not count, as the old adage goes, and so refusing to put a price on fresh air is a way of discounting its benefits.

America's federal government has required regulators to perform cost-benefit analyses since an executive order made in 1981 by Ronald Reagan, then president. His goal was to cut red tape to a level at which its costs could be clearly justified. Murray Weidenbaum, then the chair of the president's Council of Economic Advisers, pointed out that if regulations on air pollution saved only a small number of lives, while costing a lot of money, it would be better spent elsewhere. Hospitals could receive the money to fund better cardiac care, for instance. Critics from the Democratic Party, sensing a ploy to advance business-friendly deregulation, responded that there was no way to put a monetary value on a human life. Squint, and that looks a bit like the EPA's argument today.

The EPA of the 1980s, however, reached for the concept of the value of a statistical life (VSL). This is not the same as how much a

person is worth. Actuaries had previously suggested pricing up the benefits of life-saving investment—or indeed purchasing life insurance—using the loss of earnings if the person in question died. Wages represent, at least to some extent, the price at which someone is willing to sell the hours of their limited lifespan. Scale that up over a whole lifetime, calculate the proportion of it they still have ahead of them, and you can work out a market value for their remaining years. This approach became known as the “human-capital method”. It fell out of favour, though, once economists pointed out that it could not be applied to those without a market wage. The old, the sick and those who eschewed paid work (to care for children, say) would be assigned a price of zero. Lifetime earning potential is not the same as lifetime value.

Thomas Schelling, who won the Nobel prize for economics in 2005, thought the human-capital method was badly flawed. The value of a life, he noted, depended on the evaluator's perspective. The “identified life”, he pointed out, had a near-infinite value. “Let a six-year-old girl with brown hair need thousands of dollars for an operation that will prolong her life until Christmas, and the post office will be swamped with nickels and dimes to save her,” he wrote in 1968. Ask for higher taxes to fund better hospital care, however, and few will open their pocketbooks. The latter was the “statistical life”: the increased risk of mortality for some unidentifiable person. When it comes to regulatory policy, argued Schelling, what matters is how much people are willing to spend on this unknown person—who might turn out to be themselves.

Schelling's insight was that people continually take risks which might result in their death. Driving, for instance, always carries the potential for a fatal road crash. Spend a bit more on cars' safety features and you reduce the chance of death. Find out how much people are willing to spend to lower the odds of death by a specified amount, and you can derive the VSL. If 100,000 people are willing to spend \$100 each to avoid a 1-in-100,000 chance of death, for instance, then \$10m has been spent to prevent one expected death. Again, this does not tell you how much a life is worth, but rather how much people will pay to prevent it being lost. The EPA has historically used a VSL of \$7.4m in 2006 dollars (\$12m today), mostly calculated from studies of the higher wages demanded by workers to perform jobs that raise their risk of death. One paper looked at how the signing bonuses paid by America's army varied with mortality rates during wars in Afghanistan and Iraq.

Britons are even less squeamish. Their National Health Service rations care using quality-adjusted life years (QALYs), an approach which follows the same logic as the VSL but takes each individual year of life expectancy and weights it for some measure of utility. A treatment that leaves a patient alive for longer, but in chronic pain, may contribute fewer QALYs than a less efficacious one with fewer side-effects. All else equal, interventions to protect statistical children are deemed more valuable than those to protect statistical pensioners, who have fewer years left.

#### **A million is a statistic**

These are all clever ways of trying to answer the unanswerable. Even so, the value of a life is definitely not zero. People tend to like being alive, and to be willing to pay to continue in this state. A best guess is better than none, and regulators need a benchmark against which to measure the costs of decisions. Economists are often accused of an anti-social coldness when they ask questions like how much a life is worth. Not asking would be far worse. ■

## Science & technology



### Electric hydrofoils

## Up, up and aweigh

STOCKHOLM

**“Flying” electric boats could remake urban transport**

THE CANDELA C-8 looks like a minimalist speedboat as it bobs in the water on a snowy morning in Stockholm. Powered by electricity, rather than a noisy outboard motor, it is eerily quiet as it pulls away from the dock. But once the boat reaches open water and starts to pick up speed, something extraordinary happens: it takes off. The hull lifts entirely out of the water, until it is flying, half a metre above the surface, supported by three thin, red struts.

These struts are in turn supported by two retractable hydrofoils, or underwater wings—one between the two front struts and one under the rear strut—which turn forward motion into lift. Propulsion is provided by a torpedo-shaped motor assembly, with two coaxial propellers, in the centre of the rear wing. Lifting the hull out of the water reduces drag, and thus the energy required for propulsion, by as much as 80%. Sensors around the boat measure the waves and adjust the tilt of the wings 100

times a second, providing such a solid, smooth ride that the boat feels as though it is on rails. “OK, we’re landing now,” says the pilot after a few minutes, and the hull sinks back into the water.

Electric hydrofoils are ideal for urban transport, says Gustav Hasselkog, the founder of Candela, which makes a 30-passenger hydrofoiling ferry, the P-12 (pictured), as well as the C-8, a leisure boat. They are quiet, emission-free and cheap to run (the C-8’s cost per nautical mile is about 5% of that of a conventional speed-boat). In many cities, boats are speed-limited, to minimise the disturbance caused

by their wake. Hydrofoils cause much less disruption and could be permitted to travel faster. Their proponents believe they could reshape urban transport by shifting traffic from clogged roads to underused waterways. Cities around the world are starting to put these claims to the test.

Candela, based in Sweden, is at the forefront of an international array of startups making electric hydrofoiling boats (it has delivered around 100 leisure boats, and has orders for 83 ferries). Its rivals include Artemis Technologies in Northern Ireland, MobyFly in Switzerland, Navier in America, SeaBubbles in France and Vesvee in New Zealand. Like Candela, many of these firms offer smaller leisure boats and larger passenger vehicles. Electric hydrofoils also have military uses, says Sampriti Bhattacharyya, founder of Navier, because they are quiet and, with no combustion engine, have a small heat signature.

The hydrofoil is not a new idea. It dates back to at least 1869, and the first successful example was built in 1904. Hydrofoil ferries have long been used in many parts of the world. But modern hydrofoils, such as the superyachts seen in America’s Cup races, are different. Rather than the “surface piercing” approach of earlier hydrofoils, the instability of which can cause a bumpy ride, modern vessels have completely submerged wings. This reduces ➤

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drag and improves stability. But it requires constant, tiny adjustments to keep the boat stable and level, which is only possible using the kinds of sensors and control systems nowadays found in smartphones, drones and autonomous cars.

The new electric hydrofoils are dependent on digital technology, then. They also take advantage of advanced materials and modern electric drivetrains. It is the convergence of these three technologies, borrowed from other fields, that has finally made hydrofoiling practical and scalable, observes Ms Bhattacharyya. "Land and air are going electric—maritime is the obvious next step," she says.

The power needed to propel a hydrofoil is directly proportional to its mass, so minimising a vessel's overall weight is vital. The wings themselves also need to be simultaneously small enough to reduce drag and strong enough to bear the weight of the boat. The solution is to borrow from aerospace and motor racing, and use carbon fibre. It has a reputation for being expensive, but that is changing. The wider availability of carbon fibre at lower cost has been "crucial" to enable hydrofoiling, says Mika Takahashi of IDTechEx, a market-intelligence firm.

Indeed, building the precise shape of a hydrofoil wing out of carbon fibre is cheaper than milling it from steel, says Mr Hasselkog. At his factory in Stockholm, the carbon-fibre hulls of a dozen P-12 ferries are lined up as their control systems are installed. Candela says it is the only company in the world in serial production of electric hydrofoils.

When it comes to electric drivetrains, makers of electric hydrofoils have been able to piggyback on the electrification of other forms of transport. In a prototype vessel, Candela used a lithium battery from a BMW i3 electric vehicle (EV), before moving on to batteries from BYD, a Chinese carmaker. It now has a partnership with Polestar, a Swedish-Chinese maker of EVs. Using batteries and power systems from EVs also allows electric boats to use standard fast-chargers designed for cars.

As for motors, Candela initially used one designed for electric planes, but ended up designing its own, submersible motor. Putting it underwater, mounted on the rear wing, provides cooling and improves efficiency. With two coaxial propellers, rotating in opposite directions, the spin induced in the wake by one is mostly cancelled out by the other, reducing energy losses. (One propeller is 70% efficient, says Mr Hasselkog, but two are 80% efficient.)

In short, new ideas are revolutionising "an industry that had long been technologically stagnant", says Ms Bhattacharyya. "In ten years, hydrofoiling will be the universal standard for high-speed maritime transit," she predicts. Nearly half of the

world's population lives in coastal regions, where cities are often gridlocked. Waterborne transit on what she terms "blue highways" is an obvious solution, initially for passengers, but also for goods, in such cities as well as island and archipelago regions. Mr Hasselkog makes a similar point, though his preferred term is "forgotten highways" because many cities made greater use of waterborne transport in the past, before the introduction of cars.

In cities, existing ferries are hugely inefficient, using 15-30 times more fuel per passenger mile than buses. They have to be large vessels to cope with demand during peak hours, but then have low occupancy for the rest of the day. Using a larger number of smaller, more efficient electric boats makes more sense and can provide a more frequent service, says Mr Hasselkog.

Several cities in Sweden and Norway have carried out passenger trials with Candela's P-12 ferry. The firm will soon deliver

eight vessels to Saudi Arabia and has orders from customers in India, Thailand and elsewhere. Candela reckons that the market for electric ferries could be worth \$22bn globally. Its existing factory can produce 40 vessels a year, but it plans to open a larger facility in Poland in late 2026.

The maximum size of hydrofoiling vessels is limited by the laws of physics. The mass of the boat (and thus the power required) increases with the cube of its length, but its passenger capacity increases only with the square. Artemis has developed a 150-person electric hydrofoil ferry, the EF-24. But a large conventional ferry running between Dover and Calais can carry 1,750 passengers, and their cars, notes Mr Takahashi. Such ferries, which can be modified to run under electrical power, will continue to dominate high-traffic routes, he predicts. But on short, passenger-only routes in cities, electric hydrofoils may be about to take off. ■

### Wild health care

## Animal hospital

### Humans are not the only animals that treat each other's injuries

**E**YES TRAINED on the patient's leg, the doctor proceeds with the operation. If the injured limb is not removed, infection and death will swiftly follow. The instrument of choice is a set of strong mandibles. The patient and surgeon are ants. Then comes post-operative care. The diminutive surgeon cleans the stump of potential pathogens with the help of its tongue.

Erik Frank, a biologist at the University of Würzburg, has spent much of his career collecting such examples of ants tending to each other's wounds. So far, his observations span more than two dozen species, from the amputation-performing *Camponotus maculatus* to *Megaponera analis*, which rescues injured comrades from the battlefield before covering their wounds ►



Turn your mandibles and cough

► with an antimicrobial goo.

These interventions seem effective. In *Camponotus*, a carpenter ant found mainly in Africa, amputations within an hour of upper-leg wounds boost survival rates from 30% to 80%. The ants employ a prophylactic approach, amputating regardless of whether the wound is infected or how recently it was inflicted. If ants waited until infection was apparent, the amputation would no longer be effective.

### Anty septic

But ants do more than amputate. In earlier research on *Megaponera*, a predator equipped with a thick cuticle that probably precludes amputation, Dr Frank observed ants carrying nestmates injured in termite raids back to the nest and then cleaning their wounds. These ants keep checking on the wounded for another eight or nine hours. If the wound gets infected, they treat it with an antimicrobial glandular secretion, more than tripling the victim's chance of survival. In another ant species, Dr Frank found that worker ants with infected wounds were expelled from the nest, while those with sterile leg injuries received continuous wound care.

Ants are an obvious group of animals in which to seek such behaviour. They lead injury-prone lives and their densely populated nests, in close proximity to bacteria-rich soil, make it easy for wounds to get infected. Moreover, as Dr Frank observes, it makes good sense for insects that live in large colonies to place a premium on the well-being of others.

Such phenomena are examples of what is known as social immunocompetence—the ability of an organism to use social interactions and behaviours to enhance immunity and control infection. The full list of such behaviours spotted in ants includes the use of pharmaceuticals, grooming, social spacing, burying the dead, quarantine and exile.

Susanne Foitzik of the University of Mainz is starting to look into the genes involved in rescue and wound-care behaviour. In *Temnothorax longispinosus*, a common North American species frequently injured when other ants raid their colonies to enslave them, she and colleagues recently identified genetic variants strongly associated with wound care. She plans further experiments to home in on what these genes are doing, which might relate to heightened sensitivity to pheromone signals from injured ants or the synthesis and secretion of antimicrobial substances. Dr Foitzik also found that *Temnothorax* ant colonies which live in warmer climates—where bacteria proliferate—lick wounds of their injured nestmates more frequently, pointing to the importance of climate as a selection pressure.

Humans might benefit from Dr Frank's

research. He has found a trove of 70 compounds, including 20 proteins, with antimicrobial and wound-healing properties. He notes that some might be useful against human pathogens that have developed resistance to antibiotics.

Ants are by no means the only animals to tend their sick and wounded. Crows, lions, macaque monkeys and chimpanzees do so as well. The mechanisms in these larger animals are, presumably, different. Insects, though capable of learning, have tiny brains, so in them this behaviour is surely genetically ingrained. The birds and mammals on the list, by contrast, are (except for lions, which have not, for obvious reasons, been studied experimentally in this way) species known to be capable of reasoning things out. But natural selection is about ends, not means. And in ants it seems to have arrived at complex medical systems that require neither empathy nor cognition. Just a strong pair of jaws. ■

### Robotics

## An eye for an eye

### Computer vision gets a human-inspired upgrade

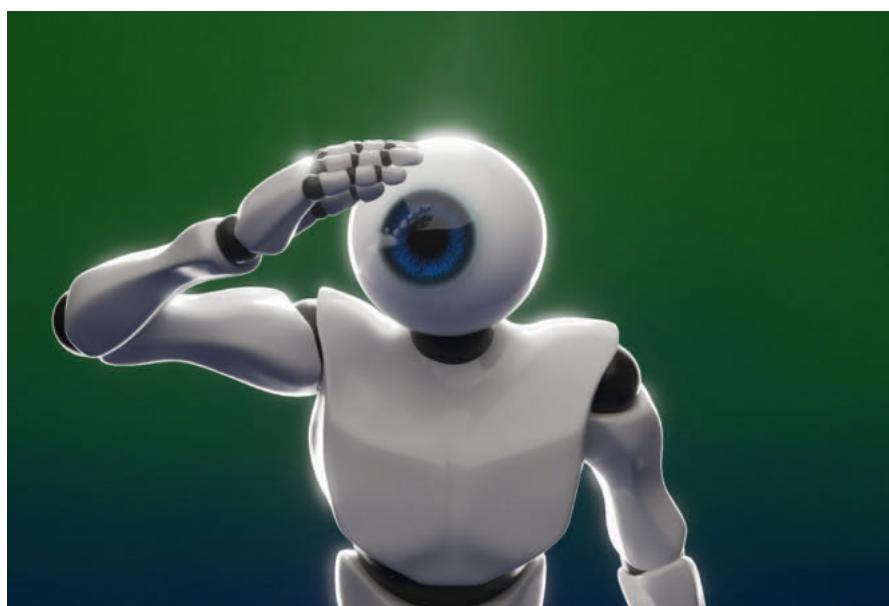
AUTONOMOUS VEHICLES face many hazards as they set out on the road. Cyclists swerve in and out of traffic, distracted pedestrians amble into the road, human drivers change lanes without indicating. Accurate vision and quick reflexes are required. Until now, even the best robots struggled to make sense of such complex environments as quickly as humans. That

may be about to change. In a study published this week in *Nature Communications*, researchers took inspiration from the human eye to develop a new artificial-vision system that is four times faster than the current state of the art.

Many robots are equipped with cameras to allow them to see the world. These digital eyes record sequences of still images which must somehow be interpreted as motion. A popular approach is optical flow. As a robot moves through its environment, optical-flow algorithms convert the shifting patterns of brightness it sees into information about its own movement and that of the objects around it. These algorithms allow robots to safely navigate busy streets, track the movement of table-tennis balls and even perform precision surgery.

Optical-flow methods are, however, computationally intensive. This is in part because every pixel in each frame must be processed. Even with state-of-the-art technology, distinguishing different objects in a single frame can take over 0.6 seconds. This can be costly. For an autonomous vehicle driving at motorway speeds, every half-second delay leads to around 12 metres of travel with outdated information. If artificial systems are to safely navigate homes, roads and operating theatres, their eyesight will need an upgrade.

Shuo Gao, a roboticist at Beihang University in China, wondered if biology might have the answer. Human eyes tame the complexity of the world by focusing attention only where it is needed. Central to this process is a region of the brain known as the lateral geniculate nucleus (LGN). The LGN acts as a relay station in the visual pathway, receiving information from the retina—where visual stimuli are converted into electrical signals—and passing it on to the brain's visual cortex, where those sig-



nals are processed. But the LGN also plays an important filtering role, indicating to the visual cortex where processing power should be prioritised. Because the LGN's filter is sensitive to changes in both time and space, it allows the brain to efficiently identify and track rapid movement, whether from a changing traffic light or a pedestrian crossing the street.

Dr Gao and his team aimed to introduce an LGN-like layer into artificial vision systems to guide the attention of optical flow algorithms. Doing so with traditional computer chips, in which the circuits that process information are kept separate from those that store data, would not have given them the speed-up they needed. Instead, the researchers turned to so-called neuromorphic hardware, which mimics the human brain by having the processing and storage functions integrated into the same bit of circuitry.

The researchers developed a novel piece of neuromorphic kit to imitate the LGN. Part of the device's circuitry was designed to track changes in light intensity over time. This allows the device to build up a picture of where motion is occurring within a given environment and prioritise regions for optical-flow analysis.

The researchers tested the new setup in a variety of contexts—including autonomous driving and robotic-arm operation—to see how it performed. The scientists found that their system operated at approximately four times the speed of existing optical-flow methods while maintaining or improving accuracy. Performance increases were particularly notable for autonomous driving, where the accuracy doubled. The system surpassed human-level speeds in most cases.

The system is not without limitations. For one thing, the neuromorphic hardware must still feed information back to conventional algorithms; as good as it gets at prioritising images, it can never overcome those algorithms' shortcomings. Indeed, the researchers observed that accuracy decreased for scenes with complex, dense motion—a familiar hurdle for optical flow.

The researchers hope that their new system will increase the variety and complexity of scenarios in which robotics can be deployed. That includes off the road and outside the factory. Interactions between humans and life-like robots may soon occur in millions of homes, an environment where the rapid detection and interpretation of subtle visual cues will be essential. Dr Gao's work may help human and machine see eye to eye. ■

### Well informed

## Do inductions lead to more C-sections?

### Research suggests the opposite

**T**HE TEXTBOOKS are clear: in humans, pregnancy lasts an average of 40 weeks. But averages are just that. Many women find themselves at the end of that period without any sign of contractions. In those cases doctors or midwives will usually suggest that, rather than wait for nature to take its course, labour should be medically induced.

Should those women agree? Some organisations promoting newborns' and mothers' health, such as the Thompson Method in Australia and National Partnership in America, as well as online influencers, argue that induction is likely to set off a cascade of other medical interventions, including epidural blocks for pain relief, forceps deliveries or perhaps even a Caesarean section—a major operation. The best evidence, however, suggests they have no reason to worry.

Hospitals offer induction because the risk of stillbirth or infant death (both of which are thankfully rare) goes up in pregnancies that continue beyond 41 weeks. The first stage is a “membrane sweep”, in which a midwife or doctor runs their fingers around the cervix to separate it from the baby's amniotic sac. If labour still does not start, a small balloon can be inserted into the cervix to help it dilate, hormones can be given to start contractions, or the waters may be broken with a long hook.

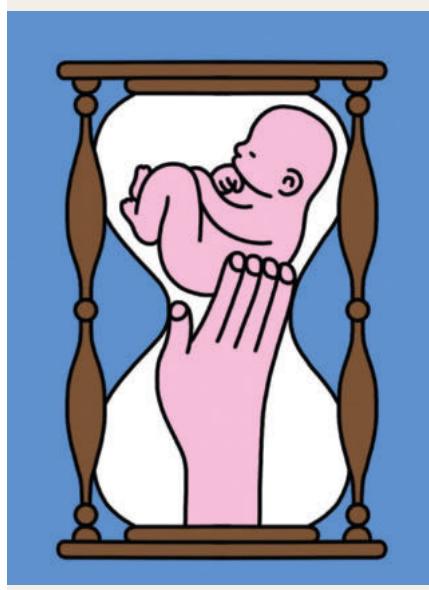
For bigger interventions—say, an epidural for pain relief, or delivery via forceps, ventouse or Caesarean—the link to induction is not as clear. Some observational studies, which look at what happens to women who are induced versus those who are not, have found induction makes those interventions more likely. But drawing robust conclusions from such work can be tricky.

There may be important differences between the two groups of women that could make the first more likely to need induction as well as the other interventions. Tellingly, the association with Caesareans tends to go away if researchers compare women who were induced with those told to go home and wait (thus excluding women who went into labour on their own and, therefore, would not have needed an induction).

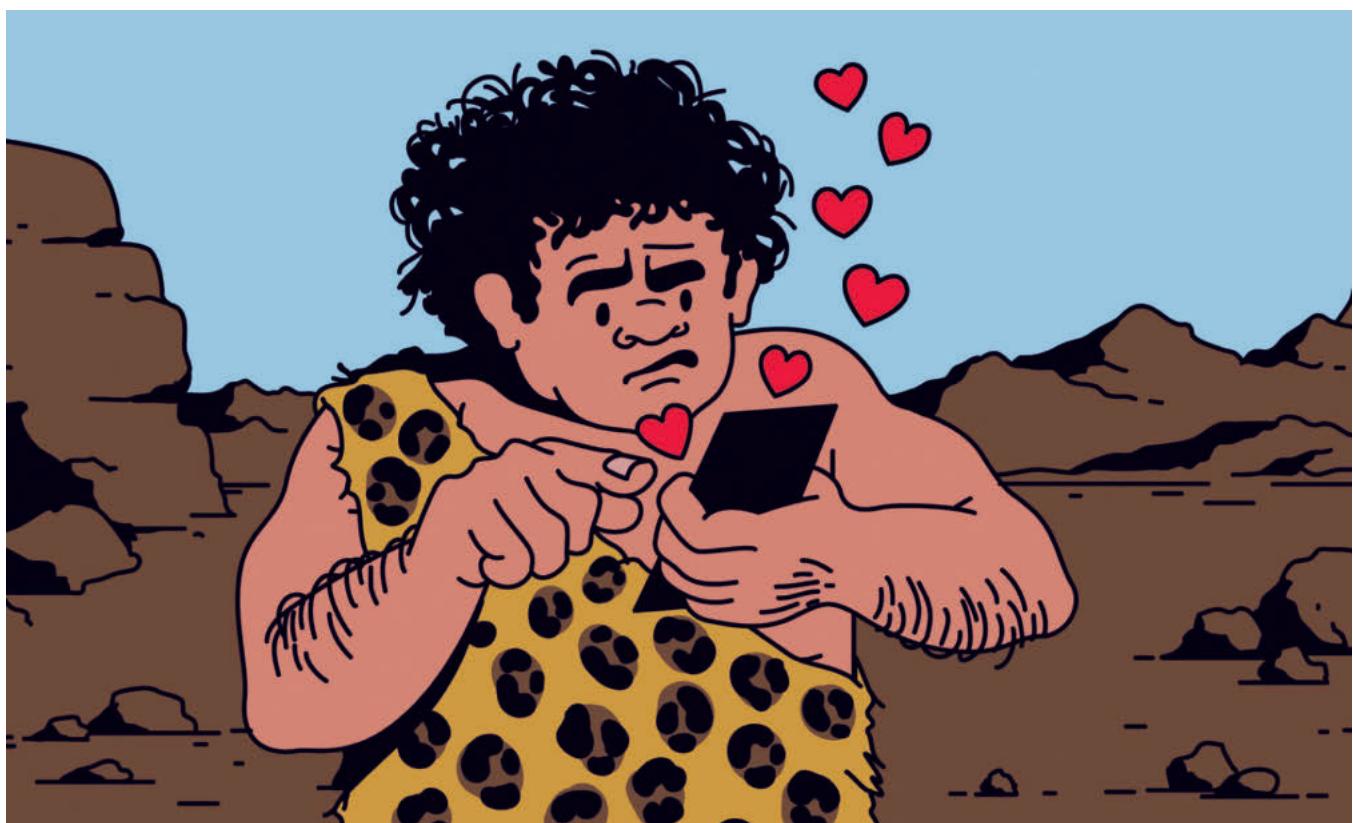
That picture is backed up by randomised controlled trials (RCTs), the gold standard for evaluating medical interventions. Take the American ARRIVE trial from 2018. It randomly assigned around 3,000 low-risk, first-time mothers to have an induction at 39 weeks, and another 3,000 or so to “wait and watch”. It actually found that 22% in the “waiting” group had a Caesarean compared with 19% of the induction group—a modest but significant difference.

These results may not be universally applicable, but other RCTs have reached similar conclusions. A review from 2020 which pooled data from 34 RCTs from around the world found that being offered induction, usually after 41 weeks, slightly lowered C-section rates, without significantly increasing the rate of instrumental delivery or the use of epidurals. In other words: induction does not seem to lead to more interventions, and might even do the opposite.

The law of averages, of course, still applies: there is no guarantee that expectant mothers will avoid unwanted interventions after an induction. How individual hospitals manage the process will probably have an impact, as will how much pressure the mother feels to have an induction when she would rather wait. Of all the reasons why any given woman might decide it is not for her, concerns about an automatic “cascade” need not be one of them.



## Culture



### Passion and pre-history

## The caveman's guide to romance

Two new books offer insights about intimacy and relationships

**Bonded by Evolution.** By Paul Eastwick.

Crown; 352 pages; \$32. Cornerstone; £22

**The Intimate Animal.** By Justin Garcia. Little, Brown Spark; 272 pages; \$30. Penguin Life; £20

**I**F YOU WANT an exciting first date this Valentine's Day, forget dinner and a screening of "Wuthering Heights". Try zip-lining instead. This is the advice of Justin Garcia, an evolutionary biologist and head of the Kinsey Institute, one of the world's best-known centres of research into sex. A day of climbing hills to throw yourself off cliffs lets you "walk and talk while experiencing something novel and thrilling together". Thus, you will get to know each other better. And because of a psychological principle known as "misattribution of arousal", your companion may start to associate you with thrilling feelings. "Yes, this is how sexologists approach first dates," says Dr Garcia.

Many species reproduce sexually. *Homo sapiens* is the only one to write books worrying about how the process is changing. Humankind is facing an "intimacy crisis", argues Dr Garcia in "The Intimate Animal". Globally, one person in four is lonely. Without strong relationships, people live less cheerfully and die earlier. A survey in America found that 98% of people believe good, intimate relationships are a key element of a satisfied life.

Part of the problem is the mismatch be-

tween the world in which our brains evolved and the one in which people now search for love, contends Dr Garcia. In his telling, the two greatest changes to human courtship in the past 4m years were the invention of farming 12,000 years ago and the spread of the internet in the 1990s. Agriculture led to the accumulation of wealth, which in turn led to marital norms designed to preserve capital for a family or clan. The internet also transformed how people find partners.

Whereas our hunter-gatherer ancestors would pick a mate out of a small selection of people they already knew (for hunter-gatherer bands consisted of only a few dozen people), modern singles face a seemingly endless choice of strangers on their smartphones. To cope with such dizzying numbers, they apply filters for everything from minimum height to "must like bird-watching" and "must not be a lawyer".

Yet the must-have traits that people demand in dating filters are woeful predictors of compatibility. Humans evolved to evaluate potential mates face-to-face, taking into account hard-to-describe qualities such as smell, touch and chemistry. A soft-lit photo and a list of arbitrary traits are no substitute. Small wonder that our caveman brains feel flummoxed. In one survey Dr Garcia conducted, he found that nearly half of single Americans thought that tech- ➤

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nology had made it harder to form real connections, and that younger adults were most likely to feel this way.

Paul Eastwick, a professor of psychology at the University of California, Davis, goes further. In "Bonded by Evolution", he concedes that dating apps have created new opportunities for people with niche preferences, limited social networks or who are too shy to initiate contact in person. However, they can be a huge waste of time—a typical user spends 90 minutes a day gawping and swiping. Lacking the old-fashioned safeguard of someone in the village warning you that so-and-so is a creep, the apps have an "abundance of creeps". Half the women who use them report being harassed. And people who scroll through hundreds of options online may head into real-world dates with the attitude that they are "the consumer who deserves to be impressed". If so, they will "find it hard to open up to someone", Dr Eastwick writes.

He has another worry about dating apps: he frets that they inadvertently promote a warped view of evolutionary psychology, which can bleed into misogyny. It starts with the accurate observation that, when picking mates, women have evolved to be choosier than men, as is the case in several other species where the female must invest a large amount of time and energy in each pregnancy, whereas the male invests only a little. This difference, it turns out, is much greater online than in real life. At a speed-dating event where face-to-face conversations have taken place, women are somewhat less likely to say yes to a second date than men (35% to 50%). On a dating app, with only pictures and text to go on, women are dramatically less likely to swipe right (5% to 50%).

So many men on apps face frequent rejection. And in the manosphere they find an explanation for their humiliation, apparently grounded in science: that women have evolved to be interested only in handsome men with plentiful resources to help ensure that their offspring can survive and reproduce. Since this is natural, it is inevitable, goes the deterministic argument popular with incels. So men must either become ripped, loaded and dominant or retreat to their bedrooms and denounce all women as manipulative gold-diggers. In fact, although women are indeed more likely than men to say they prefer a high-earning partner, they care more about kindness. And anyone can be kind.

Dr Garcia, who has a side job as chief scientific adviser to Match.com, is less gloomy about dating apps than Dr Eastwick, who rages against the "capitalist machinations of Match.com". But both authors offer similar ideas for how to make shrewder use of them. The key is to understand the limits of the information dating

apps convey, and move swiftly to acquire the more useful sort. Dr Garcia suggests having a video chat before meeting in person. Dr Eastwick favours dating fewer people, drawn from a wider pool, and spending more time with them. If you are not sure of someone after a first date, go on a second; people often change their minds on second impressions. But stop at three, since the chance of clicking after that is relatively small.

Both books conclude on a hopeful note. The dating scene may seem daunting, and some people obviously start with unearned advantages. Yet defeatism is unwarranted—whether about technology or biology. Both writers emphasise cultivating real-world, mixed-sex social networks, rather than living on your phone. Friendships can often turn romantic. Look at who is in front of you, advises Dr Garcia. The grass is not greener on the other side, but where you water it.

Dr Eastwick suggests hosting "used-date" parties, where each singleton brings someone they met online and liked, but only as a friend. "Your 'meh' is surely someone else's 'mm-hmm,'" he predicts. Another technique, which *Homo sapiens'* forebears often employed, is this: if you can't find a match where you are, try moving. People's Stone Age brains are wired to seek intimacy. You won't find it by hiding in a cave. ■

#### Amateur choirs

## The great tenor shortage

A lack of men who can sing high affects choirs and music

THE CONCERT of the Taunton Madrigal Society in November 1926 was a triumph. The ballroom in south-west England was "packed to overcrowding", wrote a local newspaper. Encores were plentiful. Yet the event ended in a minor key. The choir badly needed tenor singers, explained one of its members. Perhaps some in the audience might like to join?

"All my life tenors have been the smallest section," says Will Todd, a British composer. But the shortage of tenor singers is worsening. The lack of high men's voices, which add colour and harmony to many choral works, is a growing problem for amateur and church choirs. Given the enormous scale of choral singing, it is a problem for music in general.

Germany has at least 45,000 choirs, about 60% of them linked to churches. A poll for the German Music Council found that 8% of adults sing in a group or publicly—more than play in bands or orchestras.



Ten(or) times harder

Women outnumber men two to one. Roughly the same sex ratio prevails in Europe, America and Nigeria.

When men do join singing groups, they often avoid the tenor section. The tenor voice is "a cultivated sound", says John Potter, author of a book on the subject. A man with no vocal training is more likely to have the range of a baritone (a high bass). It does not help that the tenor voice is associated with operatic stars such as Luciano Pavarotti, who could powerfully sing high notes that no amateur can easily reach. And the tenor line in classical choral music can be difficult, with many unexpected notes and alarming leaps.

Sonja Greiner, director-general of the European Choral Association, sings in a German choir that has four or five tenors out of about 45 singers—half as many as would be ideal. Even the most prestigious amateur choirs, which can pick their singers, have grown lopsided. The Orpheus Choir was founded in Glasgow in 1906 with 66 singers, including 15 tenors. Today its new incarnation has 79 singers including 14 tenors. All but one of the tenors are over the age of 60.

The pipeline is worryingly narrow. Many adults learned to sing at school or in churches. But school choirs are at least as unbalanced as adult ones: a large study of American high schools by Kenneth Elpus of the University of Maryland found a sex ratio of seven girls to three boys. Matt Hill of Creighton University, who leads several choirs in Nebraska, points out that many churches have dropped choirs for "praise teams" with electric instruments and microphones.

In many choirs, a few women routinely sing the tenor part. That no longer attracts the spluttering outrage it once did. But conductors rarely see tenorines, as they are ➤

known, as a perfect substitute. When sung by women, low tenor notes can sound dark and underpowered. Some choir leaders, including Mr Hill, ask female alto singers to help the tenors with high notes and male basses to help with low ones. (He may also ask the sopranos, often the heftiest section in a choir, to dial it back a bit.)

A more drastic solution is to rewrite music, or to write new music differently. The standard format for choral music is SATB (soprano, alto, tenor, bass). Publishers have arranged even revered choral works such as Mozart's "Requiem" for SAB voices (soprano, alto, bass) or SAM (soprano, alto, men). Mr Todd, who asks choirs that commission pieces from him about their balance of voices, tries to avoid dividing tenor lines into a higher and a lower part, as earlier composers often did.

This is wise, given choirs' demographic difficulties. But the loss of a voice is audible all the same. At one point Ms Greiner's choir in Germany had just three tenors—too few to survive an outbreak of the common cold. The choir tried using SAB arrangements, but found it unsatisfactory. The parts seemed too low for the remaining tenors but too high for the basses. As soon as the situation improved slightly, it happily reverted to the traditional arrangements. Four or five tenors is barely enough. ■

#### Film adaptations

## Gimme moors

### A sex-steeped take on "Wuthering Heights" arrives in cinemas

**W**HAT IS THE best way to adapt a novel for the screen? There are two schools of thought. The first—call them the loyalists—insist that film-makers should stick to the source material slavishly. George R.R. Martin, whose "Game of Thrones" series inspired one of the most popular TV shows ever, stated that screenwriters who strive to "make the story their own...never make it better". Instead, "999 times out of 1,000, they make it worse."

The second group, the rebels, believe they should not be beholden to the authority of the original text. "If you simply write down scenes from the novel, it never works," Sir David Hare, a British playwright and screenwriter, has said. "The only way to be faithful to a novel is by being lavishly promiscuous."

Emerald Fennell seems to have taken Sir David's advice to heart. The British film-maker has written and directed "Wuthering Heights"—a movie that, de-



Getting gown and dirty

spite sharing a name with Emily Brontë's novel of 1847, resembles it about as closely as the Yorkshire moors in which it is set resemble Los Angeles. It takes such liberties with the plot that it could more reasonably be described as fan fiction than a true adaptation of the Victorian classic.

Ms Fennell, for her part, warned viewers about her intentions in advance. "You can't adapt a book as dense and complicated and difficult as this," she declared: "It's not possible." She made it clear that this film is her take on the story, based in part on her memory of reading the strange, haunting tale of Cathy's and Heathcliff's thwarted romance as a teenager. It was also wish-fulfilment: she added the scenes she had wanted to read.

She keeps the bones of the story: the adoption of Heathcliff into the Earnshaw family; his bond with Cathy; the friendship between Cathy and the wealthy neighbouring Linton family; Heathcliff's alienation; and Cathy's marriage to Edgar Linton. Ms Fennell keeps the arteries, too, such as Cathy's famous declaration of love for Heathcliff: "Whatever our souls are made of, his and mine are the same."

However, Ms Fennell does away with the novel's limbs and sinews, including several characters and the whole of the second half. She ends the film—spoiler alert—with Cathy's death. (And her baby dies with her.) That means that there is none of the intergenerational drama, nor the elaborate and often dull revenge plot that occupies Heathcliff after his beloved's demise. Cathy's ghost does not return to stalk him decades later.

These changes free up Ms Fennell to spend a large amount of the 136-minute runtime on her main area of interest: sex. Brontë, though unmarried, was no naïf, says Rebecca Yorke of the Brontë Parson-

age Museum. But in the book the "intensity of the love and passion" between Cathy and Heathcliff is "unspoken".

Not so in Ms Fennell's telling—here it is not just spoken, but shouted about, loudly and repeatedly. After Cathy (played by Margot Robbie, pictured) witnesses two servants having rough sex using farm equipment, she undergoes an erotic awakening. Later, when Heathcliff returns to Yorkshire after a prolonged absence, it does not take long for the pair to fall into each other's arms. In Brontë's book they barely even kiss. In Ms Fennell's version, they get hot and heavy in the garden, a carriage, her boudoir and elsewhere.

If Ms Fennell wants to make a sexed-up version of "Wuthering Heights", that is her prerogative. None of it will surprise anyone who has seen her previous films, "Promising Young Woman" and "Saltburn", both of which touch on the dark side of desire. David Thomson, a film historian, says Ms Fennell's work has "got a real sense of sensuality, sexuality, danger" and a "kind of recklessness" in its willingness to take risks. Her fans may appreciate her boldness, not to mention the sumptuous costumes and occasional jokes.

Devotees of the novel, however, will be dismayed that Brontë's tale of class, obsession and violence has been so distorted. Many will believe that she has desecrated the book and hollowed out its characters. Luckily, purists can turn on one of many other, more faithful adaptations.

They should also bear in mind the wry observation of James Cain, an American novelist and journalist whose work was the basis for "Double Indemnity", among other films. "People tell me, 'Don't you care what they've done to your books?' I tell them, 'They haven't done anything to my book. It's right there on the shelf.'" ■

## Africa's future

## Continental fates

**How Africa Works.** By Joe Studwell.  
Atlantic Monthly Press; 416 pages; \$32.  
Profile Books; £25

AFRICA IS ADDING 300m people per decade: by 2050 it will be home to 2.5bn, a quarter of humanity. As the rest of the world ages, the continent's youthfulness stands out. It will play a bigger role in the global labour market and as a source of consumers, culture and ideas. Thought-provoking new books about Africa are therefore sorely needed. In "How Africa Works" Joe Studwell, a visiting fellow at the Overseas Development Institute, a think-tank, has written one of the most interesting analyses of the past few years. It will prove valuable reading for anyone curious to understand "the last great frontier of global development".

Africa is home to most of the world's poverty. Why? Mr Studwell argues that it is partly a result of "low-budget colonialism". European powers extracted commodities, then left behind a pitifully tiny number of educated elites. Their arbitrary borders created kaleidoscopes of ethnically fragmented states.

So far, so familiar. But the author quickly moves on to make a more original argument. He singles out "chronically low population density" as an important cause of Africa's underdevelopment. Asia was labour-rich and land-poor by the time of its economic rise. But because of scourges

such as disease, crop-trampling elephants, slavery and bad soil, Africa has been much slower. As recently as 1975 the population density across Africa was equivalent to that of Europe in the 1500s. By 2030 Africa will have the population density Asia had in 1960. "Africa is only now becoming sufficiently densely populated to achieve strong economic growth," potentially following in Asia's footsteps, he argues.

It is a bold claim. In general GDP per person and density are not especially correlated. Some of the densest African countries, such as Burundi and Malawi, are the poorest. Other development experts have put more emphasis on literacy and fertility rates. But Mr Studwell's case—that it takes a critical mass of people before markets can start to hum—has an intuitive logic.

Already four of the continent's 54 states have shown impressive growth in recent years. The stories of Botswana and Rwanda will be familiar to Africa-watchers. But those about Mauritius and Ethiopia are newer and welcome. Across the quartet—in an echo of Stefan Dercon's "Gambling on Development" (2022)—Mr Studwell notes the presence of a "developmental coalition" transcending ethnic lines.

Part of the reason Mr Studwell's book was so keenly anticipated is that he came to the subject quite fresh, as an outsider. He wrote "How Asia Works" in 2013, ascribing that continent's escape from poverty to more productive family farms, export-oriented manufacturing and state intervention in finance. Later Bill Gates asked him what he thought about Africa. That conversation and a visit to east Africa seem to have inspired him to turn to the continent; he has since travelled extensively there and surveyed the academic literature. Perhaps unsurprisingly, he concludes that Asia's development recipe would be ideal for Africa, too. Two of his star subjects, Ethiopia and Mauritius, have already done more than most African countries to follow in that vein.

Some scholars will question how important—and how possible—it is for Africa to pursue this classic story of structural transformation. On the face of it, the Asian mould feels foreign: South Sudan will not become South Korea. Africans may also feel that their politicians do not get enough blame for the corruption and complacency that have stymied growth so far.

But in 2026 African GDP growth is (unusually) set to outpace that of the Asia-Pacific region, as the Chinese economy slows and commodity prices have surged. Investors are becoming more bullish about Africa as a destination for capital, not charity. And Africa's careless political elites, terrified of their jobless youth, are starting to see economic growth as crucial to their own preservation. There is no stronger development incentive than survival. ■



Heading in the right direction

## Office culture

## What a way to make a living

## The rise of the 9-to-5 influencer

HE HAS found a profitable niche. Natalie Marshall, known online as "Corporate Natalie", skewers the absurdities of office life. She makes skits about "corporate lies" (getting excited about emails), "corporate red flags" (saying work is your life) and corporate lingo (could you imagine saying "synergy" or "close the loop" in everyday life?). Her videos have more than 50m likes on TikTok.

Ms Marshall is one of a bevy of "9-to-5" influencers who offer a glimpse behind the cubicle walls. Around 1m TikTok videos are tagged #9to5 or #CorporateTikTok. You can see "A Day in the Life" of a banker, marketer or lawyer. Some work hard ("Spend a 20-Hour Workday With Me"); others work hard preparing to work hard ("My 5-9 before my 9-5").

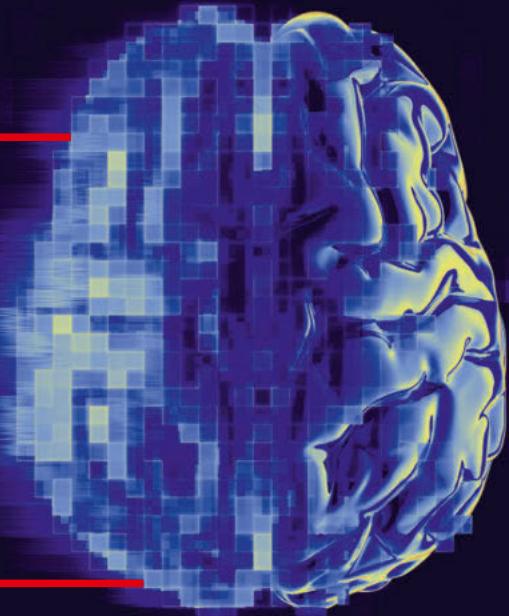
CorporateTok may sound dull. Indeed, one 9-to-5 influencer, Connor Hubbard, has been dubbed "the most boring man on the internet". But white-collar workers enjoy watching their own stresses play out on screen. Influencers offer a more realistic depiction of the world of work than Hollywood does. Fans of "Industry" might think that a career at an investment bank is raucous fun. Influencers such as Juliet Mackay show that the small hours are spent drowning in emails, not cocaine.

Having noticed their popularity, firms are inking deals with corporate influencers, believing they can help them connect with customers and employees. In 2022 Deloitte, a consultancy, hired Lara Sophie Bothur, making her the first in-house influencer at a company; her LinkedIn account was estimated to generate \$13m of advertising value a year. (She left the firm last year to go freelance.)

Most corporate influencers build their personal brand rather than a company's one. Corporate Natalie quit her job in marketing to start a virtual-assistant business for influencers. Mr Hubbard, who has 2m followers, left his full-time analyst job to become a full-time influencer. Some fans would have preferred them to stay in their 9-to-5s. Mr Hubbard's "content was boring before, but relatable", one wrote on Reddit. "Now it's just boring."

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## Rupert Murdoch's legacy

# Bossy Aussie

The raucous history of media's most powerful—and dysfunctional—family

**Bonfire of the Murdochs.** By Gabriel Sherman. Simon & Schuster; 256 pages; \$29 and £25

**W**HAT TURNED Rupert Murdoch into the terror of Fleet Street, scourge of the American airwaves, maker and breaker of prime ministers and presidents? It may have been an incident 90-odd years ago on a cruise ship somewhere between Australia and Europe. Lady Elisabeth Murdoch, his formidable mother, decided that it was time young Rupert learned to swim. So she took him to the pool—and tossed him in. “I had to dog-paddle to the side, and I was screaming,” Mr Murdoch later recounted.

To understand the world’s most powerful news machine and its complicated, irascible mastermind, you have to understand the family behind them, argues Gabriel Sherman, a journalist who wrote “The Apprentice”, a scathing film about Donald Trump. As Mr Murdoch nears his 95th birthday and the question of succession looms, Mr Sherman has written a family saga that gallops through 100 years of history in around 200 lively pages.

The pool incident took place on a ship bound for England, where Sir Keith Murdoch, Rupert’s distant father, began his own newspaper career under Lord Northcliffe of the *Daily Mail*. The key ingredients of news, Northcliffe declared, were “health things, sex things, money things”. Applying these lessons in Australia, Sir Keith built a newspaper chain that provided Rupert with a fancy childhood home, a Shetland pony called Joy Boy and early brushes with power, including meeting President Harry Truman and Arthur Sulzberger of the *New York Times*. But when Sir Keith died, aged just 67, Lady Elisabeth sold many of his assets to cover debts, and the Murdoch empire was greatly reduced.

In the subsequent decades Mr Murdoch built it back up—and then some. In Australia he gleefully acquired rivals; in Britain he began with the *Sun*, before shocking the establishment with his takeover of the august *Times*. In America he took control of 20th Century Fox before selling most of it to Disney for \$71bn in 2019, at the top of the market for media. Today his remaining newspaper and TV assets—including the ever influential Fox News, which Mr Trump watches obsessively—are worth a combined \$40bn.

They pack an editorial punch like no other. “I didn’t come all the way from Australia not to interfere,” Mr Murdoch told one of his editors. He employed “telephone terrorism”, calling staff day or night and firing off faxes from his yacht. Jet-lag, combined with the “angry pills” of temazepam he took to combat it, did nothing for his patience. To survive, executives built their coverage around his prejudices without instructions being spelled out directly. This “anticipatory compliance”, as one underling describes it, has insulated Mr Murdoch from scandals that have hit his titles, such as when the *News of the World* was shut down over illegal phone-hacking.

Mr Murdoch’s worldview is faithfully projected by his papers and by Fox News. But he has changed his politics over the years. In his surprisingly lefty student days he was known as Red Rupe and kept a bust of Lenin in his room at Oxford. The *Sun* flipped from Margaret Thatcher to Tony Blair to David Cameron and back to Sir Keir Starmer: more of a political weather-vane than a signpost. Mr Murdoch held a fund-raiser for Hillary Clinton in 2007, later backing Mr Trump, with whom he has had a fraught relationship.

The one constant is a transactional view of power. After Mr Murdoch’s *New York Post* backed Ed Koch for mayor, he lifted a ban on the paper’s delivery trucks using city highways. To get into China,



Black and white and read all over

coverage was censored at his Star Television Network, and his publisher, Harper-Collins, spiked a critical book by Chris Patten, a former governor of Hong Kong.

He seems to identify most strongly as an outsider, never happier than when fighting obstacles. British elites dubbed him a “dirty digger”. Yet his *Sun* and *News of the World*—stuffed with health things, sex things, money things—thrived against their dull competitors. The ferocious Fox tore up a cosy Hollywood where executives enjoyed nine-course board lunches. Anti-elitism was sometimes a figleaf for bad behaviour, however. After the *Sunday Times* published “Hitler’s diaries”—fake, it turned out—Mr Murdoch shrugged: “We are in the entertainment business.”

As he has aged, the question of succession has come into focus, heightened by a HBO drama that appears to be largely based on the family. (Mr Murdoch’s divorce settlement with Jerry Hall, his fourth wife, included a clause forbidding her from talking to the show’s writers.) HBO was not the first to fictionalise the feuding family. Mr Murdoch’s second wife, Anna, wrote a novel, “Family Business”, about a media dynasty that implodes when the father dies and his heirs fight. After a decades-long audition, Mr Murdoch has decided to pass the empire on to Lachlan, his eldest son, causing a rift with other siblings. For now, however, the proprietor is sticking to his promise that “My retirement plan is to be carried out of here.” He is still a regular, if somewhat hobbled presence, at the Fox lot in Century City.

Mr Sherman’s book draws on material already reported about the Murdochs, including Michael Wolff’s “The Man Who Owns the News” (2008), which got closer to the mogul than any other account. There are few new stories to be told. But it elegantly marks the end of the news-baron era. Most of Fox News’s competitors are owned by parent companies with much bigger interests than the news, from Disney (of ABC) and Paramount (CBS) to Warner Bros (CNN) and Comcast (NBC). Newspapers, meanwhile, are increasingly loss-making hobbies for unreliable billionaires, who view them either as philanthropic endeavours or political bargaining chips. (Jeff Bezos, owner of the *Washington Post*, has nothing approaching Mr Murdoch’s passion for newspapers. The paper recently announced it would lay off a third of its journalists to stem losses.)

Given media valuations today, it is hard to conceive that in the 1980s Mr Murdoch leveraged a newspaper fortune to buy a Hollywood studio. Now attention and power are shifting to platforms whose editorial line is dictated by algorithms rather than a bark down the telephone or furious fax from the yacht. For better or worse, Mr Murdoch is the last of his kind. ■

## Economic & financial indicators

	Gross domestic product % change on year ago latest quarter*		Consumer prices % change on year ago latest 2026†		Unemployment rate %		Current-account balance % of GDP, 2026†		Budget balance % of GDP, 2026†		Interest rates 10-yr govt bonds change on latest, %		Currency units per \$ Feb 12th % change on year ago	
United States	2.3	Q3	4.4	2.3	2.7	Dec	3.0	4.3	Jan	-3.5	-6.5	4.2	-36.0	-
China	4.5	Q4	4.9	4.6	0.2	Jan	0.9	5.1	Dec†‡	2.7	-5.7	1.5	6.91	5.6
Japan	0.6	Q3	-2.3	0.8	2.1	Dec	1.7	2.6	Dec	4.3	-3.3	2.2	92.0	153
Britain	1.0	Q4	0.2	1.2	3.4	Dec	2.5	5.1	Oct†‡	-2.6	-5.0	4.5	6.0	0.73
Canada	1.4	Q3	2.6	1.4	2.4	Dec	2.4	6.5	Jan	-1.0	-2.2	3.3	24.0	1.36
Euro area	1.3	Q4	1.3	1.2	1.7	Jan	2.0	6.2	Dec	2.5	-3.3	2.8	37.0	0.84
Austria	0.9	Q3	1.7†	1.0	2.0	Jan	2.3	5.8	Dec	1.0	-4.2	3.1	24.0	0.84
Belgium	1.1	Q4	0.8	1.2	2.2	Dec	2.2	6.4	Dec	-1.6	-4.5	3.3	31.0	0.84
France	1.1	Q4	0.7	1.1	0.4	Jan	1.4	7.7	Dec	-0.3	-5.2	3.4	23.0	0.84
Germany	0.4	Q4	1.3	1.0	2.1	Jan	2.2	3.8	Dec	4.6	-3.8	2.8	37.0	0.84
Greece	2.0	Q3	2.4	2.3	2.9	Dec	2.5	7.5	Dec	-5.1	nil	3.4	7.0	0.84
Italy	0.8	Q4	1.3	0.8	1.0	Jan	1.5	5.6	Dec	1.4	-2.9	3.4	-14.0	0.84
Netherlands	1.8	Q4	2.1	1.0	2.2	Jan	2.6	4.0	Dec	7.1	-2.9	2.9	24.0	0.84
Spain	2.6	Q4	3.1	2.0	2.5	Jan	2.2	10.0	Dec	2.3	-2.6	3.2	20.0	0.84
Czech Republic	3.0	Q3	3.2	2.5	1.6	Jan	2.0	2.8	Q3†	0.8	-2.5	4.3	38.0	20.4
Denmark	4.0	Q3	9.2	1.9	0.7	Jan	1.5	2.9	Dec	11.5	1.3	2.7	47.0	6.29
Norway	2.2	Q4	-1.3	1.4	3.6	Jan	2.8	4.4	Nov†‡	12.2	8.9	4.3	43.0	9.49
Poland	3.8	Q3	3.6	3.5	2.4	Dec	2.4	6.0	Jan§	-1.0	-6.6	5.0	-83.0	3.55
Russia	0.6	Q3	0.4	0.6	5.6	Dec	4.9	2.2	Dec§	1.4	-2.5	14.8	-154	77.5
Sweden	1.9	Q4	0.8	2.2	0.4	Jan	1.2	8.3	Dec§	5.5	-1.9	2.6	41.0	8.90
Switzerland	0.5	Q3	-2.1	1.1	0.1	Dec	0.5	2.9	Jan	3.3	0.2	0.3	-6.0	0.77
Turkey	3.7	Q3	4.4	3.6	30.7	Jan	24.5	7.8	Dec§	-1.2	-3.5	28.1	146	43.6
Australia	2.1	Q3	1.6	2.4	3.8	Dec	2.6	4.1	Dec	-1.4	-1.7	4.9	44.0	1.40
Hong Kong	3.8	Q4	4.1	2.5	1.5	Dec	2.0	3.8	Dec†‡	12.6	-3.7	3.0	-71.0	7.82
India	8.2	Q3	8.4	7.2	1.3	Dec	3.5	6.9	Jan	-1.0	-4.1	6.7	1.0	90.7
Indonesia	5.4	Q4	6.7	4.9	3.5	Jan	2.9	4.9	Aug§	-0.2	-3.2	6.4	-37.0	16,797
Malaysia	5.7	Q4	2.6	4.8	1.6	Dec	2.0	2.9	Dec§	2.3	-3.8	3.6	-27.0	3.92
Pakistan	3.7	2025**	na	4.0	5.8	Jan	5.0	6.9	2025	-2.5	-4.8	11.1	+++	-106
Philippines	3.0	Q4	2.4	4.5	2.0	Jan	1.9	5.0	Q4§	-4.3	-5.8	5.9	-15.0	58.3
Singapore	6.9	Q4	8.7	2.9	1.2	Dec	1.4	2.0	Q4	14.9	0.2	2.0	-87.0	1.26
South Korea	1.5	Q4	-1.1	2.5	2.0	Jan	1.8	4.1	Jan§	4.9	-2.4	3.6	80.0	1,446
Taiwan	12.7	Q4	24.0	6.9	0.7	Jan	1.5	3.4	Dec	23.3	0.7	1.4	-16.0	31.4
Thailand	1.2	Q3	-2.2	1.7	-0.7	Jan	0.6	0.7	Dec§	2.6	-4.7	1.8	-48.0	31.1
Argentina	3.3	Q3	1.1	3.0	32.4	Jan	27.2	6.6	Q3§	-1.6	0.4	na	na	1,404
Brazil	1.8	Q3	0.4	1.7	4.4	Jan	4.0	5.1	Dec§**	-2.7	-7.0	13.6	-128	5.20
Chile	1.6	Q3	-0.6	2.2	2.8	Jan	3.0	8.1	Dec§**	-2.0	-1.7	5.3	-67.0	855
Colombia	3.4	Q3	5.0	2.8	5.4	Jan	5.7	8.0	Dec§	-2.6	-6.4	12.8	160	3,671
Mexico	1.6	Q4	3.2	1.4	3.8	Jan	3.5	2.6	Dec	-0.5	-3.7	8.7	-113	17.2
Peru	3.4	Q3	5.7	2.7	1.7	Jan	16	4.0	Dec§	1.4	-2.5	5.8	-65.0	3.36
Egypt	5.3	Q3	39.4	5.3	11.9	Jan	10.8	6.4	Q3§	-1.8	-6.2	23.7	-75.0	46.8
Israel	3.1	Q3	11.1	4.5	2.6	Dec	2.0	3.1	Dec	2.1	-4.0	3.8	-47.0	3.07
Saudi Arabia	4.5	2025	na	4.5	2.1	Dec	1.9	3.4	Q3	-3.4	-4.2	na	na	3.75
South Africa	2.1	Q3	2.0	2.0	3.6	Dec	3.5	31.9	Q3§	0.9	-4.7	8.0	-259	15.9

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

	% change on:		
	Index Feb 11th	one week	Dec 31st 2025
In local currency			
United States S&P 500	6,941.5	0.9	1.4
United States NAS Comp	23,066.5	0.7	-0.8
China Shanghai Comp	4,132.0	0.7	4.1
China Shenzhen Comp	2,695.2	0.4	6.5
Japan Nikkei 225	57,650.5	6.2	14.5
Japan Topix	3,855.3	5.5	13.1
Britain FTSE 100	10,472.1	0.7	5.4
Canada S&P TSX	33,254.2	2.1	4.9
Euro area EURO STOXX 50	6,035.6	1.1	4.2
France CAC 40	8,313.2	0.6	2.0
Germany DAX*	24,856.2	1.0	1.5
Italy FTSE/MIB	46,510.8	-0.3	3.5
Netherlands AEX	1,009.0	1.9	6.1
Spain IBEX 35	18,044.5	-0.3	4.3
Poland WIG	126,500.5	-0.8	7.9
Russia RTS, \$ terms	1,121.5	-1.4	1.2
Switzerland SMI	13,547.1	0.3	2.1
Turkey BIST	13,787.8	-0.7	22.4
Australia All Ord.	9,281.8	0.8	2.9
Hong Kong Hang Seng	27,266.4	1.6	6.4
India BSE	84,233.6	0.5	-1.2
Indonesia IDX	8,291.0	1.8	-4.1
Malaysia KLSE	1,756.4	0.8	4.5

## US corporate bonds, spread over Treasuries

		Dec 31st
	Basis points	latest 2025
Investment grade	91	93
High-yield	348	354

Sources: LSEG Workspace; Moscow Exchange; Standard & Poor's Global Fixed Income Research \*Total return index

## Commodities

The Economist commodity-price index 2020=100	Feb 3rd	Feb 10th*	% change on month	% change on year
Dollar Index	146.3	144.9	-1.8	2.6
All items	138.7	138.5	nil	-14.1
Industrials	152.6	150.3	-3.1	20.5
Non-food agriculturals	135.3	136.1	4.9	1.4
Metals	157.0	153.9	-4.7	25.9
Sterling Index	137.2	136.2	-3.5	-6.9
Euro Index	141.5	139.0	-4.0	-10.9
Gold	\$ per oz	4,944.5	5,018.7	8.8
Brent	\$ per barrel	67.3	68.9	5.1

Sources: CME Group; LME; LSEG Workspace; NOREXCO; NZ Wool Services; S&P Global Commodity Insights; Thompson Lloyd & Ewart; USDA \*Provisional

For historical indicators data, visit

economist.com/economic-and-financial-indicators

## OBITUARY

### *Virginia Oliver*

*The lobster-boat skipper died on January 21st, aged 105*



**T**HE KNOCKING of a diesel engine coming to life, followed by a steady, low chugging and a roar that grows quieter in the distance: that is the sound of early mornings in coastal Maine. Lobster boats in the common Cape Islander style are made for work, broad and flat-bottomed, sturdy and high-bowed, with plenty of space for storage and room on deck to stack traps, built for working in choppy northern waters. They ply near-shore grounds rather than the high seas, their captains checking the traps they set a day or two earlier before returning to the same dock in mid-afternoon from which they set out before sunrise.

Virginia Oliver first went out on the water with her father, who sold lobsters and had a general store in the Muscle Ridge Islands, when she was eight years old—when traps were rickety crates of wooden slats that needed heavy ballast to sink them and strong arms or a sturdy winch to raise them, not like today's wire-mesh traps that sink easily and get pulled up by mechanical haulers. This was before the Great Depression and the second world war, and not too long after those sea cockroaches were considered fit only for prisoners, servants and farm animals.

Female lobstermen are rare today, as the profession's common name suggests, but they were unheard of when Ginny was growing up. Back then women could knit nets for the wooden traps their husbands made, but their place was on shore. As much as she enjoyed being on the water with her father, Ginny went to school, living on the mainland with her aunts and grandfather in Rockland during the week. She married and had four children, and when the youngest was nine she went back to paid work.

She spent 19 years at a printing press in Rockland, lugging heavy equipment around, but got tired of it. "Lobstering", she told an interviewer when she was 101, "I wouldn't have to work half as hard, and I could be my own boss." So one day, when her husband came home, she told him: "I just quit. I'm going with you."

It's not hard to see why. The intricate waterways wending among tiny, pine-forested islands in the Penobscot Bay traverse a rugged, dramatic, intimate seascape for which tourists empty their pockets every summer to see for a fleeting week or two what she got to see every day: rocky outcroppings where seals hoot at

passing boats, the sun rising over Vinalhaven in a riot of reds and golds and setting behind the mainland as the sky goes from periwinkle to cornflower blue to an endless canopy of stars.

From the time she left the printing press she reminded her husband Bill, her fishing partner for 60 years, and then her son, who took Bill's place after he died, that she was indeed her own boss—and theirs too. She cut an unusual figure on the water, always going out in earrings and lipstick ("You never know who you are going to see," she explained).

Lobstering can be tough. As Colin Woodard, a journalist from Maine, explained in "The Lobster Coast", his book-length study of coastal Maine's lobstering towns, "Through custom, peer pressure and the occasional extralegal act, the lobstermen of each harbour have long conserved their lobstering turf; they determine who fishes it." If a skipper sets traps in waters that everyone knows belong to lobstermen from another harbour, she might find her traps emptied or buoys missing. If things get really bad, tyres can get slashed, or guns drawn.

But she was tough, too. Nobody ever gave her grief for being a woman running a boat ("I'd have told them off if they did"). One lobsterman who knew her recalled, "She had a mouth like a sailor. A lot of things she said you couldn't print in a newspaper."

Three days a week, Ginny would wake up at 2.45am for the 15-minute drive south to Spruce Head, where she and her son Max kept their boat, the *Virginia*, named by her late husband. They would row their little skiff from the shore to where their boat was moored for the night. After satiating *Virginia*'s appetite for diesel and hauling her bait on board—usually a box of reeking menhaden, which bottom-feeding lobsters love—she and Max would leave the harbour at daybreak.

She had 200 traps; Max had another 200. Regulations forbid hauling any traps until 30 minutes before sunrise, but then came a full day of work. "If we haul 200 traps," she explained, "that's a good trip." Max did the trap-hauling, and Ginny would measure and inspect the lobsters. By law, juveniles and "berried" lobsters (egg-bearing females, named because eggs cling to their carapace like berries) must be thrown back into the water, and eggers notched with a V in their tails, to let any other lobstermen who caught them know they were productive, and should not be kept. Then she would bind their claws with thick rubber bands to make them easier to handle. She skippered her own boat until a fall when she was 103 confined her to the mainland, 95 years after she first put to sea with her father.

She did this in relative obscurity until a local filmmaker persuaded her to appear in a documentary called "Conversations with the Lobster Lady" when she was 99. Viewers learned that she went to the supermarket daily, just to get out of the house and see people, and that her children, then aged 74, 76, 78 and 81, still came for supper every Saturday night.

Soon enough, television networks and feature writers found her. A local poet and author wrote a children's book about her life. The only thing that seemed to discomfit her were threats to her independence: after a doctor asked why she was still lobstering in her late 90s, she responded "Well, that's 'cause I wanted to go." She confided to an interviewer, "He really made me mad." She liked keeping busy, and, modest Mainer to her bones, took the attention in her stride. "There's always something to do," she would say, in her musical Downeast accent. "I don't think I'm anything too special." Others disagreed. ■

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