The Economist

Bento-box economics

Imagining a war in Lebanon

In its prime: Amazon at 30

Technology Quarterly: Spycraft

JULY 6TH–12TH 2024

NO WAY TO RUN A COUNTRY

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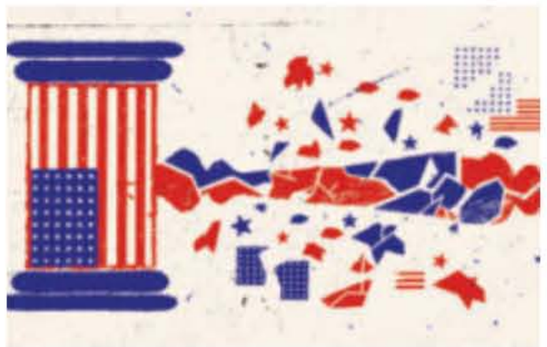

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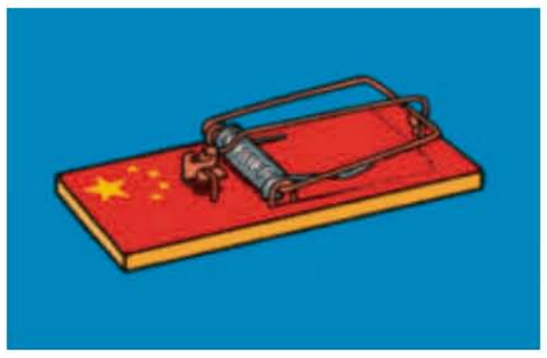

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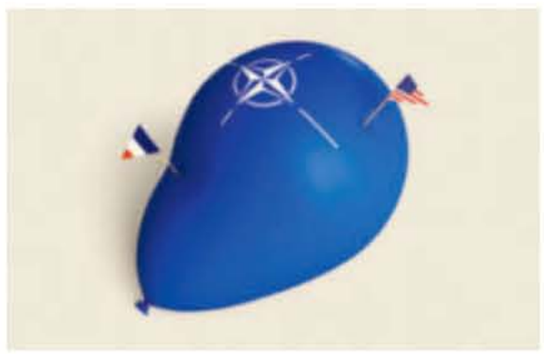

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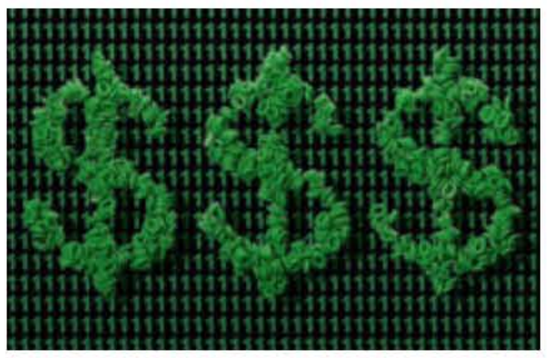

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to take part in *"a severe contest between intelligence, which presses forward, and an unworthy, timid ignorance obstructing our progress."*

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The world this week Politics

Joe Biden admitted that he had "screwed up" his debate with Donald Trump. The president's disastrous performance has caused some Democrats to openly call for him to drop his re-election bid. Polls show a sizeable majority of Americans think he does not have the cognitive ability to serve as president. Mr Biden said he would not pull out and would contest November's election. Senior Democrats, including Kamala Harris, the vice-president, and state governors rallied around the 81-year-old.

Trump card

America's Supreme Court gave a mixed verdict on whether **Donald Trump** was immune from prosecution for his alleged attempt to overturn the 2020 election. In a 6-3 ruling the court separated a president's official actions from his unofficial ones, finding that Mr Trump's conversations with people in his administration were covered by immunity. His communications with private individuals and state officials were a grey area, the justices said, sending the issue back to the lower courts. It is now less likely that Mr Trump will ever be tried on those election charges. After the ruling, prosecutors agreed to postpone Mr Trump's **sentencing** hearing for falsifying business records.

Steve Bannon began his four-month prison sentence for refusing to answer a subpoena from a congressional committee investigating the events of January 6th 2021. Mr Trump's former adviser held a rally shortly before his incarceration. "Victory or death," he exclaimed to the crowd.

More than 200 candidates from the centre and the left withdrew from the second round of the **French parliamentary election** to avoid splitting their vote in constituencies where they have a chance of beating the hard-right National Rally (RN). The united "republican front" is trying to stop the RN from gaining a majority in the election on July 7th. The RN came first with 33% of the vote in the first round.

Ursula von der Leyen was endorsed by EU leaders for a second term as president of the **European Commission**. She now faces what is expected to be a tight confirmation vote in the European Parliament in mid-July. Kaja Kallas, the prime minister of Estonia, has also to be confirmed as the EU's top diplomat. António Costa, who resigned as Portugal's prime minister last year, is the new president of the European Council, for which he does not need parliamentary approval.

Turkey arrested hundreds of people after **Syrians** were targeted in a spate of violence triggered by reports of a Syrian man sexually abusing a child. Cars and properties belonging to Syrians were set ablaze in Kayseri, in central Turkey, before the unrest spread to other cities. More than 3m Syrian refugees live in the country. Across the border in northern Syria locals responded by attacking Turkish troops, who maintain a big security presence in the area.

Spain's supreme court ruled that Carles Puigdemont, the de facto leader of Catalonia's separatist movement, could not be granted amnesty for misuse of public funds, a blow to the Socialist government, which has promised the amnesty in return for Catalan support in parliament. The decision can be appealed against. The court held that other charges relating to the holding of an illegal independence referendum in 2017 were covered by the amnesty.

Turnout hit a record low in the first round of **Iran's** presidential election. Masoud Pezeshkian, a 69-year-old surgeon and reformist who has criticised the regime's corruption and called for engagement with the West, came first. Saeed Jalili, a hardliner who seeks confrontation with America and engagement with Russia and China, came second. They face each other in a run-off on July 5th. Mohammad Baqer Qalibaf, a stalwart of the Islamic Revolutionary Guard Corps, is out of the race.

Israel ordered Palestinians to leave Khan Younis, a city in southern **Gaza**, after rockets were reportedly fired into Israel from there. It was reported that Israeli strikes in response killed several people. António Guterres, the UN's secretary-general, said that "No place is safe in Gaza." In April displaced Palestinians returned to Khan Younis after Israel withdrew its soldiers.

An Israeli drone strike killed a senior **Hizbullah** commander, known as Abu Naameh, in southern Lebanon. The Iranian-backed militia responded by firing a barrage of rockets across the border at Israel. American negotiators have been trying to stop an all-out war from breaking out between Israel and Hizbullah. Around 70,000 Israelis have been forced to leave their homes in the border area.

Cyril Ramaphosa, **South Africa's** president, appointed a cabinet containing members of the Democratic Alliance (DA), previously the main opposition party, averting worries that squabbles over ministerial positions might have torn apart the new coalition government. The African National Congress, Mr Ramaphosa's party, still holds most key portfolios, including finance and foreign affairs. The DA and smaller parties control several troubled departments, including home affairs and agriculture.

Mohamed Ould Ghazouani was re-elected for a second term as president of **Mauritania**, with 56% of the vote. At least three people were killed in clashes between protesters and the security forces after his main rival disputed the results. The electoral commission dismissed claims that the poll had been rigged.

In **India** at least 121 people were killed during a stampede at a religious festival around 200km (125 miles) south-east of Delhi. Authorities said the event attracted 250,000 people when permission had been given for 80,000 to attend.

A petition in **South Korea** to impeach the president, Yoon Suk Yeol, has been signed by 1m people so far. The document accuses Mr Yoon of corruption and failing to protect South Koreans from Japanese treated radioactive water, among other things. The petition crashed on the National Assembly's website because of heavy demand. The deeply unpopular Mr Yoon lost a parliamentary election in April.

Battling Beryl

A powerful category-five storm, **Hurricane Beryl**, ripped through the Caribbean, destroying property and killing at least seven people. On July 4th it was bearing down on the south-eastern coast of Mexico. There is no record of a category-five storm ever forming in the Caribbean so early in the year. Warmer sea temperatures, induced by climate change, mean that ever more energy is available to create powerful hurricanes.

The world this week Business

Boeing agreed to buy **Spirit AeroSystems**, a maker of jet fuselages that Boeing hived off from its operations in Wichita in 2005, in an $8.3bn transaction. Reincorporating Spirit will help Boeing streamline its production process after a host of claims about shoddy workmanship. Spirit built the door panel that blew off a 737 MAX upon take-off in January. It also produces parts for Airbus. That business will be sold to the European aerospace company as part of the deal.

Tesla delivered almost 444,000 electric vehicles in the second quarter. Although that was down by nearly 5% from the same period last year and was its second consecutive quarterly sales decline, the carmaker's share price surged, as markets were expecting a bigger drop. **BYD**, a Chinese rival, increased its deliveries of pure battery EVs by 21%, to 426,000, so Tesla keeps its crown as the world's biggest EV seller, for now.

General Motors had its best sales quarter in America since the end of 2020, shifting 696,000 vehicles from April to June. Sales of EVs accelerated by 40%, year on year, to 21,900, though that still represents just 3% of GM's total US sales.

Japan's **Topix** stockmarket index closed at a new high, beating the previous record set in December 1989. The Nikkei 225, which breached its 1989 peak in February, also hit new levels this week.

The **euro zone's** annual inflation rate dipped slightly in June, to 2.5%, though the growth of prices in services was still high at a rate of 4.1%. The European Central Bank is expected to keep interest rates on hold at its next meeting on July 18th, after cutting them a month ago.

An **Apple** executive will join OpenAI's board as an observer, according to reports. Microsoft has a similar arrangement with OpenAI, the developer of ChatGPT, a chatbot that uses generative artificial intelligence. Apple recently struck a deal with OpenAI to integrate ChatGPT into its new Apple Intelligence system.

The revolution's energy

Google's annual assessment of its environmental impact revealed that its carbon emissions grew by 13% last year, to 48% above its 2019 baseline, mostly because of its expanding data centres and use of artificial intelligence. Google is still aiming to be net zero by 2030, a target it admits is "extremely ambitious". There is a lot of "uncertainty around the future environmental impact" of AI, it said.

ITER, an attempt by six governments and the European Union to build a **fusion reactor** in the south of France, announced another delay. It was supposed to open in 2025 (already a postponement of nine years). That has been moved a further nine, to 2034, with the first energy-producing reactions expected in 2039, and the cost rising from €20bn ($21.6bn) to €25bn. It looks increasingly likely that one of the many commercial fusion companies now in existence will beat it.

The European Commission again flexed its new regulatory muscles under the Digital Markets Act, this time taking **Meta** to task over its "pay or consent" advertising model. European users of Meta's platforms can either pay for an ads-free service or consent to having their data tracked. Meta's response was that its advertising model complied with a ruling from "the highest court in Europe" and that it wanted a "constructive dialogue" with the commission.

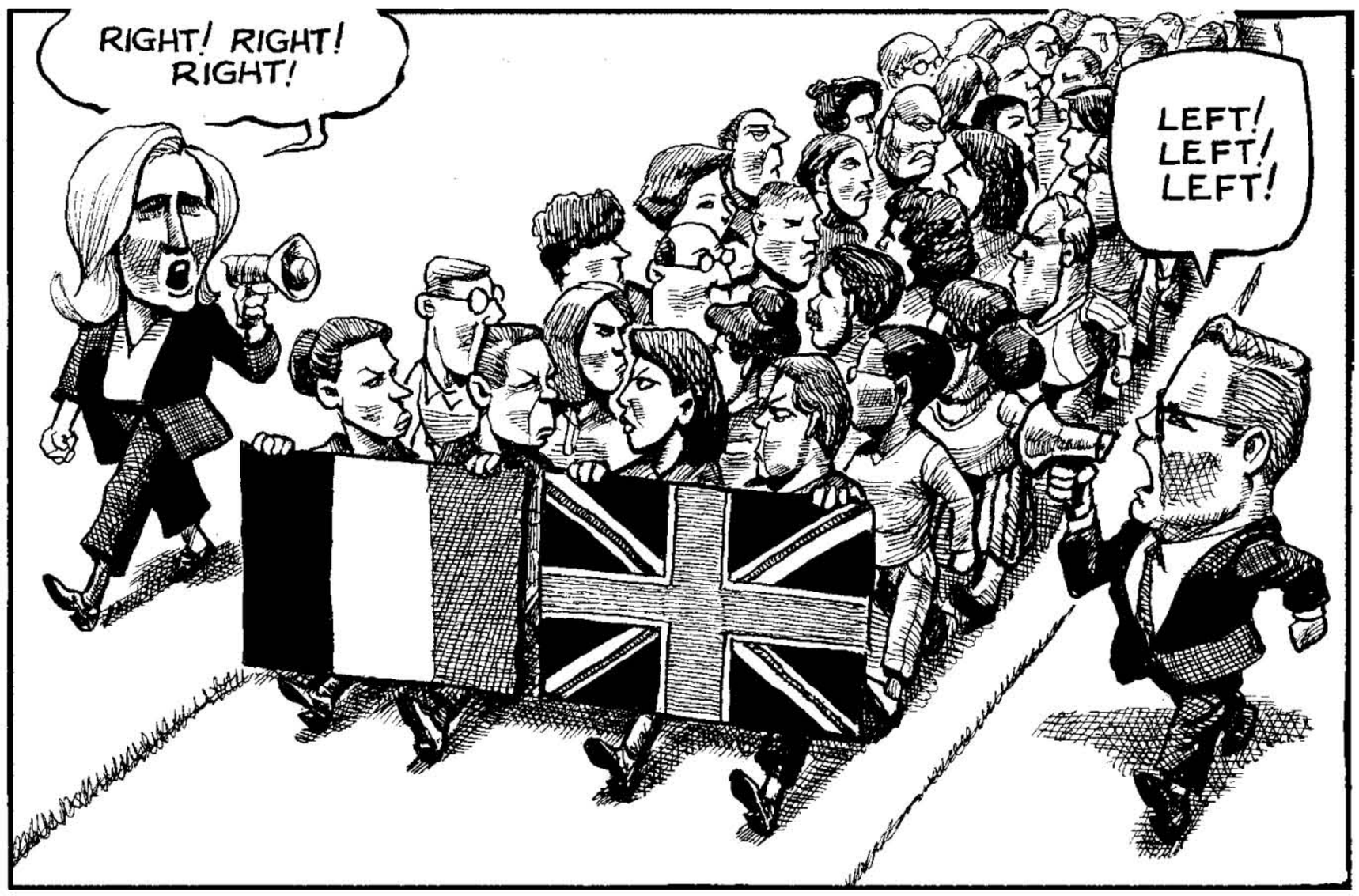
Nike's share price failed to recover from the hammering it took after the sportswear company reported weak quarterly earnings and lowered its sales forecast for the year. The stock lost 20% of its value. Nike has been running behind trendy competitors, such as Hoka and On, in terms of sales growth.

Walgreens Boots Alliance saw its share price take a similar dive after it slashed its profit forecast and announced more shop closures. The managing director of Boots, the British side of the pharmacy business, is stepping down. Walgreens had toyed with selling Boots, but none of the prospective buyers offered the right price.

EU regulators approved **Lufthansa's** bid for a 41% stake in **ITA**, Italy's national carrier, which was created from the ashes of Alitalia. Rome's Fiumicino airport will be the German airline's sixth hub when the deal closes, giving it better access to Africa, the Middle East and Latin America.

City of flights

The Olympics is leading travellers to postpone their visits to **Paris**, according to Air France-KLM, which warned that traffic to and from the French capital was "lagging behind" other European cities and would hurt its revenue from June to August. As 15m people are expected in the city for the games, this may in part be because French people are postponing their holidays until late August. "Paris will be unbearable," one resident told the media.



The Economist

No way to run a country

Joe Biden and his party portray themselves as the saviours of democracy. Their actions say otherwise

THE PRESIDENTIAL debate was awful for Joe Biden, but the cover-up has been worse. It was agony to watch a befuddled old man struggling to recall words and facts. His inability to land an argument against a weak opponent was dispiriting. But the operation by his campaign to deny what tens of millions of Americans saw with their own eyes is more toxic than either, because its dishonesty provokes contempt.

The effect has been to put the White House within Donald Trump's grasp. Fresh polls have found that voters in the states Mr Biden must win have moved against him. His lead may be in danger even in once-safe states such as Virginia, Minnesota and New Mexico.

Mr Biden deserves to be remembered for his accomplishments and his decency rather than his decline. So it is right that the first senior Democrats have begun to call openly for him to step aside (see Briefing). However, their public expressions are nothing compared with the building wave of private dismay. More of them urgently need to face up to the fact that if they do not speak out now, Mr Trump will win. In order to bring about the political renewal that America now so clearly needs, they must call for change. It is not too late.

Democrats argue, rightly, that Mr Trump is unfit to be president. But the debate and its aftermath have proved Mr Biden unfit, too. First, because of his mental decline. Mr Biden can still appear dynamic during short, scripted appearances. But you cannot run a superpower by autocue. And you cannot put an international crisis on hold because the president is having a bad night. Should someone who cannot finish a sentence about Medicare be trusted with the nuclear codes?

Mr Biden is blameless for his failing powers, but not for a second disqualification, which is his insistence, abetted by his family, senior staff and Democratic elites, that he is still up to the world's toughest job. Mr Biden's claim that this election is between right and wrong is ruined by the fact that the existence of his campaign now depends on a lie.

Democrats sneer at the Republican Party for its craven behaviour towards Mr Trump. Again, they are right. Too many Republicans have parroted his falsehoods and lacked the moral courage to speak out against his abuses. Convinced they could outlast him, or that someone else would pay the price for ejecting him, senators and congressmen have put their ambition before their country.

The Democratic Party should look in the mirror, starting with Mr Biden himself (see Lexington). He avers that he failed in the debate because he was tired from jetting around the world, as if his debility were evidence of his vitality. His supporters argue that those awful 90 minutes should not overshadow the past three and a half years. But what matters is whether they foreshadow the next four. Senior Democrats repeating these desperate talking points or waiting in silence for someone else to speak up first may think they are being loyal. Is that loyal to their country or their careers?

Democrats might say that their tactics are just politics. Their ugly means are justified by their honourable ends of saving American democracy from the predations of Mr Trump. That defence does America no favours. The tactic of covering up your own flaws by demonising your opponent has long marred American politics, but using the threat of Mr Trump as a "dictator" to offset Mr Biden's evident infirmity is a form of blackmail. As the head of state, America's president embodies the virtues of the republic. The more he is seen as a stubborn old man who leaves the real work to his courtiers, the more he will undermine Americans' faith in their system of government. Representing America abroad, Mr Biden will project decrepitude—to the delight of China and Russia and the dismay of America's allies.

There is another option. Mr Biden should withdraw from the campaign. That way, the election might refresh the body politic. The virtue of democracy is that voters can choose their rulers, but Mr Biden and Mr Trump offer a choice between the incapable and the unspeakable. Americans deserve better.

As our new podcast "Boom!" explains, presidential politics is stuck in a rut. Barring Barack Obama, every president since Bill Clinton in 1992 was born in the 1940s. Mr Biden (1942) first campaigned for the presidency 37 years ago, albeit in a fumbling way. At that time Mr Trump (1946) thought about running, too. Their generation came of age during the Vietnam war. It carries around the baggage of campus protests, the greed-is-good era on Wall Street and old fights over race and feminism. Those fights are very different today, and not only because they are more often waged on TikTok.

The stagnation is a failure of the party system. Parties are supposed to be vehicles that bring together factions and interests to bid for power. They have been carjacked. First the Clintons and Bushes seized the wheel. When voters were sick of them, Mr Obama and then Mr Trump staged grassroots rebellions. In today's Democratic Party the driving seat is being hogged by Mr Biden and his people. Only if Democrats take back control and persuade him to move aside can renewal begin.

The Economist first said in 2022 that Mr Biden should not seek re-election because he was too old. Immediately after the debate we made our case more strongly. A fresh candidate would have just over ten weeks after the convention to make their pitch. Such a candidate might lose, obviously, though even then the catharsis of Mr Biden's self-sacrifice would help restore American politics.

But we believe that they would have a good chance of winning—a better one than Mr Biden, even if the candidate was Kamala Harris, his relatively unpopular vice-president. They would be fit to govern; and they would, with the exception of Ms Harris, deprive Mr Trump of his strongest arguments against Mr Biden: the responsibility for inflation, immigration and the supposed "witch-hunt" that led to his prosecution. America's renewal needs to start now. There could be no better way than by choosing a new candidate to defeat Mr Trump. ■

The northern front

A dangerous moment

Hizbullah poses a grave threat to Israel, but a war right now would be disastrous

As the intensity of the fighting in Gaza ebbs, an even more dangerous conflagration looms on Israel's northern border. Ever since the day after Hamas's attack on October 7th, Hizbullah, another Iran-backed militia, based in Lebanon, has battered northern Israel with rocket and drone strikes. Fires have burned thousands of acres of land and 70,000 evacuated Israelis have been unable to return to their homes. The Israel Defence Forces (IDF) have hit back, driving 90,000 Lebanese from the south of the country. On July 3rd they assassinated a prominent Hizbullah leader. An outright war could be one of the biggest conflicts in the region for decades (see Middle East & Africa section). Israel has no good answer to Hizbullah's menace. That means it should seek to avoid a war today and instead focus on rebuilding deterrence.

The threat from Hizbullah is not new, but it is more serious than it was. By making parts of the north uninhabitable, the militia has put Israel in an impossible position. Understandably, Israelis are outraged by the presence of an enemy on its borders that envisions Hamas-style attacks. Israel's invasion of Lebanon in 2006, aimed at pushing Hizbullah from the border, led to a bloody 34-day war that did, from an Israeli point of view, weaken the militia. Now some officials are calling for another invasion, warning that Gaza will look like a "paradise" compared with Lebanon once it ends.

In fact, another war now would be disastrous for Israel—and for Lebanon. Hizbullah is better armed than in 2006, with an arsenal of 150,000 missiles, some of which could reach Tel Aviv, overwhelm Israel's air defences and destroy crucial infrastructure. Israeli officials talk of a short, sharp war, but the IDF invasion of 1982 was a quagmire; even in 2006 Hizbullah put up fierce resistance. Civilian casualties would be horrific because Hizbullah is embedded in villages and towns, leading to further international opprobrium for Israel. The bankrupt Lebanese state could collapse, triggering chaos. And a conflict could lead to a regional war involving Iran and its proxies. Hassan Nasrallah, Hizbullah's leader, has warned of a war without limits. Iran has talked of an "obliterating war".

For all these reasons Israel's leaders should hold back. They say that fighting in Gaza will wind down further in the coming weeks, which may give Mr Nasrallah a pretext to de-escalate in the north. He may be glad of the respite, since he has lost hundreds of fighters in the past few months. Meanwhile, the IDF has strengthened its defences on the northern border, which at least reduces the chance of a Hamas-like surprise attack.

In the long run the threat that Hizbullah poses would be intolerable for any country. Diplomacy could help. UN Resolution 1701, passed after the war of 2006, asks Hizbullah's forces to stay north of the Litani river, 30km from the border. But that offers no protection from Hizbullah's rockets. So far the militia has shown little interest in complying with 1701, and the Lebanese army and UN troops are unwilling and too weak to enforce it. That is a barrier to progress.

Israel should instead seek to rebuild deterrence. One way would be a credible plan for the day after in Gaza and a path to negotiations for two states. This would let Israel shift military resources from Gaza and the West Bank to counter the more serious threat in the north. Israel also needs to repair relations with America, whose military backing is essential to deter Hizbullah, because it helps with air defence against missiles, including those from Iran. Last, Israel needs to deepen relations with the Gulf Arab states. Normalisation with Saudi Arabia, in particular, would help strengthen Israel and isolate Iran. Israel cannot simply crush Hizbullah. But if it is mired in a forever war in Gaza, isolated from its neighbours and bickering with America, Hizbullah will calculate that it is more vulnerable. That, at least, can be fixed. ■

Amazon

Everything in store

After an explosive 30 years, three factors will define the tech giant's next decade

About a week ago Amazon joined an exclusive club. Its market value ticked over $2trn, putting it in the company of only four other firms: Alphabet, Apple, Microsoft and Nvidia. In its 30 years Amazon, which began life as an online bookseller in Seattle on July 5th 1994, has been astonishingly successful. Its network of warehouses and vans delivers more packages each year than FedEx or UPS, equivalent to $850bn-worth of goods worldwide. Its pioneering cloud-computing business is used by millions of customers and generates annual revenues of $100bn. Beyond its core operations, it is investing in delivery drones, satellite networks and self-driving cars.

This success is the result of the company's tireless focus on customers and its enthusiasm for experimenting. Activists may complain about how it kills off brick-and-mortar stores. But punters are delighted with their sackfuls of smiling cardboard boxes; Amazon routinely tops customer-satisfaction surveys. In its quest to please shoppers, it diligently ploughs its profits back into its business. Last year no firm spent more on research and development or capital expenditure than Amazon. Plenty of companies say they are customer-obsessed. But for Amazon, that claim actually rings true.

What lies in store for the company as it enters its fourth ▸▸

decade? In recent years Apple and Microsoft have joined a more rarefied club still; both have a market capitalisation above $3trn. Whether Amazon manages to catch up with them will depend on how well it navigates three tricky areas: slowing e-commerce; increasing competition in artificial intelligence (AI); and an onslaught from antitrust regulators.

During the pandemic, the firm's e-commerce operation went into overdrive, with global revenues surging by 40% in 2020. In the past 12 months sales grew by 5%, a third of their pre-covid pace. That is a problem because, when you include shipping and other services sold to vendors, retail accounts for two-thirds of Amazon's sales. Worse still, analysts reckon it is barely profitable and is propped up by the cloud-computing and ads businesses. In response, Amazon has tried to move into groceries, a market worth $2trn in America, but in which only a tenth of spending takes place online. It is also making inroads into pharmaceuticals. Yet so far it has little to show for its investments.

The next challenge is generative AI, in which Amazon ought to excel because much of the demand associated with the technology is for cloud-based services. But, thanks to its partnership with OpenAI, Microsoft has grabbed the lead. As a result, Amazon's dominance in cloud computing is waning. In 2022 its market share was 13 percentage points higher than that of Microsoft. Today the difference is just six points.

There are signs that Amazon is tackling these problems. In March it invested $3bn in Anthropic, an OpenAI rival. This week it hired part of the senior team from Adept, another AI startup. Its capital spending will probably jump by a fifth this year, as it splurges on AI gear to fill its data centres. In e-commerce, meanwhile, the company is trying to extract more value by tying the retail business more closely to its advertising units and video-streaming services (see Business section).

Yet this closer integration may sharpen a third threat: antitrust. Regulators everywhere have become wary of big tech, and Amazon's plethora of different businesses makes it a natural target. Knitting them together more closely may attract even more scrutiny. Take, for example, the complaints brought against the firm by America's Federal Trade Commission last year. One was that sellers who wanted their products to be eligible for free delivery to shoppers with Prime subscriptions were being forced to use Amazon's logistics networks. Regulators elsewhere have disrupted its plans to expand. Those in the European Union blocked the company's ambition to buy iRobot, a maker of automated vacuum cleaners.

All told, the company's fourth decade will be harder going than its third. It will have to factor antitrust scrutiny into its decisions, which could impede growth. There may come a time when it will need to pull the plug on groceries as ruthlessly as it did with the Fire phone. In AI, cut-throat competition from startups will test the giant firm's ability to keep pace.

Yet Amazon's focus on its customers and innovation should stand it in good stead throughout. People often counted Amazon out over the years; in the build-up to the dotcom bust commentators nicknamed it "Amazon.bomb", and many jeered when the firm launched its cloud-computing service. To dismiss Amazon again today would be a mistake. ■

Central banks

The end of the beginning

Monetary policy is winning the battle against inflation. But the war is only getting started

THE TRAJECTORY of inflation has not given central bankers much cause for celebration in recent years. But at the European Central Bank's annual jamboree in Sintra, Portugal, this week, a touch of self-congratulation has been in the air. "I know it sounds a little bit arrogant," confessed Christine Lagarde, the ECB's president, on July 1st, but the unwinding of high inflation "is remarkable". "We've made a lot of progress," said Jerome Powell, the chairman of America's Federal Reserve, the next day. Others agree. "Central banks have risen to the challenge" of high inflation, commends the Bank for International Settlements.

The data do indeed merit some satisfaction. After cumulative price increases between 2021 and 2023 of 15% in America and 18% in the euro zone, annual inflation rates now stand at just 2.6% and 2.5% respectively. Yet the time for mutual backpatting may be brief. Lower inflation, though welcome, does not mean a return to the relatively stable economy that prevailed before the pandemic. Several perils loom on the supply side, which could constrain growth and boost inflation, just as a return to populism in America and Europe threatens fiscal blowouts and more price pressure still. Central bankers may be winning the battle against inflation. The war is just beginning.

Consider the dangers to supply. Donald Trump has promised a 10% across-the-board tariff if he returns to the White House, and, after Joe Biden's catastrophic performance in a presidential debate in Georgia on June 27th, investors and prediction markets think that a second Trump term looks more likely. The levy, and any retaliation by China, will push up the cost of imports. Climate change and surging investment in green infrastructure are helping keep commodity prices high even with global growth weak, according to the World Bank. And the risk of an escalation in the war in the Middle East hangs over the world economy.

What these potential shocks have in common is that, like the pandemic, they threaten to send growth and inflation in opposite directions. According to Goldman Sachs, Mr Trump's 10% tariff would, if it provoked retaliation by America's trading partners, add 1.1 percentage points to American inflation while marginally reducing growth. Euro-area output could fall by 1%. And that is without factoring in the additional damage caused by a 60% tariff on Chinese goods, which Mr Trump might also decide to impose.

In theory, central bankers should ignore supply shocks, which exert only a passing direct effect on inflation. In prac- ▸▸

tice, with repeated bursts of inflation—let alone a surge as big as that which followed the pandemic—their inflation targets could come to seem merely theoretical. Yet their other option, of raising interest rates to squeeze inflation out of the economy quickly, would be painful. Were Mr Powell, Ms Lagarde or their successors to raise rates with every escalation in a trade war, say, the world economy would become far more volatile.

Layered on top of this is politicians' renewed fondness for running up big debts. As the world has discovered, wars, pandemics and commodity crises are costly. Though tariffs raise government revenue, supply shocks tend to harm growth, making debts harder to repay.

Bond markets are already alert to lavish fiscal policy; investors took fright at the prospect of a victory for the populist right in France's parliamentary poll, only to calm a little as a hung parliament appeared more likely after the first round of voting. Yields on ten-year Treasuries have risen as investors contemplate a Republican sweep in America's elections in November, which would make deficit-financed tax cuts more likely. Such policies will only push up inflation, forcing central banks to raise interest rates—and putting them on a collision course with Mr Trump and other populist politicians.

A rocky road

The risk of a more inflationary world is still under-appreciated. At times the mood in Sintra did become sombre, but—notwithstanding their recent jitters—financial markets are for the most part priced giddily, as though the recent episode of inflation was an aberration, and stability will now prevail. More probably, the pandemic marked the start of a dangerous new time—one in which victories for central banks will be rarer and harder-fought. ■

Intelligence services

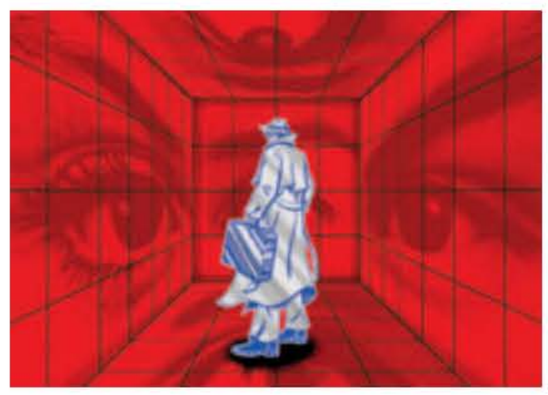
How spies should use technology

Digital tools are transforming spycraft, but won't replace human agents

PHILO OF BYZANTIUM, an inventor of the third century BC, described how crushed gallnuts, dissolved in water, could make invisible ink. Technology has shaped spycraft for millennia, but today it is having an unprecedented effect (see Technology Quarterly). The internet enables covert action on a grand scale. Biometric border controls impede spies operating abroad. Smartphones haemorrhage secrets.

Some conclude that intelligence services in their current form are obsolete. Why steal secrets when open and commercial sources such as satellite imagery and phone-location data can expose mischief? Who needs human spooks when it is so hard to protect their identities and so easy to snoop digitally?

In truth, intelligence needs both the old and new ways. Human intelligence is getting harder, costlier and riskier. Yet, for all that, it remains essential. That is not just because there are still some things that only an agent can do, such as read the mood in the corridors of the Kremlin. It is also because human and technical operations are intertwined. When an unknown operator, presumably a state, recently attempted to insert a surreptitious backdoor into a vital piece of software called XZ Utils, they did so by spending years pretending to be a well-meaning volunteer on the project.



Public and commercial sources are increasingly valuable. Around 90% of NATO's intelligence on cyber threats now comes from private firms, for instance. But the real value is derived by blending open and secret sources. That is harder than it sounds. For good reason, spy agencies have long maintained a gap between the classified and unclassified worlds. Now it has to be bridged.

Intelligence services will need top-secret cloud servers. Currently these are built largely by American or Chinese firms, which spy agencies from most other countries do not trust. Within and between countries, those agencies will often want to share data that are now siloed. And they will need to experiment with artificial intelligence to exploit it all, balancing the hallucinatory habits of today's large language models against the huge promise of future ones.

Whereas the secret world once far outstripped the private sector, it is now often the reverse. Spy agencies will have to work with companies at the cutting-edge and recruit talent that may balk at the prospect of working in a windowless room without access to phones or the internet.

More broadly, a world in which digital technology has seeped into everything—into everyone's pockets, power plants and the cameras that watch over government buildings—is one in which access to data becomes central to the intelligence contest between America, China and other big powers. At the moment, that is a lopsided fight.

Chinese hackers hoover up data from around the world, giving them potential leverage over their adversaries. American and European intelligence services also collect a lot. But they are far more constrained by law. It is easier for a private firm to collect bulk data, such as phone-location logs, than for a state agency to do so.

Data brokers who buy and sell private data, often to law-enforcement and intelligence agencies, need tighter rules and a brighter light shone on their often murky business. States which bar their agencies from collecting and fusing data about rivals will blind themselves. But those that allow such activities without proper legal authority and robust oversight do not just stomp on individual rights, they also risk provoking a backlash, as after Edward Snowden's revelations in 2013.

It is tempting to dismiss the technologies of spycraft as just an entertaining diversion from real geopolitics. In fact, the two are intertwined. America's interception of Russian war plans in 2021 allowed allies to prepare for the invasion of Ukraine that followed. Israel's failure to foresee Hamas's assault on October 7th was a national calamity. If China chooses to invade Taiwan, intelligence will be crucial to denying it the element of surprise. Forewarned is forearmed. ■

Letters

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Let solar shine

To realise the potential of solar power the world must take urgent, co-ordinated action to achieve universal energy access with renewables ("The Sun machines", June 22nd). If we don't 660m people, most of them in developing and emerging economies, will be still living without electricity at the end of this decade.

The most energy-poor countries are not able to access the green investment they need. According to the World Economic Forum, 81% of green investment in high-income countries is funded privately, compared with just 14% in emerging and developing economies. One area where this shows up is in the deployment of battery energy storage systems (BESS). Without sufficient storage capacity, countries will be unable to add renewable energy to their grids at the scale they need to provide constant electricity, cut emissions and create economic opportunities.

Partnerships like the BESS Consortium aim to change that by making initial investments that ultimately usher in the private investors needed to make renewable energy the cheapest source of power. Solar power can transform the world, but only if we ensure poor countries are not left behind.

ASHVIN DAYAL
Senior vice-president
Rockefeller Foundation
New York

The depressing thing about your article on private firms driving a revolution in solar power in Africa is that it could have been written ten years ago ("The light continent", June 22nd). The number of people without electricity in sub-Saharan Africa has not moved since 2014, when off-grid solar was still often cheaper than grid extension and South Africans were already battling power outages.

Then, as now, we are not doing enough to fund electricity infrastructure in countries that need it. The West heavily subsidised electricity grids when they were first built out; rural customers are still subsidised today. Yet we expect off-grid electricity to be profitable in Africa.

The World Bank and other donors pledged around $2bn to off-grid solar from 2012 to mid-2020, often with great fanfare. Just 13% of that money was disbursed over that time, even though private companies were poised and ready to build. We will be in the same place in 2034 if donors continue making grand promises that don't materialise. We can't rely on the private sector in Africa to shoulder the cost of connecting rural customers when they are the least profitable. Our aid institutions must put their money where their mouths are if we are to build solar infrastructure in Africa.

LUCY SHAW
London

I disagree with the claim that, once installed, the costs of solar systems become negligible. Solar parts, such as microinverters or microprocessors for optimising performance across modules or for monitoring the system, fail and must be replaced. Because the technology is advancing so quickly, the replacement parts usually reflect an upgrade in technical performance but at added expense. The parts are components in a system that are often "ganged" with other similar parts, so a failure of one part requires the replacement of additional parts in the gang that have not yet failed to assure compatibility.

Rooftop solar systems are often not synchronised with the roof's life, so when roofing needs replacing the system must be disassembled, removed and reinstalled. If the building codes have changed the replacement system must be a new one, not the old one, so in effect the lifetime of a solar system is often cut short by the lifetime of the roofing on which it is mounted.

ALTON PENZ
Frisco, Colorado

As you say, Bell Labs unveiled a new technology for turning sunlight into power in 1954 ("The solar age", June 22nd). Decades before that, in 1906, George Cove patented a solar panel and rudimentary battery. His company, Sun Electric Generator Corporation, demonstrated the technology on New York's rooftops. He was allegedly kidnapped in 1909 (some claim by energy competitors) and abandoned this work shortly after.

I wonder what impact this might have had on our climate? If we shift solar power's exponential growth back 40 years before 1954 (assuming no disruption in 1909) solar could have become cheaper than coal by as early as 1997. It's a good reminder that vested interests can set back progress, a challenge that is as relevant today as it was back in the 1900s.

SUGANDHA SRIVASTAV
Smith School of Enterprise and the Environment
University of Oxford

Solar power has been a boon to the Amish, who don't use electricity from a public grid. An Amishman in the community where I lived has a business installing solar panels and selling battery power tools.

JIM SEVERANCE
Spring Green, Wisconsin

Book smart

There is a subtle political bias in the otherwise trustworthy *New York Times* bestseller list, you say ("Tipping the sales", June 15th). However, what remains mystifying is why the Grey Lady (and others) refuse to publish the actual number of books sold, or gross receipts for books in their various lists. This would at least allow us to assess the relative popularity of the various genres (fiction, non-fiction and so on) and give a more accurate picture of the true state of readership. By contrast, the movie industry regularly publishes the box-office receipts for each film release in a very timely manner.

EDMUND TIRYAKIAN
Hillsborough, North Carolina

Roll over Beethoven

One of the pioneering works in the genre of blending classic music with rock ("Four good", May 25th) is Metallica's "S&M" album. Recorded in 1999 as a collaboration between Metallica and the San Francisco Symphony Orchestra, this spectacular piece of music showcases heavy metal within a classical symphony orchestra and includes several songs that were written specifically to be performed in the metal-classical medium. It is a tribute to the genius of both Metallica and the late Michael Kamen, who composed some of the music and conducted the orchestra.

CHRISTINE OUMANSOUR
Weston, Massachusetts

The drama of a football field

The fact that the "golden generations'" ultimately fail in international football has less to do with the pressure they come under and more to do with the core of this beautiful, heartbreaking game (The sports page, June 21st). These low-scoring matches are more about unpredictable fate than predictable statistics. The allegorical undercurrent of undeserved victory and undeserved defeat in life is why Europeans tend to love football, and Americans tend to hate it.

STEFAN KRETZER
Copenhagen

The great debate

I am 86 years old and I have been watching presidential debates since Kennedy and Nixon in 1960. Not once have I learned more about the candidates' vision for the future or anything about their character or lack thereof that I didn't already know ("Debate debacle", June 28th). It's time to explore alternative formats to debates. How about something like a legal deposition, which would be more rigorous and demanding for the candidates, requiring them to answer questions truthfully. Voters would gain a better insight.

HUGO ZAMORANO
Coral Gables, Florida

Demotivational speaking

WASHINGTON, DC

Democratic bigwigs are starting to call for Joe Biden to step aside

SOME FIRES are hard to snuff out. The one that started after President Joe Biden's disastrous debate performance on June 27th, through which he stammered only semi-lucidly, is developing into a blaze. For a few days it was only the media—albeit including the columnists and commentators closest to the president—who were calling for him to abandon his bid for re-election. But on July 2nd the president's support within the Democratic Party started to crack. Lloyd Doggett, a representative from Texas, became the first sitting Democratic congressman to call for him to stand aside. The following day another, Raúl Grijalva, joined him. Reed Hastings, a big donor, also said Mr Biden should make way for another candidate. Betting markets, which had put the odds of the president leaving the race at 20% on the morning of the debate, raised them above 60% on July 3rd.

Other grandees have been hinting at similar views, or at least refusing to excuse Mr Biden's doddering inarticulacy. Sheldon Whitehouse, a senator from Rhode Island, told a local TV station, "Like a lot of people, I was pretty horrified by the debate." Jim Clyburn, a representative from South Carolina and close ally of Mr Biden, said he still supported the president, but would back Kamala Harris, the vice-president, to replace him were he to drop out of the race. Perhaps most important, Nancy Pelosi, a former speaker of the House of Representatives who had initially pooh-poohed concerns about Mr Biden's fitness, seemed to open the door to doubters by telling an interviewer, "I think it's a legitimate question to say, 'Is this an episode—or is this a condition?'"

These public utterances are the palest shadows of the misgivings Democrats express in private. Leaks are proliferating of meetings in which Democratic congressmen and governors cast doubt on Mr Biden's ability to continue his campaign. The muttering comes despite the energetic efforts of Mr Biden's surrogates to quell the anxieties of donors reluctant to throw good money after bad and of down-ballot candidates frightened that a faltering president might wreck their chances as well. The apologists have come up with a remarkable number of explanations for Mr Biden's feeble display: he had a cold; he had prepared too much; he had jetlag; he had the stronger arguments, even if he struggled to be understood. A senior moment—even 90 senior minutes—is far from disqualifying, they insist. ▸▸

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19 Introducing "Boom!"

A rally on June 28th at which Mr Biden successfully delivered a speech, aided by a teleprompter, was greeted by his supporters with the jubilation of a kidnap victim's family receiving a proof-of-life video. Jen O'Malley Dillon, Mr Biden's campaign chair, called donors to instruct them to disbelieve their lying eyes and ears. "He's probably in better health than most of us," she said, according to CNN.

Heads below the parapet

As unconvincing as this bluster is, Democrats have been paralysed by a collective-action problem. Individual members face severe consequences for declaring publicly that their emperor has no clothes. They may be ostracised by their party, lose funding or face a primary challenge in future. What is more, because the president has already captured all the delegates needed to secure his party's nomination, he will become the Democrats' official candidate at the party's convention in Chicago in August unless he personally decides to step aside. The president is famously stubborn. If he refuses to change course, the only effect of attacking him will be to provide aid and comfort to his enemy, Donald Trump. And there are always the uncertain political consequences to consider. In a parliamentary system, MPs can depose a prime minister without consulting voters. But Democrats know that a sitting president has been induced to renounce a bid for re-election only twice since the second world war: Harry Truman in 1952 and Lyndon Johnson in 1968. Both were Democrats and both their replacements went on to lose.

Recent surveys of public opinion may be clarifying the likely consequences somewhat for Democrats. A poll released on Sunday by CBS News and YouGov found that only 27% of voters think that Mr Biden has the cognitive health needed to be president; 45% of registered Democratic voters said the president should step aside. This week's iteration of *The Economist*'s regular poll, also conducted by YouGov, found a shift of two percentage points away from Mr Biden compared with the week before.

Political operatives and donors are anxiously trading (and selectively leaking) private polling, which is usually of higher quality than the publicly available stuff. Mr Biden was already trailing Mr Trump in the presidential race. The debate, arranged by his campaign at a far earlier date than is usual, was supposed to be the president's chance to reset the race in his favour. Instead, his implosion has left all Democrats wondering what could possibly re-float an apparently foundering campaign.

Mr Biden's aides are hastily scheduling meetings, calls and public appearances in the hope of reassuring doubting Democrats. The president met Democratic governors on July 3rd. He is supposed to speak to skittish Democrats in Congress later this week. He has scheduled an unscripted television interview to air on July 5th and has booked himself a rehabilitation tour of swing states over the weekend. His staff have also announced that he will hold a news conference at the NATO summit in Washington next week.

There is also a chance that the Biden team tries to call time on the insurrection by bringing forward the date at which Mr Biden officially becomes his party's nominee for president. There had long been a plan to hold a vote of delegates in advance of the convention in Chicago, to get around a quirk of the election laws in the state of Ohio, which required candidates to be named before the convention began. But Ohio has since changed its law to accommodate the dates of the convention (August 19th-22nd), obviating the need for a telephone vote. Going ahead with one now would be seen as a sign of desperation, but it would raise the cost of dethroning Mr Biden considerably. The process for replacing an already nominated candidate is only hazily described in the party's rules. A new candidate would have even less time to mount a campaign and to raise money. They would also face considerable logistical difficulty getting placed on state ballots on such short notice.

The president's campaign is focusing on surviving the four months until the election in November, rather than sketching a vision for the next four years. His campaign's website is a policy-free shell for soliciting donations. But if Democrats do rally behind their creaking mascot, as Mr Biden's campaign hopes, they will not just increase the risk of Mr Trump returning to the White House, they will also increase the chances that the Democrats lose control of the Senate and fail to win the House. That would give Mr Trump the power to govern as he sees fit, including appointing more conservative justices to the already ideologically unbalanced Supreme Court.

That grim scenario makes replacing the president look more appealing. If he stood aside, the delegates to the convention who were pledged to him would become unbound, able to vote for anyone they liked.

Although Ms Harris, the vice-president, would normally be the natural successor, she is not much more popular than her boss. Assorted governors and senators are also waiting in the wings. A new candidate, whoever it might be, could bask in the booming economy while sloughing off responsibility for all Mr Biden's failings. Mr Biden, meanwhile, could claim the mantle of George Washington or Cincinnatus, gracefully surrendering authority for the greater good—before the American people seize it from him. ■

Senility in high office

President Lear

Even leaders who are spry for their age eventually lose their grip

HISTORY, SCIENCE and common sense concur: even great leaders age. In 1953, during his second stint as prime minister, Winston Churchill had a stroke after dinner. "No one seemed alarmed by [his] slurred speech and unsteadiness on his feet, one of the advantages of having a reputation for enjoying alcohol," writes Andrew Roberts, a historian. For several weeks, as Churchill was incapable of governing, his son-in-law and private secretary in effect ran the country. He never fully recovered, yet refused to stand down until 1955, when he was 80. "Churchill is now often speechless in Cabinet; alternatively, he rambles about nothing," wrote Harold Macmillan, a future Conservative prime minister, in 1954.

For most people, cognitive decline is a private tragedy, scarring loved ones but few others. When it afflicts political leaders, the damage can be catastrophic. Paul von Hindenburg, Germany's president in 1933, was no fan of Adolf Hitler but let him become chancellor to break a political stalemate. Some historians blame this epic misjudgment on the fact that he was 85, exhausted and perhaps suffering from Alzheimer's disease.

Because getting to the top requires such stamina, many successful politicians are "superagers"—people who preserve their physical and mental fitness into old age far better than the average. Research- ▸▸

ers at the Mesulam Centre at Northwestern University near Chicago have found that the brains of cognitive superagers (defined as people aged 80 and over whose performance on memory tests is on a par with those two or three decades younger) shrink more slowly in old age than those of their "normal" contemporaries, by 1.1% a year instead of 2.2%.

Specifically, superagers' cingulate cortices (a bit of the brain important for memory, attention, cognitive control and motivation) remain comparable in thickness to someone in middle age, and their von Economo neurons (cells in the cingulate cortex linked to social intelligence and awareness) are present at higher density than in a typical middle-aged person. They also seem to have fewer of the protein "tangles" associated with Alzheimer's disease than their contemporaries.

What President Joe Biden's cingulate cortex looks like is not public information. Both he and Donald Trump were assessed in 2020 by Jay Olshansky, a gerontologist at the University of Illinois, and a team of colleagues, using what information was available. They predicted that the probability of either man surviving the presidential term both were then seeking was more than 90%. For both of them, that was several percentage points more than the actuarial average for men of their age.

However, high office takes a toll, and even superagers must eventually deteriorate. The trouble is that they often fail to accept this fact. And the people around them, whose jobs may depend on the big guy keeping his, have every incentive to deny or conceal it. The British public was kept largely in the dark about Churchill's fading capacities. American voters were blithely unaware when they re-elected Franklin Roosevelt in 1944 that his doctor doubted he would survive another term. Aides to Jacques Chirac, France's president from 1995 to 2007, were evasive about a stroke he suffered in 2005.

Dictatorships are especially prone to denial and deception. If the leader is erratic but still in control, aides are scared to tell him (despots are nearly always male) that he is not as sharp as he was. If he loses his grip, the aides have a chance to wield power themselves by controlling access to the throne.

Leonid Brezhnev, the leader of the Soviet Union from 1964 to 1982 (pictured), was rendered barely coherent by strokes in the mid-1970s. Yet his colleagues kept him in place until he died. As Stephen Kotkin, a historian, noted, "Even after [he] began drooling on himself in appearances on Soviet television, the clique around him took no action, other than to nominate him for still more medals." Their motives were selfish: with no one supervising them, each minister could do what he liked in his personal fief. Strategic thinking evaporated; the army blundered into Afghanistan; the Soviet Union eventually fell apart.

Plenty of modern autocracies keep ailing leaders in office. Saudi Arabia is formally ruled by the 88-year-old King Salman, but real power lies with his son, Crown Prince Muhammad. The strings controlling Cameroon's 91-year-old leader, Paul Biya, who can barely read a speech, are thought to be pulled by his wife. In Algeria until 2019 the top brass propped up President Abdelaziz Bouteflika, literally, and shared power among themselves.

Such arrangements are unstable, because a senile leader must eventually die. Zimbabwe's President Emmerson Mnangagwa anticipated this by overthrowing his doddering predecessor and mentor, Robert Mugabe, in 2017. In Malawi in 2012 the ruling party pretended that a dead president was still alive while factions jockeyed for position. Some think this happened in Nigeria, too: in the six months before his death was announced in 2010, President Umaru Yar' Adua was never seen in public.

Deception about senescence at the top is harder in democracies with inquisitive media, and in parliamentary systems, where the prime minister must submit to regular questioning. In a presidential system such as America's, aides may find it easier to keep their boss away from unscripted events. Mr Biden's aides have been accused of doing just that. But even if they were to continue to do so, clips of his disastrous debate will keep playing. Voters may not grasp the nuances of fiscal or foreign policy, but most have seen ageing close-up, and understand that it is a one-way process.

Dr Olshansky reserves judgment about Mr Biden's sharpness. He says he has received updated medical records from Mr Biden (though not from Mr Trump), but would need to hear more from Mr Biden's doctor, following the debate, before making any new estimate of the candidate's condition.

From George Washington to Nelson Mandela, history tends to smile on leaders who bowed out before they had to. For the rest, Goethe has the last word: "An old man is always a King Lear." ■

Politicians born in the 1940s

Gerontocrats ascendant

MONTGOMERY, ALABAMA

One generation has dominated American politics for over 30 years

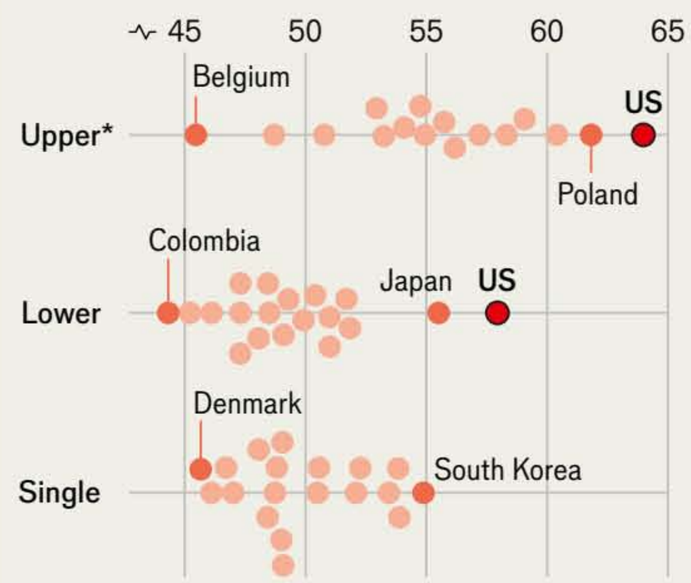
WHEN BARACK OBAMA became president in 2009, it appeared not just to be a changing of the guard, but the end of an era. Men born in the 1940s had occupied the White House for the previous 16 years; now it was the turn of a new generation. Mr Obama was born in the 1960s. His watchwords were "hope" and "change". He had complained, in one of his many memoirs, about the "arrested development" of American politics, stuck in the "psychodrama of the Baby Boom generation". It was time to move on, he wrote, from the stale feuds initiated on the college campuses of the 1960s.

Yet Mr Obama's tenure turned out to be not a break with the past, but merely a brief respite from it. The two subsequent presidents, Donald Trump and Joe Biden, were both also born in the 1940s. And since they are the two main candidates in this year's election (at least for now), one of them is likely to be president for another four years. Even if Mr Biden withdraws his candidacy, Mr Trump is currently the favourite anyway. That means their generation could end up locking up the presidency for most of the period from 1993 to 2029—getting on for 40 years.

Both Mr Biden and Mr Trump would be well into their 80s by the end of another term. Mr Biden launched his first presidential campaign in 1987. At the time this newspaper labelled him the "voice and conscience of the baby boomers". Mr Trump published a bestselling business book that year and also toyed with a presidential run. Most countries that still have ▸▸

A superannuated city on a hill 1

OECD countries, average age of legislators, by chamber, July 2024 or latest available



Sources: IPU Parline; *The Economist* *Only elected chambers

political figures lingering from that era are dictatorships. Mr Biden had to withdraw from the race in 1987 after plagiarising a speech by the leader at the time of Britain's Labour Party, Neil Kinnock. He was born in 1942, like Mr Biden, and retired from public life 20 years ago. What is it about the equivalent cohort of American politicians that has made them so determined to cling to power for so long?

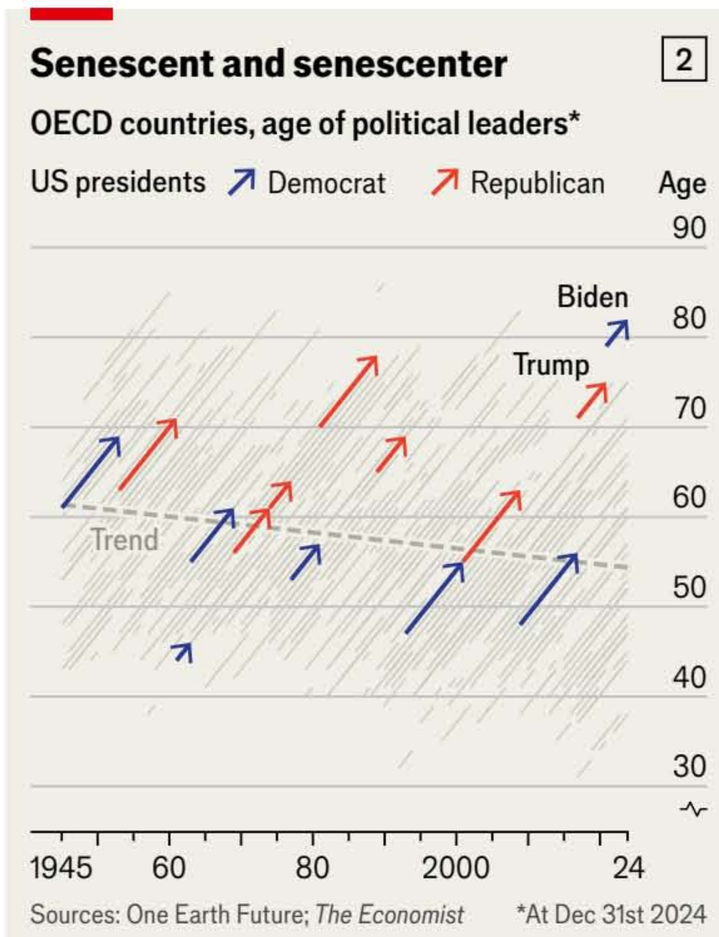
Among rich countries, America is relatively young. Its 333m people have a median age of 38.8, lower not only than that of Britain, Germany and Japan, but also than that of China, Cuba or Thailand. Most of its corporate bosses are in their 50s. The average age of its super-rich is falling, thanks presumably to fortunes made by whippersnappers in IT. That hints at what a dynamic place America is, churning out new technology, cultural fads and commercial innovation at a pace that is the envy of the world. Yet its politicians are far older than the norm (see chart 1 on previous page)—and unlike those in other developed countries, they are getting ever older (see chart 2).

This peculiar dichotomy, the subject of our new, six-episode podcast, "Boom!" (see next story), is puzzling and distressing to many Americans. Messrs Biden and Trump are the two most unpopular candidates ever to have contested a presidential election. Even many of their contemporaries are troubled by their generation's continued hold on politics. They were born at a moment of triumph for America, at the close of the second world war. Yet they are bequeathing younger Americans acrimony, as the two main parties accuse one another of wrecking democracy.

Bad start

As Mr Obama insinuated, the upheaval of the 1960s was the formative political experience for many in the generation born in the 1940s. The government's deliberate disguising of the difficulty of the Vietnam war alienated people like Chuck Hagel, a former senator and secretary of defence (under Mr Obama), who was serving in the army at the time. "It got me because of the dishonesty of it...it was a huge mistake," says Mr Hagel. Margo Alexander, a student at the University of California, Berkeley at the time who went on to work on Wall Street, agrees: "We started to lose faith in the government because of Vietnam."

It was not just the war. There was violence on the domestic front too: civil-rights activists were often beaten and sometimes murdered, culminating in the assassination of Martin Luther King Jr in Memphis in 1968. Bobby Kennedy, a possible Democratic nominee for president and an anti-war icon, was shot dead that year, too. Anger consumed America. "We wound up burning our own neighbourhoods down," recalls Richard Smith, a black activist from Wilmington, Delaware, where he befriended an Irish guy called Joe Biden, who worked as a lifeguard at the neighbourhood pool.



These events prompted different reactions among different groups. On one side were student activists. By 1968 there were nearly 7m undergraduates in America, 47% more than there were prior to the passage of the Higher Education Act three years earlier. So vocal were their protests and so widespread was the view that Lyndon Johnson, the president, was old and infirm (although, at 59, he was 22 years younger than Mr Biden is today) that he called off his campaign for re-election. That gave half the Biden-Trump generation the conviction that they had the power to overhaul politics in their image.

But others regarded the upheaval with horror. Mr Johnson's retirement sparked a crisis at the Democratic National Convention, which was held in Chicago in August that year, just as this year's convention will be. There was violence on the streets outside after the mayor banned "anti-patriotic" protests. There was disgruntlement inside, too, as party elders helped secure the nomination for Hubert Humphrey, the vice-president. The chaos alienated voters, who sided with the Republican candidate, Richard Nixon, in November. This pattern, in which the right denounces the left as dangerous radicals and the left dismisses the right as unthinking reactionaries, pertains to this day.

The tumult of 1968 also rewrote the rules of presidential politics, quite literally. The Democrats sought to avoid future rifts in the party by allowing ordinary voters to pick the presidential nominee in state primaries and caucuses. The intention was to force candidates to build a broad coalition within the party and forestall any complaints about the winner's legitimacy. The Republicans followed suit. But the flipside of this democratisation was that party bosses lost control of the nomination process, which ultimately fuelled partisanship, paved the way for populists and so hastened the demise of the centrism that had prevailed since the second world war.

Another factor shaping the politics of the children of the 1940s was America's unparalleled prosperity. From their childhood to their mid-30s the economy grew by an average of 3.7% a year. Real (ie, after adjusting for inflation) incomes grew even faster and unemployment was low. Jon Corzine, who ran Goldman Sachs before becoming a senator and governor, explains how his wages as a banker astonished his father, a Midwestern farmer. "He asked whether I was working for the mob when I got my first bonus."

The average distance Americans travelled in cars each year rose rapidly between 1962 and 1972. Mr Biden won admiration at the University of Delaware thanks to the fancy cars his father, a second-hand dealer, lent him on weekends. The president still keeps a 1967 Corvette in his garage. Doug McAdam, a sociologist at

Stanford University, argues that this period of plenty allowed the Biden-Trump generation the luxury of getting involved in politics, something prior generations had less time for.

Even now that they are older, these Americans are still more involved in politics than is the norm. More than three-quarters identify with a political party, whereas barely half of their grandchildren's generation do. They are also avid consumers of news: the median age of the audiences of CNN, Fox and MSNBC is 67, 68 and 71 respectively.

Their generation have influenced politics not just because of their engagement, however, but also because of their sheer numbers. Between 2010 and 2020 the share of Americans aged over 65 rose from 13% to 17%, or from 40m to 56m people. Given their higher propensity to vote, these pensioners wield both growing and disproportionate clout in elections.

All these factors have exacerbated the political feud currently consuming America. Mr Obama was right: America's political class was still fighting the battles initiated in the 1960s. But he did not foresee that his own election would further stoke the conflict. Loathing the new president became an organising principle on the right. Conspiracy theories about him flourished. The idea took hold that he was a radical leftist in the 1960s mould—an activist from Chicago, of all places. Dick Armey (born in 1940), a former Republican leader in the House, says, "I think Barack Obama was raised to hate America."

What the left depicted as progressive politics, hoping to bring the promise of America to those left behind (universal access to health care, for example), the right attacked as dangerous socialism that aimed to change the country fundamentally. Just as in the 1960s, accusations of racism and Marxism were tossed about.

The most prominent proponent of the conspiracy theory that Mr Obama had been born abroad and so was not eligible to be president was Mr Trump. The Republican Party had become something of an empty vessel by this time, having presided under George W. Bush (born 1946) over a disastrous war in Iraq and a calamitous financial meltdown. Mr Trump, who first made a name for himself as a property tycoon by taking over a derelict hotel, used America First nativism to take over the shell of the GOP.

In 2016 the Democrats, for their part, picked a standard-bearer from the past. Hillary Clinton (born in 1947) had been a lightning rod during the presidency of her husband, Bill, as his administration's champion of the sort of health-care reform that Mr Obama ultimately secured. In the 1960s she was a student activist, of course, and she had spoken about her generation's search for "more immediate, ecstatic and penetrating modes of living". She owed her nomination in part to name recognition, which had become more important in the competitive primary system.

Mr Trump's narrow, lucky win in 2016 only made things worse. His gaping loss in the popular vote—Mrs Clinton won 3m more votes—made Democrats feel that he was in some sense illegitimate. In light of the shocking result, they reinterpreted Mr Obama's presidency as being a failure because he was not bold enough. The initial frontrunners in the Democratic primaries in 2020 were from the left of the party: senators Bernie Sanders (born in 1941) and Elizabeth Warren (born in 1949). It took another child of the 1940s to unite the party's moderates: Mr Biden.

Mr Trump's refusal to accept his loss means that this repetitive saga of recrimination and retribution continues. It is heartening, however, to see the names mooted as potential replacement candidates should Mr Biden bow out of this year's race. Kamala Harris, the vice-president, was born in the 1960s. So were Gavin Newsom, the governor of California, J.B. Pritzker, the governor of Illinois, and Raphael Warnock, a senator from Georgia. Gina Raimondo, the secretary of commerce, and Gretchen Whitmer, the governor of Michigan, were born in the 1970s. A new generation beckons. ■

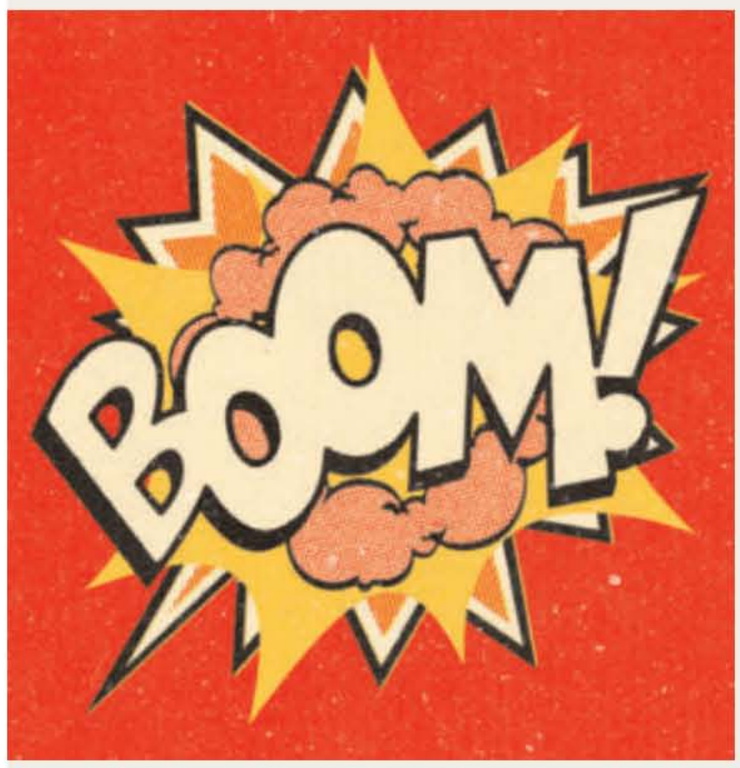
A new podcast

Introducing "Boom!"

A six-part series about the generation that blew up American politics

WHY HAVE Americans born in the 1940s, like Donald Trump and Joe Biden, had such a stranglehold on American power, and why do they cling on to it so tightly? To answer this, our US editor has interviewed dozens of prominent Americans born in the same decade. The result is a new six-part podcast series that begins this week. It is called "Boom! The generation that blew up American politics".

Born around the same time as the atom bomb, they grew up in a country that was pre-eminent in technological, military and economic terms. Fear of mutually assured destruction lurked in their childhoods, but it was mostly blocked out by comforting domesticity. People form their political views between their mid-teens and mid-20s. For this group that time was the late 1960s, a decade of possibilities cut short by war, assassinations and street violence. Episode 1 focuses on 1968, the origin story of America's extreme partisanship.



Episode 2 takes place a decade later, in 1978. It begins in Studio 54, the nightclub where elite Americans of the 1940s explored a different kind of liberation. It traces the rise and disappointments of the women's movement and its mirror image, the social conservatism that was such an important part of Ronald Reagan's winning coalition. Episode 3 focuses on 1987, the year Mr Biden first ran for president and Mr Trump published "The Art of the Deal". It was a year of excess—"The Bonfire of the Vanities" topped the bestseller lists—and of hubris.

The 1940s generation arrived in the White House in 1993, at the start of another triumphant decade. Yet rather than come together after the cold war, the country's politicians turned on each other. Episode 4 focuses on 1994, when this battle was beginning, aided by changes in media and technology that supercharged partisan animosities and conspiracies. Episode 5 skips forward to 2008, when power should have passed definitively to the next generation.

Episode 6, on 2020, explains what happened instead, and how it can be that someone born one year after America bombed Hiroshima and Nagasaki is the favourite to occupy the White House until January 2029. "Boom!" is free to listen to for subscribers to *The Economist*. You can find it on our app, or wherever you get your podcasts.

Asia

Japan's economy

Mind-bending bento-box economics

TOKYO

The paradox of red-hot labour markets, falling demand and rising prices

FOR MUCH of the past three decades Japan's economy has been defined by deflation, stagnation and fading global relevance. That is no longer the case. Between 1991 and 2021 Japan's annual inflation rate averaged 0.35%. Inflation has been above 2% every month since April 2022. In March the Bank of Japan (BoJ) raised rates for the first time in 17 years, doing away with the world's last experiment in negative interest rates; it will debate another rise at its next meeting at the end of this month. The blue-chip Nikkei stock index broke its bubble-era high this February; the Topix, a broader benchmark index, hit its highest level since 1990 last week. It seems that the lost decades are over.

But what comes next? Some see opportunity. Japan, the optimists crow, is back—this time for real. Morgan Stanley, a bank, touts a "revitalised Japan". Higher inflation and more dynamic companies will put the country back on a growth trajectory, allowing it to keep its public debt in check and hang on to its place among the world's top economies. Japan has become a destination for high-tech firms seeking to reinforce supply chains: TSMC, the Taiwanese semiconductor giant, is pouring billions of dollars into new manufacturing plants.

Others take a gloomier view. Some argue that after three straight quarters of contraction or no growth, Japan has already fallen into mild stagflation. Long-term potential growth remains low, the yen is in freefall and demographic headwinds loom. Pessimists fret that Japan's future is as a middling economy with burdensome debt, a weak currency and a greying workforce.

The implications of the new era can be seen in Nihonbashi, a neighbourhood in Tokyo's north-east. Its fate has long moved in parallel with that of the national economy. During the Edo era (between 1603 and 1868), merchants congregated there, making it the country's commercial centre; during the Meiji period (1868-1912), when Japan opened up to the world, it became home to the first institutions of modern finance. Highways built above Nihonbashi's bridge in 1963 symbolised the country's booming growth in the decades after the second world war; shuttered stores along Nihonbashi's avenues attested to the bursting of the asset bubble in the 1990s.

Today, the neighbourhood offers a window on Japan's new economic reality. Start at Benmatsu Souhonten, which bills itself as Japan's oldest continuous purveyor of *bento*, or boxed lunches, with a history that stretches back to before America's "black ships" arrived to open Japan to foreign trade. More recently the soaring cost of imports caused by the pandemic and the war ▸▸

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in Ukraine have acted as a black ship of sorts. What was once unimaginable has become commonplace: companies consistently raise prices and consumers keep coming back. Benmatsu Souhonten has increased *bento* prices twice in the past two years. "These days customers understand prices go up," says Higuchi Junichi, the shop's eighth-generation owner.

It is a change that officials inside the Bank of Japan, down the street from Benmatsu Souhonten, have spent years trying to engineer, to little effect. While central banks elsewhere raised rates in response to rising inflation, the BoJ did nothing, hoping to use the external shocks to re-anchor domestic expectations for inflation near its 2% target. The strategy appears to be working. Prices for a wider swathe of goods are rising at faster rates than at any time since the 1990s (see chart). Expectations have risen and stayed up: the BoJ's latest Tankan survey on corporate sentiment, released on July 1st, shows that firms expect inflation of 2% or higher five years into the future.

Price growth has helped push firms to raise wages, too. Annual negotiations, known as *shunto*, have produced big salary increases for two years running. This year's average nominal wage growth will exceed 5% for the first time since 1991. The trend is likely to continue, thanks to demographic and generational changes. As Japan's working-age population shrinks, the competition for talent is heating up. Changing jobs was once seen as taboo; young Japanese today have fewer qualms about that.

Strong wage growth is a big reason why the BoJ normalised its policy in March. Though the bank has maintained a relatively accommodating stance (its policy rate stands between 0% and 0.1%), analysts expect at least one more rise this year. Goldman Sachs, a bank, estimates that the BoJ policy rate will gradually increase to 1.5% by 2027. The implications of rising prices and, potentially, rising rates are vast. They will force executives to "think about changing their business model—not only about their prices, but about the mix of goods, about efficiency, about strategy itself", says Okina Yuri, chair of the Japan Research Institute, a think-tank.

Such pressure, along with gradual improvements in corporate governance, is fuelling optimism at the Japan Stock Exchange, just south of Nihonbashi's bridge. As far as the market is concerned, "we have already passed the turning point", says Yamaji Hiromi, the bourse's boss. "Many are convinced that Japan is now different." Many corporate leaders are shifting from cost cutting to investment-driven growth. Piling up cash makes less sense in an inflationary environment. "It's a totally different mindset," Mr Yamaji says.

Some Japanese households are also starting to put their savings to work. NISA, a new government programme to encourage retail investing by offering exemptions from capital-gains taxes, has been a hit since its launch in January. Younger Japanese, who did not experience the trauma of the bubble bursting, have proved especially keen. Nearly ¥7trn ($44bn) flowed into NISA accounts in the first four months of this year; roughly half of the funds are being invested in domestic markets. "It takes a generation to recover from a bad bubble burst," Mr Yamaji says.

Yet for all the investor enthusiasm, the mood among Japanese consumers is gloomy. At the top of a department store in Nihonbashi last month Kasai Hidekazu, a retired schoolteacher, munched on a *bento*. "It sure doesn't feel like the situation is getting better," he mused. Wage growth still lags behind inflation, meaning pay cuts for many Japanese in real terms. Consumption is sluggish. In the boutiques that fill the floors below, many shoppers are foreign tourists who have been arriving in droves, lured in part by Japan's relative cheapness. The yen's exchange rate, against a basket of currencies and adjusted for inflation, is at a historic low. Germany recently surpassed Japan as the third-largest economy in the world, measured in current dollars.

The BoJ hopes wages will start growing in real terms later this year, once the results of this spring's wage negotiations filter through to salaries. That should encourage ▸▸

Alternative reality

Japan, distribution of consumer-price changes*, share of the number of items, %

Source: Statistics of Japan *Excludes fresh food and energy

Universities

The strange death of liberal arts

Why many young Asians are no longer studying history

WITH CANNONS on campus, its own Qing-dynasty wall and the first Dutch fort in Taiwan nearby, National Cheng Kung University seems an appealing place for a budding historian. However, after a first round of applications, no students had accepted places in the history department for next year. It is a shock for the university, ranked third in Taiwan. But it is part of a broader trend.

In much of East Asia, universities face a demographic crisis. In Japan the population of 18-year-olds has been declining since the 1990s. In Taiwan the undergraduate population has dipped by more than a quarter in the past decade. Experts in South Korea talk of an "enrolment cliff", as 3.6m students in 2010 fell to 3m last year.

This has hit humanities and social-sciences departments hard. Faced with a more uncertain economic environment than their parents, students want to study subjects that will lead to well-paid jobs. These are mostly in science, technology, engineering and mathematics (STEM). Private universities, which educate most students in Japan, South Korea and Taiwan, often depend on tuition fees, and therefore most need to adapt to students' wishes to stay afloat. In South Korea 18 private universities have closed for good since 2000.

Governments are also keen on STEM subjects. In Taiwan new academies at 12 universities train young people to work in the semiconductor sector and other high-tech fields. In the past two years 126 institutions in Japan have applied for a government subsidy to focus on digital and green technologies.

What could be done? Universities have managed to increase foreign student numbers, but not enough to offset demographic decline. But efforts to increase the rate of university-going among locals could still bear fruit. In Japan the growth in female students has meant that the university population increased slightly from 2012 to 2022.

In Singapore the number of students continues to rise, even as the traditional university-age population is falling, through policies which encourage older student cohorts to enroll. Singapore's government, while fond of STEM subjects, also stresses the importance of social sciences and the humanities for policymaking. The number of students in those faculties is growing.

consumer spending. But Japanese consumers, conditioned by decades of deflation, may not behave as the economic textbooks predict. "It's so expensive now," Mr Kasai says. "It makes me think I'd rather save some money."

Ultimately, the demographic pressure that has helped tighten labour markets also drags down growth. Japan's working-age population (now 74m) is projected to shrink by 30m between 2020 and 2070. For all Japan's improvements, its potential growth rate is still below 1%.

These dynamics can be seen at the shops and cafés that line the *shotengai*, or market street, in Ningyocho, on Nihonbashi's eastern edge. "There are just fewer and fewer people," laments Masukawa Yoshio, the head of the local business association. His café has gone from being open six days a week to five, for lack of staff. He is unsure who may take over when he retires. Yet as he looks towards the future, he feels hope, despite all the challenges. "Everything was very stagnant," he says. "At least now there's movement." ■

Health care

An Asian model

BANGKOK

Why is Thai health care so good?

POLITICAL TURMOIL in Thailand is unrelenting. Over the past two decades, 11 different prime ministers have led the country. In the coming weeks that number could increase, as the constitutional court considers dismissing the current leader, Srettha Thavisin, over an allegedly illegal cabinet appointment. Yet amid such instability, one aspect of Thailand's governance flourishes: its public-health system.

Thai health care is among the most effective in the world. The average Thai can expect to live to 80, much longer than their regional counterpart (the South-East Asian figure is 73) and even slightly longer than the average American and European (each roughly 79), according to the latest data from the United Nations. Last year a whopping 99.5% of the population of 72m was covered by health insurance. Remarkably, Thailand has achieved this as a developing country: its income per person was roughly $7,000 in 2023, more than 11 times smaller than America's. Even in the middle of the pandemic in 2021, its public-health bill was 6% of GDP, compared with 17% in America and 11% in the European Union.

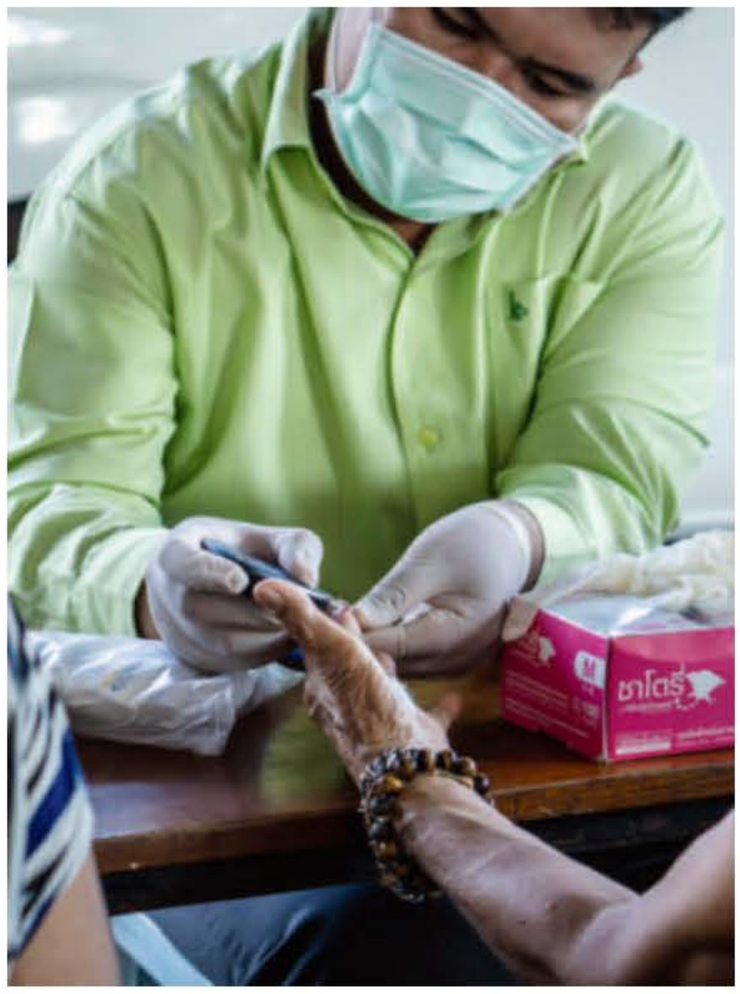
What explains such outperformance? Amid fears that the country's hinterlands would succumb to communist ideas that were spreading fast in the region in the 1970s, Thai policymakers focused on rural development. Public health became a priority, so a wave of spending was unleashed on infrastructure. By 1990 all 928 districts had a hospital.

Investment in people also helped. In 1972 the government launched a programme that required medical graduates to spend the first three years of their careers in villages. This led to a "golden generation" of doctors, says Eduardo Banzon of the Asian Development Bank.

Subsequent Thai governments made health care more affordable. The first big initiative was an insurance scheme targeting the poor. This was followed by state-sponsored schemes for those working in the informal and private sectors. But the big boost came in 2002 when the government rolled out a universal health-coverage programme, which offered free health care to the poor and a nominal 30-baht ($1) fee for others. One study found that just between 2000 and 2002 there was a significant decrease in infant mortality.

Unsurprisingly the scheme was a huge hit, boosting the popularity of Thaksin Shinawatra, the prime minister at the time. Few governments since then have dared to tinker with it. Instead its coverage has expanded. Today it covers treatments for conditions ranging from HIV to kidney diseases. But an equally important feature of the programme is the focus on preventive health care, says Piya Hanvoravongchai of the National Health Foundation, a non-profit. A network of grassroots workers helps provide health advice.

Particularly striking is the fact that universal health coverage is not only affordable for beneficiaries, but also for the government. The programme is funded through tax revenues, but spending is controlled. Every year district hospitals are provided with a fixed amount of money per patient in their catchment area, regardless of the treatment they get. This "capitation" model ensures efficiency and predictability in funding. Thailand's spending on health had remained largely steady at around 3-4% of GDP until the pandemic, even as its programmes expanded.



All in hand

Many countries are eager to emulate Thailand. Earlier this year Saudi Arabia signed an agreement with the government to co-operate on public-health matters. Thai delegations have travelled around Asia, Africa and the Middle East, too.

However, challenges loom. More than a fifth of Thais are over 60. Within the next decade that share could be a third. That puts strain on the public-health system and government finances. Many doctors already complain of overwork. Efforts are under way to expand the cadre of public doctors, while several specific policies have been rolled out for the elderly. Here, too, Thai health care may continue to be a model for the world. ■

Minerals in Kazakhstan

Going nuclear

Demand for uranium is booming

ON JULY 3RD Vladimir Putin, Russia's president, and Xi Jinping, China's leader, attended the annual summit of the Shanghai Co-operation Organisation, a Eurasian security and defence partnership, in Astana, Kazakhstan's capital. In a statement ahead of his meeting with Kassym-Jomart Tokayev, Kazakhstan's president, Mr Xi emphasised the need for the two countries to strengthen their co-operation in energy investment and mining. It hints at an area where the "no-limits" friendship between Russia and China is being tested, as they both woo Kazakhstan.

The war in Ukraine exposed Europe's dependency on Russian oil and gas. This has given a boost to nuclear advocates and increased the demand for uranium, the mineral used for nuclear fuel. Global uranium production is projected to reach over 75,000 tonnes by 2030, up from around 65,000 tonnes last year. Uranium prices have multiplied five-fold since 2016, heavily driven by China's ballooning demand (though they have cooled a bit recently).

Kazakhstan stands to benefit. It is the largest producer and exporter of mined uranium in the world, accounting for 43% of global supply in 2022. That is almost triple the share of Canada, the next-biggest ▸▸

BANYAN

The waning power of handouts

Indian voters have begun to expect more than welfare from their politicians

AN INDIAN RECEIVING any sort of benefit from the government in recent years was left in little doubt of whom to thank. Got vaccinated against covid? Narendra Modi, the prime minister, beamed from the certificate. Applied for housing under a 50-year-old programme? The words *pradhan mantri* (prime minister) were written all over the paperwork. Received a cash injection from the state government? Probably advertised by posters displaying the relevant chief minister's visage.

Welfare politics has been a long-standing feature of India, but Mr Modi and his Bharatiya Janata Party (BJP) sought to perfect the art of loudly claiming credit for doling out benefits to ordinary people. For a period it was a reliable electoral tool, establishing the prime minister and his party as benefactors to the poor. The BJP's rivals joined the welfarist bandwagon, hoping for a similar effect. Yet the recent election, in which the BJP lost its majority, shows that the tactic may have run its course.

For a while welfarism worked for both politicians and ordinary Indians. Mr Modi and bigwigs in state governments used the personalisation of welfare payments, food aid and subsidies to create a direct patronage link with voters, while playing down the role of bureaucrats who administer benefits and the taxpayers who fund them.

Taking credit for improving people's lives helped win elections: even those who disliked Mr Modi's Hindu nationalism approved of his efforts to help the poor. Some 800m Indians, or around 60% of the population, get food aid. Most voters knew someone who got a house thanks to *Modiji*. When politicians competed to offer more goodies than their rivals, many voters benefited.

But in the election that ended in early June, the link between handouts, credit-taking and electoral success has weakened. In the year to April the central government spent twice as much on its biggest welfare and subsidy schemes as it did in the run-up to elections in 2014 and 2019. Mr Modi's face was plastered outside government grain shops and health clinics and all over the BJP's manifesto, which was made up of 24 "Modi's guarantees" and promised to continue the government's welfare programmes.

Even so, the BJP's biggest losses in the election in June were in the poor, rural states where most welfare beneficiaries live. Meanwhile, in the southern state of Andhra Pradesh the party of Y.S. Jagan Mohan Reddy, the chief minister, was wiped out in the state election. This was despite Mr Reddy's reputation as the benefactor of poor Andhraites and as the man who had built a welfare-distribution system that bypassed bureaucracy.

Two explanations arise. One is that the strategy is suffering from diminishing returns as it has become more widespread.

Seeing how well it worked for Mr Modi, others have copied it, and showy generosity has become the norm. As voters have grown used to being courted in this way, personally associating a politician with a welfare benefit is no longer a reason to vote for that candidate or their camp, but simply a minimum standard.

In a survey conducted shortly after the election by CSDS-Lokniti, a pollster, a huge majority of people agreed that it was the government's job to distribute cash and food. More people said that they had benefited from welfare schemes than in a similar survey in 2019, and still more were likely to credit the central government. Yet the survey found a large gap between giving credit and voting for the BJP: acknowledging the government's contribution to a scheme did not necessarily prompt a person to vote for Mr Modi's party.

The other explanation is that voters increasingly see the limits of welfare schemes. More than half of respondents told the same CSDS-Lokniti survey that improving infrastructure was more important for development than extending welfare to the poor. Voters whom Banyan met on the campaign trail in the weeks leading up to the election said they were happy to get food and money from the government. But many also said that they would have preferred better jobs, better health-care facilities and better schools for their children.

Those complaints illustrate the most fundamental problem with welfarism in Indian politics. Running high-quality schools and hospitals and creating the conditions for a vibrant private sector to produce jobs is harder, slower and less visible than printing the prime minister's face on a sack of rice. But it is essential if all Indians are to thrive.

producer. To maintain its position, the country has been rapidly expanding its production capacity, from 796 tonnes a year in 1997 to a projected 31,000 tonnes by 2025. The country now provides 25% of America's imports of uranium.

Its biggest customer is China. Around half of Kazakhstan's exports go there, supplying close to two-thirds of China's uranium intake. The state-owned China National Uranium Corporation has signed several joint mining ventures with local operators, giving it rights to nearly 60% of future uranium production in Kazakhstan. The two countries are also in talks to develop a uranium transport link to Shanghai.

Other countries are likely to intensify their fight over Kazakhstan's resources. Russia is trying to cement its influence by winning a tender to build a nuclear-power plant there (the government will hold a referendum on whether the plant should be built, which is unlikely to be free or fair). Most of Kazakhstan's oil exports have to go through a pipeline that ends up in Russia, and are shipped from a Russian port. Russia already controls 25% of uranium production in the country.

However, an American ban on uranium enriched in Russia will soon kick in. This may prompt the West to devise more ways to import mined uranium from Kazakhstan directly. Or more exports might go through China instead of Russia. And as high prices persist, other countries may start to produce more, too. ■

China

Climate change

Worrying about water

QUESHAN COUNTY

China has been struck by floods and drought—at the same time. It could get worse

IN QUESHAN COUNTY, on the plains of central China, fields that are usually green with maize plants are brown and dusty. It has barely rained for two months and village wells are running dry. "We depend on the Emperor of Heaven to make a living," says Yang Ning, a grizzled 67-year-old farmer, referring to a deity who controls the weather. "I don't dare to hope." The drought, which has affected eight Chinese provinces, is the worst many locals can remember.

A certain level of hardship is to be expected in parts of central and northern China. Most of the provinces in the north, where 40% of the country's population lives, fall below the threshold for "water scarcity" set by the UN (see map on next page). In the south torrential rains are more common. Flooding and landslides in the region killed dozens of people last month. Thousands had to be evacuated. But southern China has also been hit by droughts in each of the past three years.

Attributing any single weather event to climate change is complicated. But scientists expect that China will increasingly experience periods of heavier rainfall, as well as longer periods of dryness in the coming years. That is going to make an already difficult challenge much harder. With just 6% of the world's freshwater China must quench the thirst of 20% of the world's people. To do this the country's leaders have long relied on big infrastructure projects to move water from wetter to drier places. As the demand for water increases and the weather becomes less predictable, that process gets more complicated.

Droughts and floods are not the only problem. Glaciers high in the Himalayas, which feed the country's great rivers (as well as those in South-East and South Asia), are retreating. One-fifth of their ice cover has melted since the 1950s. For the moment, that is making parts of China wetter. Oases in western deserts are blooming. But around mid-century the meltwater run-off is expected to start decreasing. One area affected will be the Tarim basin, home to 12m people who get about 40% of their water from the glaciers.

Disruptions caused by drought alone have cost the Chinese economy $7bn per year between 1984 and 2015, according to an estimate by researchers at the Chinese Academy of Sciences. They reckon that number could increase to $47bn annually if global temperatures rise to 1.5°C above pre-industrial levels, a threshold that may be crossed by the 2030s if emissions continue to rise at their current pace. (China's GDP was just under $18trn in 2023.)

The agricultural sector, which uses more than half of China's water, has suffered most. But other parts of the economy are not shielded. In 2022 the south-western province of Sichuan saw months with little rain. The flow of rivers fell, causing hydropower output to decrease by half. That led to power cuts, with thousands of factories ▸▸

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— Chaguan is away

forced to curb production.

The government worries about social stability. Since imperial times China's rulers have tried to tame the country's big rivers, seeing their legitimacy as bound up in these efforts. A former prime minister, Wen Jiabao, once said that water shortages threaten "the very survival of the Chinese nation" (by which he probably meant the survival of the Communist Party). China's supreme leader, Xi Jinping, talks often about the country's water resources and the need to protect them.

Half measures

Officials tend to focus on the supply side of the problem. To ease shortages in the north, for example, China spent the equivalent of tens of billions of dollars on one of the most expensive infrastructure schemes in the world: the South-North Water Diversion Project. As the name suggests, this massive system of canals pumps water from southern to northern China. Its two main channels, fed by the Yangzi and its tributaries, were completed about a decade ago. But the amount of water being moved is still relatively small, so the project is being expanded.

Last year China invested over 1trn yuan ($137bn) in water infrastructure. Much of that went to building a denser network of pipes and storage tanks to reduce waste from leaks. Many coastal cities are constructing desalination plants as an "insurance policy" against water scarcity, says Scott Moore of the University of Pennsylvania. These can remove the salt from seawater to make it drinkable (albeit at a big cost in terms of energy). By next year China plans to be able to desalinate about 3m cubic metres of water per day. (It consumes about 1.7bn cubic metres per day.)

The government is also dabbling in more speculative efforts. Officials are eager users of cloud-seeding technology, where chemicals are shot into clouds to try to encourage water vapour to condense and fall as rain (the evidence that this works and is cost-effective is mixed). Chinese scientists, meanwhile, have partially covered a glacier on the Tibetan plateau with a blanket of reflective material in an attempt to slow its melting.

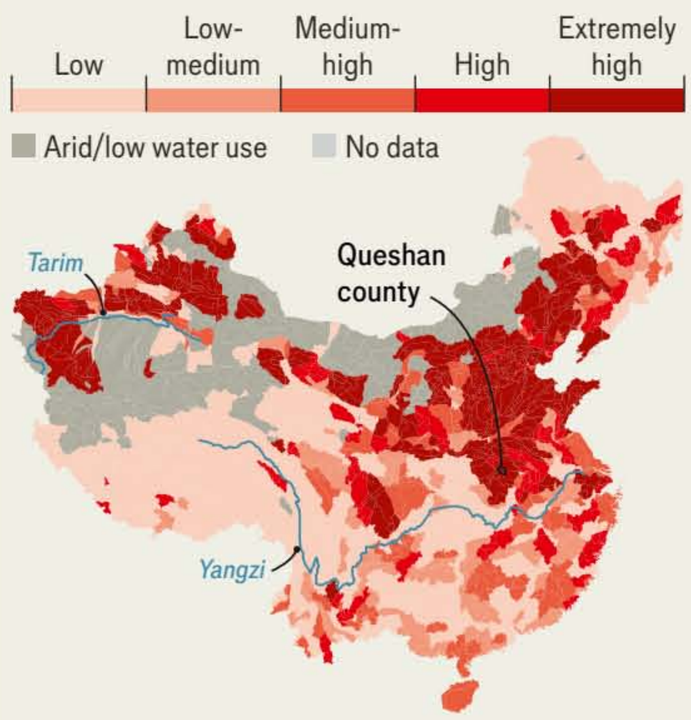
China is doing little, however, to reduce demand for water, something most analysts say is necessary. In practice such an approach would entail raising the price of water so that it better reflects the scarce supply and incentivises lower consumption. Instead, the government keeps prices artificially low. People living in northern China typically pay much less for water than those living in America, where it is more plentiful. Chinese farmers sometimes pay nothing at all.

This has led to absurd outcomes. A report released in April by China Water Risk, a non-profit, found that 41% of China's data centres, which use lots of water for cooling, are located in areas prone to drought. So are many of China's water-guzzling coal-fired power plants. In the arid northern province of Hebei, which was once criss-crossed by camel caravans, one now finds ski slopes covered in artificial snow.

Since 2014 several provinces have been involved in a project that has seen them set up markets for trading water rights, akin to those for carbon emissions. But the markets remain a patchwork, lacking co-ordination. And weak enforcement hinders their effectiveness. It is difficult to track a company's water usage, particularly if it is drawing water from the ground.

Wet-dry map

China, water stress*, 1979-2019



*Ratio of water withdrawal to supply
Source: Aqueduct 4.0 World Resources Institute, 2023

The price is wrong

Even if the markets functioned properly, the government is unlikely to let the price of water rise by much, says Charles Parton of the Council on Geostrategy, a think-tank in London. Officials worry about inflation. (High prices contributed to widespread unrest in 1989, though at the moment China is flirting with deflation.) More expensive water would also make farming unprofitable in much of the country. China could import more food instead, outsourcing its water demand to wetter countries. But that is unlikely, given the party's obsession with food security.

For now the government seems much more interested in building canals and fixing pipes than increasing the price for water. As the climate warms, that may look short-sighted. Mr Parton believes a water crisis, which could involve widespread energy shortages and spiking food prices, is inevitable. If the government delays in taking action to reduce demand, he says, "it will just be bigger." ■

Corruption

No defence

BEIJING

Two former generals are accused of betraying the Communist Party

FOR SENIOR Chinese officials charged with wrongdoing, the road to justice is often long and winding. The first step is usually detention, interrogation and an internal investigation conducted quietly by the disciplinary arm of the Communist Party. This triggers frantic but uninformed chatter about the official's disappearance. Weeks or months later, state-controlled media confirm that he or she has been removed from their post and is under investigation. Some time after that it is announced that the official has been stripped of party membership. The matter then gets turned over to the justice system.

Two notable figures have now reached the end of that process. Li Shangfu (pictured on next page) and Wei Fenghe are former generals in the People's Liberation Army (PLA). Both men served as defence minister. Last summer they disappeared from public view and in the autumn Mr Li was removed from his post (Mr Wei had retired). On June 27th the official news agency, Xinhua, reported that they were being probed for "serious" crimes. Each man had accepted "a huge amount of money and valuables" in bribes, alleged investigators. The Politburo has expelled them from the party. They will now face criminal charges from military prosecutors.

The cases of Messrs Li and Wei are part of a wider crackdown on corruption and malfeasance in the armed forces launched last year by China's ruler, Xi Jinping. Before serving as defence minister from 2018 to 2023, Mr Wei had been in charge of the PLA's Rocket Force, which is responsible for the country's arsenal of land-based conventional and strategic missiles. Several leaders of the force, along with a handful of other generals, were dismissed from China's legislature last year, losing their immunity from arrest or criminal charges.

The upheaval hints at serious problems with Mr Xi's efforts to revitalise China's ▸▸

He might have to change uniforms

armed forces. Shortly after coming to power in 2012 he had a first go at tackling corruption, which was rife. Dozens of generals were dismissed, including two retired ones who had served at the top of the army, Guo Boxiong and Xu Caihou. Yet even after that clean-up effort, high-level graft seemingly persists.

As a result, some have questioned China's military readiness. Earlier this year Bloomberg, a news agency, reported that corruption in the rocket force had resulted in missiles loaded with water instead of fuel. American intelligence analysts were quoted as saying that graft in China's defence-industrial base was so bad that Mr Xi would probably shy away from military confrontation in the coming years.

State media's reporting on the latest probes suggests that party leaders are furious. The alleged actions of Messrs Li and Wei are being painted as a betrayal. Both men were appointed by Mr Xi. According to Xinhua, Mr Li has "brought enormous damage to the party's cause", while Mr Wei "lost his faith and loyalty".

Wayward leadership in the army, however, is not Mr Xi's only problem. Around the same time that Messrs Li and Wei went missing, another murky scandal emerged, this one at the top of China's foreign ministry. With the clear backing of Mr Xi a diplomat called Qin Gang had leap-frogged other officials, becoming foreign minister in 2022. Last June he disappeared amid rumours of indiscretions in his personal life.

Mr Qin has since been removed as foreign minister and stripped of other titles. But he has not been kicked out of the party, nor charged with corruption. He may avoid the fate of Messrs Li and Wei. On the path to justice, they are at the point where things tend to speed up. Trial, conviction and sentencing are the final steps. ■

Anti-Japanese sentiment

An attack and a crackdown

The government takes a small step to curb extremist rhetoric online

IT WAS AN isolated incident, the government insists. On June 24th a Chinese man attacked a Japanese woman and her child at a bus stop outside a Japanese school in the city of Suzhou. A Chinese school-bus attendant, Hu Youping, tried to shield the pair, only to be stabbed herself. She died days later. The local administration has called Ms Hu a "righteous and courageous" role model.

Extreme Chinese nationalists, though, have a different view of the attack. In comments posted online they have spread rumours that Ms Hu had been a Japanese spy. Others urged more violence against Japanese people. Some social-media posts called for the establishment of a "modern-day Yihetuan". The term refers to the Boxer Rebellion, an anti-foreign uprising in northern China between 1899 and 1901.

Japan is often a target of nationalist ire. Young Chinese are taught to resent the country for its invasion of China and the atrocities it committed during the 1930s and 40s. One netizen described the attack in Suzhou as the result of "decades of hate education". Nationalists are further animated by disputes over the Japanese-controlled Senkaku islands, which China claims and calls the Diaoyu, and Japan's support for Taiwan. Online nationalists sometimes wish for Japan to sink to the bottom of the sea.

This type of vitriol is generally tolerated by the government, which censors content it deems undesirable. Many nationalists attract huge audiences online. One such commentator, Hu Xijin, has nearly 25m followers on Weibo, a microblogging site. The nationalists promote a sense that the Communist Party has made China strong. And they distract from the party's failings. Last year, as the economy slowed, the government stoked nationalist anger over Japan's release of nuclear wastewater.

But China's ruler, Xi Jinping, is obsessed with stability, so the party wants to make sure that nationalism has limits. In response to the attack in Suzhou, party mouthpieces called for vigilance against the spread of "digital hatred" into the real world. Social-media platforms have cracked down on "extreme nationalism", particularly anti-Japanese sentiment. Weibo and Tencent, a social-media giant, said they had removed hundreds of pieces of content.

Even some nationalists think the anti-Japanese rhetoric has gone too far. The attack in Suzhou came two weeks after four American college instructors were stabbed in the province of Jilin. On June 27th Mr Hu wrote a post titled: "Is hating America and Japan patriotism?" China's status as a developing country made close ties with richer countries important, he argued. Hatred towards others was not in China's interests.

United States

SCOTUS's report card

Supremely controversial

NEW YORK

The Supreme Court's term ends with a rash of divisive rulings

BEFORE PRESENTING her opinion in a sleeper case on July 1st, the final day of the Supreme Court's term, Justice Amy Coney Barrett elicited chuckles in the courtroom. "Sorry," she quipped, announcing the result in *Corner Post v Board of Governors of the Federal Reserve System*, "this is not one of the cases you're waiting to hear." Chief Justice John Roberts would deliver the highly anticipated presidential-immunity decision—smoothing over Donald Trump's most profound legal troubles—a few minutes later.

Justice Barrett's downplaying of that case was misplaced. In her dissent, Justice Ketanji Brown Jackson contended that the decision magnified the fallout from *Loper Bright v Raimondo,* the case that spelt the demise of the *Chevron* doctrine. This might have been the most important rule governing government that most Americans had never heard of—until the court struck it down this term too. "The tsunami of lawsuits against agencies" would empower plaintiffs to challenge long-settled regulations issued by federal agencies, she warned, and could "devastate the functioning of the federal government".

In the last five days of the term, the three justices appointed by Democratic presidents each took a turn decrying the conservative majority's attack on the administrative state. Justice Jackson had a go in *Corner Post*, Justice Kagan in *Loper Bright v Raimondo*, the case concerning herring fisherman that gave the justices reason to strike down the Chevron doctine.

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And Justice Sotomayor took her turn in *Securities and Exchange Commission (SEC) v Jarkesy*, a successful challenge to the SEC's procedure for adjudicating and penalising securities fraud. Each also took the unusual step of delivering an oral summary of her dissent from the bench—a sign of especially vehement disagreement.

This three-pronged throttling of administrative agencies would have added a fourth had Justices Samuel Alito and Neil Gorsuch found three colleagues to kill the Consumer Financial Protection Bureau (CFPB), an agency established in 2011 to promote fair-dealing among America's financial institutions. Still, the long-developing deregulatory goal of the conservative legal movement had a banner year at the Supreme Court—a trajectory that would probably be supercharged if Mr Trump wins a second presidential term.

The chances of another four years for Mr Trump improved on July 1st when, in *Trump v United States,* the case concerning presidential immunity, the six conservative justices gave the candidate something approaching a stay-out-of-jail card.

Chief Justice Roberts, who wrote the majority opinion, worried that presidents would not be able to fulfil their responsibilities if their days in office could later subject them to criminal prosecution. There is no refuge in the "good faith of ▸▸

prosecutors", he wrote, so former presidents should be handed a wide umbrella on their way out of the White House. While Chief Justice Roberts acknowledged that private behaviour with no connection to the presidency can get ex-presidents in hot water, he gave no examples, nor any guide as to when a president is acting as a president (and is therefore immune) and when he's not. That is for the lower courts to sort out. But the presumption, after *Trump v United States,* is always on the president's side.

In her concurring opinion, Justice Amy Coney Barrett was willing to say that Mr Trump's "alleged attempt to organise alternative slates of electors" is "private and therefore not entitled to protection". Or as Lawrence Lessig of Harvard Law School put it, "the president has no role in the selection of the president". But rather than let Jack Smith, the special counsel, get on with litigating a pared-down version of his indictment, the chief justice opted for the path of most resistance.

The pacing of Mr Trump's immunity plea helped the former president—and contrasted with the alacrity with which the court handled *Trump v Anderson,* the ruling that he was not disqualified from the Republican primary ballot in Colorado. The justices declined to weigh in early when Mr Smith asked in December. They took 16 days (compared with two in *Anderson*) to decide to review the appellate court's ruling against Mr Trump. They scheduled the oral argument 57 days later, compared with 34 in *Anderson,* and handed down the decision after 67 days, compared with 25. So when time was of the essence for the viability of Mr Trump's candidacy, the court acted quickly. When the time crunch involved prosecution of Mr Trump, urgency was absent.

Decisions, decisions

What of the other disputes that dotted the justices' docket? In *Fischer v United States,* six justices said January 6th rioters could not be charged under a section of a federal obstruction law. (The effect seems muted, as Merrick Garland, the attorney-general, says all of them were charged under other laws, too.) *City of Grants Pass v Johnson* rejected a claim that it is cruel and unusual punishment to fine homeless people for sleeping outdoors. The justices also threw out a settlement compensating victims of the opioid crisis, subjecting the Sackler family to individual lawsuits.

Two decisions involved abortion rights. *Food and Drug Administration (*FDA*) v Alliance for Hippocratic Medicine* concerned an attack on mifepristone, a pill used in 63% of abortions in America. Starting in Amarillo, Texas, where they were sure to land in the courtroom of a conservative judge, the plaintiffs struck a blow against mifepristone last year. The judge took the extraordinary step of de-authorising the drug, which the FDA approved in 2000. After this ruling partially survived a trip to the Fifth Circuit Court of Appeals, the Supreme Court weighed in. The justices decided unanimously that the pro-life challengers had no plausible argument for "standing"—the legal right to sue: plaintiffs must show they have suffered a concrete injury that is traceable to the FDA's moves expanding mifepristone's availability.

For now, mifepristone continues to be available through telehealth appointments and post. But more legal challenges are on their way, with several states (Kansas, Idaho and Missouri) leading the charge. Project 2025, the Heritage Foundation's 920-page manifesto for transforming America if a Republican becomes president, calls abortion medication, "the single greatest threat to unborn children in a post-*Roe* world. The drug's FDA approval, it reads, should be reversed.

Another partial and potentially fleeting win for abortion access came in *Moyle v United States,* a fight over Idaho's abortion law allowing terminations only in rare circumstances. It appeared the Supreme Court would resolve whether the Emergency Medical Treatment and Labour Act, a federal law requiring hospitals receiving public funds to provide "necessary stabilising treatment" to all-comers, trumped Idaho's ban on emergency abortions for women whose pregnancies threatened their health. But the justices opted to dismiss the case as improvidently granted and let the district court's previous modification of Idaho's law take effect, for now.

More return correspondence is expected after the court's array of opinions in *United States v Rahimi,* a case asking whether a Zackey Rahimi, a man who threatened his girlfriend with a gun—and shot up a few locales—nevertheless has a Second Amendment right to his weapons. The justices published seven different opinions, coalescing 8-1 against Mr Rahimi to hold that the government can take guns away from demonstrably dangerous people, and from those subject to a domestic-violence restraining order. But Justice Thomas, author of the 2022 ruling radically bolstering gun rights, dissented, telling his colleagues they had mangled his masterpiece.

Over the past three years the court has ticked the three boxes of the conservative legal movement: ending abortion rights, overturning affirmative action and constraining the administrative state—along with bolstering the Second Amendment. This term has been particularly busy. So a fair question is: what's next? A large share of the justices' attention in the next couple of years may turn to clarifying what they meant in the streak of big decisions they have just issued. ■

Conservation

Vulture capital

BIG SUR

The plight of the California condor is a study in unintended consequences

IT MAY HAVE been the smelliest job in conservation. Whoever drew the short straw sat in a hole in the dirt underneath a carcass. Then they waited for a California condor to come and have a snack. "That's not a pretty job at all," says Chandra David, an animal keeper for the Los Angeles Zoo. "When a bird would land somebody would radio in saying 'Now!' and they would reach up and grab the bird's legs." This, and other less nauseating methods, is how the last remaining condors were brought in from the wild in the 1980s.

Californian condors are a species of vulture; they feed on dead animals. Adults can have a wingspan of up to three metres, making them the largest land bird in North America. As America's population grew in the 19th and 20th centuries, the birds' numbers plummeted. They were placed on the federal endangered-species list in 1967, but they continued to die off. Their near-demise, and recent comeback, provide a study in unintended consequences.

At first, researchers were not quite sure what was killing the birds. Unlike bison, grey wolves or grizzly bears, they were not hunted almost to the point of extinction. Some hunting and egg-snatching was troublesome, and more recently ever more severe wildfires and avian flu have proved deadly. But lead poisoning is the main culprit. Condors regularly feed on animals shot with lead bullets. If they ingest frag- ▸▸

Keep calm and carion

ments of the bullet along with their meal, they are poisoned. By 1982 just 22 condors remained in the wild, and America's Fish and Wildlife Service (FWS), along with the LA and San Diego zoos, hatched a plan to save the species. To those poor zoo workers, hiding beneath carrion was just a stinky sacrifice for the greater good.

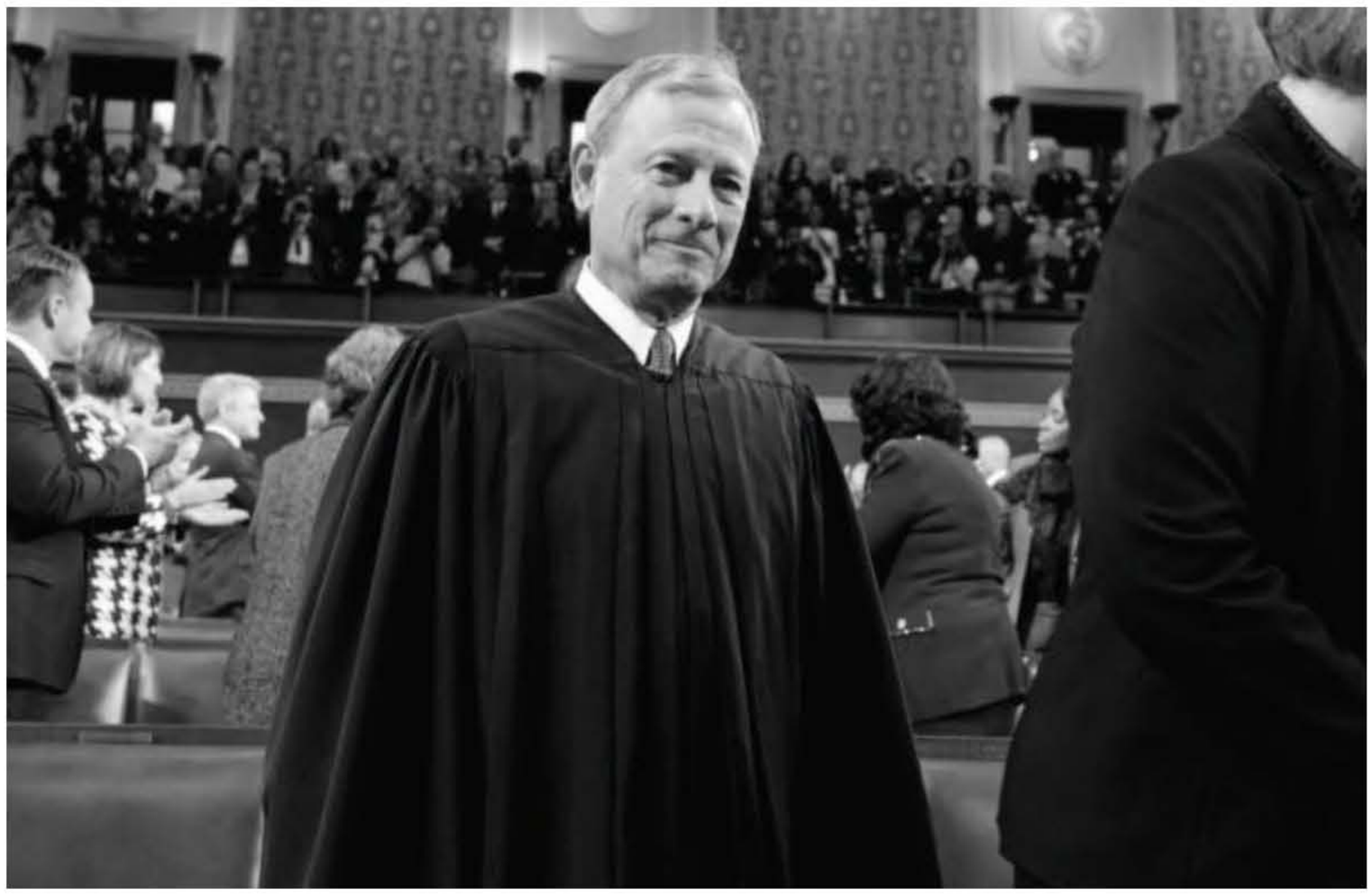
The zoos and the FWS spent years rehabilitating the species before releasing birds into the wild. By 2023 there were nearly 350 wild condors flying free across California, Utah, Arizona and Baja California in Mexico—and another 217 in captivity. The zoos regularly free birds with the help of local conservation outfits. They are "the garbage collectors" of the ecosystem, says Kelly Sorenson proudly. He leads the Ventana Wildlife Society, which helps maintain a condor population in Big Sur, on California's central coast. Mr Sorenson and his staff name the birds and set up webcams for people to watch them roost in nearby redwood trees. Redwood Queen seems to be the current favourite.

The birds' recovery has led to some runins with humans. In 2021 a group of condors north of Los Angeles went viral for taking up residence on a woman's sundeck. But condors are also a draw for tourists. They can be spotted from California's scenic Highway 1 as they circle above seals basking on the Big Sur coast.

Lead is still a threat. Since 1992 nearly half of all condor fatalities, when the cause of death is known, were attributed to lead poisoning. In 2019 California banned the use of lead ammunition for hunting, but Mr Sorenson says the policy has not made much difference. That is due to another Californian gun-control law. The Golden State has the strictest gun laws in the country, according to Everytown for Gun Safety, a gun-reform group. One measure bars anyone but certified vendors from selling ammunition, making it tricky to buy ammunition online. In addition to riling internet ammo sellers, another group was miffed: condor conservationists.

Non-lead ammunition exists. Hunters can buy copper bullets, for example. But it can be hard to find. "It's each individual store-owner's decision whether they want to carry non-lead ammunition," argues Mr Sorenson. "If they don't, your local populace is not going to have access to it because you can't buy it online." He gives away free non-lead ammo to try to persuade hunters and ranchers to switch.

California would not, and should not, roll back commonsense gun laws to help condors. But the debacle demonstrates the accidental effects of well-meaning policy. Until hunting with lead bullets becomes taboo, condors will be threatened. But at least they will always have zookeepers in LA who will cover themselves with a carcass to check on them. ■



Bureaucratic power

What the Chevron ruling means

WASHINGTON

The Supreme Court weakened regulators and invited a wave of lawsuits

THE QUESTION confronted by the Supreme Court in *Loper Bright Enterprises v Raimondo*—whether the Magnuson-Stevens Act of 1976 implies that herring fishers in the Atlantic can be forced to pay the salaries of federal inspectors riding on their boats—might appear to be, well, small fry. Yet while the Supreme Court issued many consequential decisions this term, *Loper Bright* may turn out to be the most important of the lot.

That is because the court's conservative 6-3 majority used the case to strike a mighty blow against the American administrative state. Its ruling on June 28th eliminated a precedent called "*Chevron* deference", named after a landmark case from 1984, that instructs courts to defer to federal agencies when their authority is left ambiguous by a law (as it frequently is). For decades, *Chevron* justified countless rules and regulations; under it, agencies and bureaucrats in charge of environmental, labour and financial matters made expansive use of the vague authorities delegated to them by Congress.

The judiciary has now struck back. By forcing courts to defer to regulators, wrote Chief Justice John Roberts in the majority opinion, "*Chevron* does not prevent judges from making policy. It prevents them from judging." The court's liberal minority called it a power grab and predicted costly disruptions: "A rule of judicial humility gives way to a rule of judicial hubris," Justice Elena Kagan's dissent declared. "The majority's decision today will cause a massive shock to the legal system," casting doubt on thousands of court rulings.

The Founders had no reason to go into detail on the powers of bureaucrats. By 1861 the entire federal bureaucracy still had fewer than 6,000 employees. But the New Deal expanded the power of regulators and the second world war gave birth to a gigantic administrative state. In 1952 one Supreme Court justice, Robert Jackson, called the bureaucracy the "veritable fourth branch" of government.

He did not mean it kindly. Today, bureaucrats clearly do impinge on the three constitutional branches: they perform a legislative function in crafting rules and regulations, they mirror courts by interpreting their own authorities, and they exercise executive power in the name of the president. During the *Chevron* era, federal courts had to defer to a regulatory agency so long as its interpretation of a law seemed to be "a permissible construction of the statute". That gave agencies power.

Ironically, conservatives embraced the decision at first. Ronald Reagan's government had pledged sweeping deregulation, but frequently encountered court challenges by public-interest groups. *Chevron* implied that if agencies had a broad remit to issue regulations, they also had a broad remit to deregulate. Antonin Scalia, appointed to the Supreme Court when he ▸▸

was an early champion of *Chevron*, would remain a lifelong devotee. But conservative legal scholars eventually turned against the precedent, seeing it more as a cause of bureaucratic overreach than a convenient deregulatory tool.

Will the post-*Chevron* landscape be post-apocalyptic for the administrative state? Maybe not. The court had been moving away from *Chevron,* and it developed new doctrines that limited *Chevron* deference in practice. In a decision of 2022, *West Virginia v EPA*, regarding the agency's attempt to regulate emissions from coal-fired power plants, the court issued a new "major questions doctrine" requiring a higher standard of "clear congressional authorisation" if agencies asserted new powers with "economic and political significance". It used that doctrine a year later to strike down Joe Biden's attempt to cancel $430bn-worth of student-loan debt. "At this point, all that remains of *Chevron* is a decaying husk with bold pretensions," Mr Roberts wrote in his *Loper Bright* opinion.

What comes next is uncertain. "It isn't the case that it's going to end the administrative state...but it certainly sends a signal that the administrative state is not to be trusted and that the courts are supposed to be the heroic bulwarks against bureaucratic excess," says Nicholas Bagley, a law professor at the University of Michigan. In theory, the demise of *Chevron* could cut against Republicans, who have become increasingly statist. But given the relative strength of conservative jurists, Democrats are probably right to be alarmed. "It's like an open invitation," says Robert Litan of the Centre on Regulation and Markets at the Brookings Institution.

Another decision on July 1st, *Corner Post v Federal Reserve*, eliminated the statute of limitations for many challenges to administrative rules. That too is an open invitation to litigants. Between the two cases, the "tsunami of lawsuits" authorised by the court this term "has the potential to devastate the functioning of the federal government", Justice Kentaji Brown Jackson wrote in her dissent to *Corner Post*.

Agencies have other ways to exercise power. They will retain discretion over enforcement actions, whether against polluters or makers of deceptive adverts. These cases are necessarily retrospective, though. Without the ability to craft forward-looking rules, Mr Biden's ambitions to use executive power to combat climate change look far-fetched. A future Trump administration would also have to resort to authorities where the courts remain broadly deferential, such as those specially delegated to the president on matters like trade, national security and immigration policy. Unsurprisingly for a decision that sweepingly reasserts judicial power, there is only one clear winner: lawyers. ■

IVF

Fertile ground

WASHINGTON, DC

Will IVF really be the next frontier in America's culture wars?

MORAL INCONSISTENCY is a pretty normal part of the human condition. Attitudes to in-vitro fertilisation (IVF) are a case in point. While the vast majority of Americans support access to the technology, which now accounts for over 90,000 births per year, many struggle with a key component of it: the destruction of embryos in the process. Indeed, whereas 82% of Americans believe IVF is morally acceptable, only 49% say the same about destroying excess embryos, according to recent polling by Gallup. This presents moral purists with a conundrum.

So far, Americans have mostly been able to hold such competing views. Even among those who believe that an embryo is a person with rights, only about one in ten say access to IVF is a "bad thing", according to Pew Research Centre. Yet state courts, state legislatures and pressure from the Christian right are making the contradiction harder to sustain. In February Alabama's Supreme Court ruled that embryos created through IVF counted as children under state law, causing the temporary closure of fertility clinics. In June the Southern Baptist Convention, which represents 13m Christian evangelicals, overwhelmingly voted to oppose IVF as currently practised, calling it "dehumanising", and calling on the government to curtail it.

Meanwhile Democrats have been calling out Republican hypocrisy, pointing out that many lawmakers who claimed to support IVF had supported the fetal-personhood bills that—by giving embryos human rights—threaten IVF. In June Senate Democrats dared Republicans to block a Right to Contraception Act and, a week later, a Right to IVF Act (all but two Republicans voted against, calling them unnecessary "show votes"). The Biden campaign has a new ad in which the president warns that "they're coming for IVF and birth control next". Republicans dismiss the accusations as fear-mongering. They have a point. No sane Republican up for re-election will pledge to ban IVF.

Don't mess with these people

But the Alabama judgment showed how pro-life judges, state Supreme Courts or legislatures could in effect ban IVF (in Alabama it is safeguarded only thanks to a stopgap law). All it would take is another court case brought by a wronged party, in a state with a fetal-personhood bill—which one in three states have—and a sympathetic judge. In April the majority of Florida's Supreme Court suggested "pre-born children" are "persons" entitled to a right to life under the state's constitution. Texas's Supreme Court recently declined to hear a case between a divorcing couple arguing over whether frozen embryos were property or children. Had they taken it up, it could have had similar effects to the Alabama case.

The most realistic threat, though, is that IVF will become harder to get in some conservative states. This is what happened with abortion after *Roe*, with extra hurdles—like burdensome regulations about corridor widths in clinics, mandatory waiting times and ultrasounds. Louisiana already prohibits the destruction of embryos; patients have to pay to transport them to out-of-state clinics. Barbara Collura, from Resolve, an infertility patient organisation, predicts that "it will take the form of things like regulating how many embryos can be created, maybe even regulating if embryos can be frozen", or genetically tested. Although she does not expect a total ban, she is "very confident that we're going to see those kinds of attempts, probably beginning at the state level".

Americans are far from alone in having complex feelings about embryos. In Germany, embryos have a particular status which falls short of "personhood" but is more than just gametes, a legacy of the Nuremberg trials. Several countries prohibit genetic testing or donation of embryos. Most European countries prohibit selecting embryos based on sex, though America allows it. Yet whereas most other countries allow for moral flexibility, whereby politicians can be anti-abortion but pro-IVF, or pro-IVF but uncomfortable with embryo destruction, in America cultural wars around reproductive rights leave less room for such elasticity. ■

LEXINGTON

Joe Biden is fooling only himself

A president who prides himself on the common touch is insulting everyone's common sense

DESPAIR AS YOU may about American politics, polls suggest a stubborn cause for hope: Americans still do not appreciate being treated like fools. Regardless of what alternative facts their politicians insist upon, most voters do not ignore their common sense or life experience or the evidence of their eyes and ears.

This helps explain why former president Donald Trump has never had majority support, and why President Joe Biden's pitiable debate performance on June 27th did not much affect public opinion of his ability to do the hardest and most important job in the world. Yes, 72% of registered voters told CBS afterwards that they thought he lacked "the mental and cognitive health to serve as president"—but, in answer to the same question just three weeks earlier, fully 65% said the same thing. Such doubt was not new: back in 2022, barely a quarter of Democrats told pollsters they wanted to see Mr Biden renominated; those who were opposed cited his age as their biggest concern. Until the debate, Mr Biden and his aides were fooling only themselves, their truest believers, and those partisans for whom it was convenient to believe.

That is why consternation at Mr Biden's performance varied inversely with distance from places like Washington and the Hamptons. The debate mattered because it shook the confidence of Democratic officeholders, donors and operatives that the fiction of his acuity and stamina could be sustained until the election. He was already trailing Mr Trump; how could the president hope to win over any more voters, if he could not even articulate a case for abortion rights?

If Mr Biden and his aides believed, as they said, that he just had "a bad night", they would have immediately arranged for a serious broadcast journalist to grill him. Instead, they tried for days to brazen things out with the same old tactics: deploying teleprompters to guide the president through even informal remarks, and accusing dissenters of "bed-wetting" and helping Mr Trump. Such condescension was too much even for stalwarts, who knew that every vulnerable Democratic candidate would be in an impossible bind: either affirm that Mr Biden was fit for office or openly break with their president. As the first on-the-record call for Mr Biden to step aside was heard from a Democratic congressman, it was reported that Mr Biden would sit for an interview, with ABC on July 5th. A passable performance may reassure donors, but anything less than the old Joe Biden—the buoyant, garrulous fellow of yesteryear—will have small chance of changing voters' views of biological reality. People know what it means to grow old.

Mr Biden is 81. While holding fewer press conferences than his predecessors and even using shorter stairs to reach Air Force One, he has been assuring voters he can serve until he is 86. Astonished to realise that this claim is implausible to most Americans, Democratic insiders are now wondering who could have imagined it would be swallowed. In press reports some are anonymously knifing members of Mr Biden's inner circle or blaming the president himself. They should look in the mirror. Since 2016 Democrats have scorned Republicans for falling in line behind Mr Trump instead of voicing their concerns that he is not up to the job. Maybe such Democrats will now feel, if not some shame, at least some empathy for their Republican counterparts. It is hard to be brave.

In fact, Republicans might be able to hold their heads slightly higher: some at least called Mr Trump unfit before humiliating themselves by lauding him, and a few opposed him in the primaries—granting Mr Trump a more democratically tested claim on his party's nomination than Mr Biden has. Julián Castro, who ran for the Democratic nomination in 2020, told NBC News that smothering competition led Democrats into a trap. "Anybody that stepped forward as a potential contender, the idea of having debates, campaign consultants that might think about supporting somebody—all of them were shut down," he said. "At each juncture the opportunity for an off-ramp was cut off."

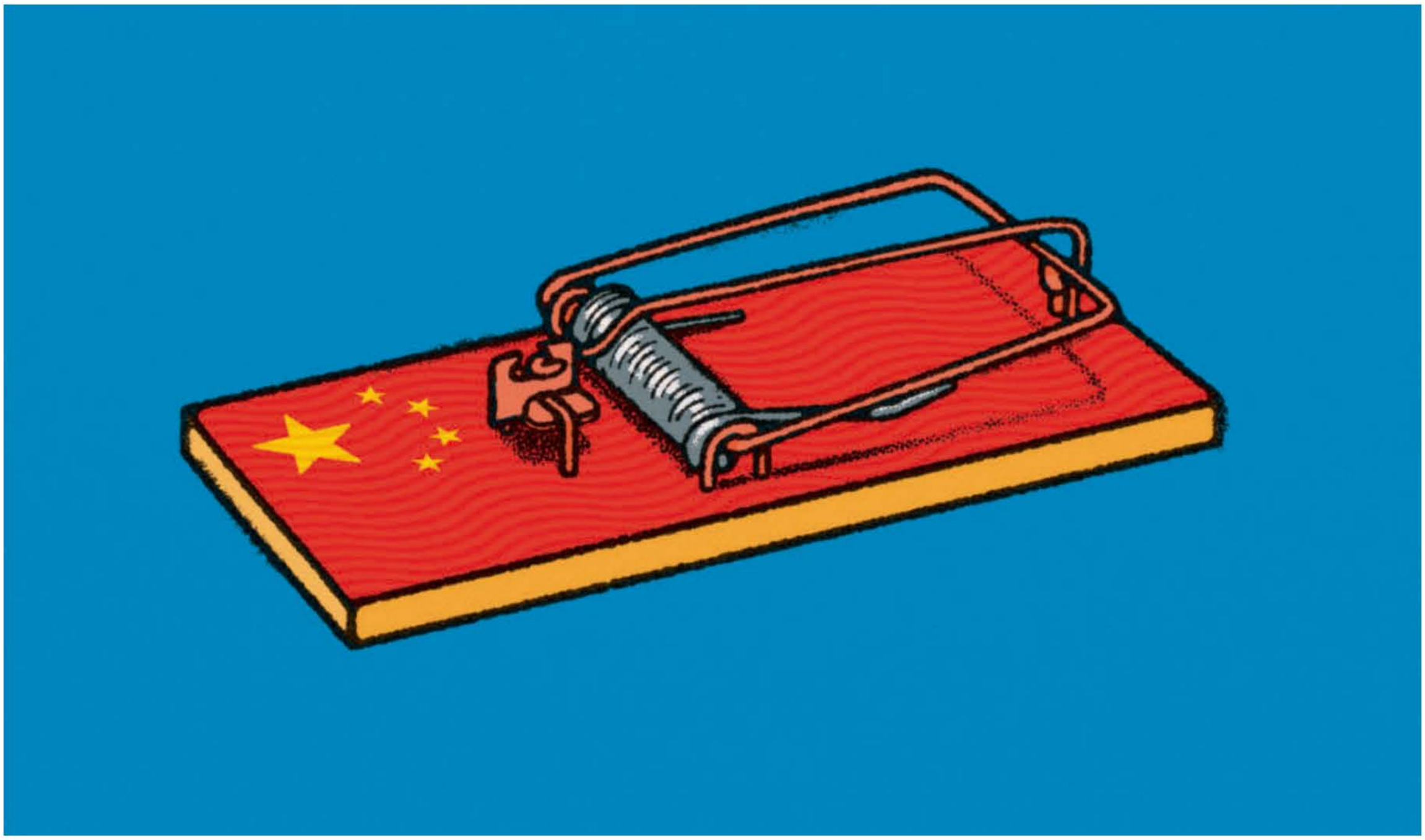
It's perverse: the very ambitions of rising Democratic officeholders kept them from challenging Mr Biden. They found it wiser to wait until 2028 rather than risk accusations of disloyalty. Similar calculations might prevail if Mr Biden steps aside, because to compete would mean challenging Vice-President Kamala Harris, however unpopular she is. "Are you going to shove aside your vice-president and beat Trump in six weeks?" says one Democratic operative close to the White House. "If you fail, you're dead."

As though to rub the Democrats' noses in their folly, the Supreme Court's conservative majority, four days after the debate, chose to immunise former presidents against prosecution for crimes in office that can be construed as "official acts". Shortly before that, Mr Trump reposted a meme on social media calling for Liz Cheney, a Republican who crossed him, to be tried for treason before a military tribunal.

Biden, their time

Mr Biden should be wise enough to encourage impatience and ambition in younger Democrats. He is justly proud of his own. "You know what he said?" a young woman named Neilia Hunter confided in 1964 to a friend about her dazzling new boyfriend. "He told me he's going to be a senator by the time he's 30. And then he's going to be president." Mr Biden was right, despite the obstacles and agonies life had in store. He won his first Senate race at 29. Before he was sworn in, he lost Neilia and their baby daughter, Amy, in a car crash. He survived two brain aneurysms, lost one son to cancer and struggled with another's addiction. He lost two presidential races. And then, when it mattered most, he won. He has good reason to believe in his capacity to confound his sceptics and beat the odds. But now he is facing an opponent no one has ever defeated, in a contest that is rigged against us all. ■

The Americas



People's Republic of China

The sleepwalkers

LIMA

Latin America is strengthening ties with China. It must consider the risks

ITS MAIN breakwater is visible from a plane at 6,000 metres (20,000 feet), a hook jutting into the Pacific from Peru's tawny coastal desert. In November, if all goes to plan, President Xi Jinping of China will inaugurate the vast new port at Chancay, 70km (44 miles) north of Lima on which Cosco, a Chinese company, and its local partner have so far spent $1.3bn.

Chancay typifies the footprint that China has stamped on Latin America in this century. Two-way trade has climbed from $18bn in 2002 to $450bn in 2022. While the United States remains the biggest trade partner for the region as a whole, China is now the biggest in South America—with Brazil, Chile, Peru and others. The Asian giant's presence is not just economic. Its ambassadors are well versed in Latin America, and speak good Spanish and Portuguese. Its diplomatic staff has been expanding. The United States, by contrast, often leaves ambassadorial posts vacant because of political gridlock in Washington. Local officials, journalists and academics are offered free trips to China. During the pandemic China sent vaccines to Latin America much faster than did the United States or Europe.

This expansion alarms people like Marco Rubio, a Republican senator who sits on the Foreign Relations Committee. He says the United States "can't afford to let the Chinese Communist Party expand its influence and absorb Latin America and the Caribbean into its private political-economic bloc". China is "on the 20-yard line to our homeland", said General Laura Richardson, the head of the US Southern Command, earlier this year.

The response in Latin America has generally been a shrug of the shoulders. Its officials argue that by acting as buyer, investor and financier of needed infrastructure, China has stepped into a vacuum left by the West. While the United States has free-trade agreements with 11 Latin American countries, it shows no appetite for more. Uruguay's centre-right government is negotiating an accord with China after its requests for one with the United States were rebuffed. France and others are blocking the ratification of a trade pact between the European Union (EU) and Mercosur (a five-country bloc including Brazil and Argentina) which took more than 20 years to negotiate.

The United States and Europe remain the biggest foreign investors in Latin America. The United States still dominates trade with Mexico, Central America and most Caribbean countries. But as China's role as a trade and investment partner grows, especially in South America, governments do not want to be forced to choose between the world's two great powers. "Our policy is hedging, to try to maintain a balance," says one foreign minister.

Some want to turn hedging into a more assertive foreign-policy doctrine of "active non-alignment", a term coined by Jorge Heine, a former Chilean ambassador who published an influential book propagating the idea in 2023. This harks back to the Non-Aligned Movement founded during the cold war by leaders of the Third World ▸▸

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(as it was then called), such as Jawaharlal Nehru of India and Sukarno of Indonesia. Mr Heine argues that the United States' embrace of protectionism under Donald Trump (which has continued under Joe Biden), and the rise of the BRICS group, which includes Brazil and China, amount to an irreversible shift in the world order. Active non-alignment, he argues, "allows nations to stand closer to one of the great powers on some issues and to another on a different set of issues".

This appeals especially to the left in Latin America, which has long chafed at what it sees as the United States' imperialism in the region (although since the 1980s the United States' policy has focused mainly on supporting democracy). Certainly, it smacks of hypocrisy when officials in Washington call for Latin America to ban Huawei because of the risk of Chinese snooping, for which they have not provided evidence. It was the United States' own National Security Agency which was revealed by a whistleblower in 2013 to have been running a surveillance programme across Latin America. It had intercepted the communications of Brazil's then president, Dilma Rousseff, and Petrobras, the state-controlled oil company. "Latin America appreciates that China doesn't have a preachy foreign policy," says Matias Spektor of the Fundação Getulio Vargas, a Brazilian university.

But while hedging may make sense for Latin America, in practice its leaders have often seemed oblivious to the possible political consequences of economic decisions. "Latin America is not thinking about China's dominance either in short-term policymaking or in the longer term," says Margaret Myers of the Inter-American Dialogue, a Washington think-tank. That certainly applies to Peru, which, besides Chancay port, has allowed Chinese state companies to acquire a monopoly on the electricity supply to the capital, Lima. The competition regulator applied minor conditions regarding the purchase of electricity from associated power generators. But no government entity considered the geopolitical implications. The threat is not so much that China could turn off the lights but rather that it has acquired a tool for applying more subtle pressure. "China is trying to create a situation in which it shapes the external environment in Latin America according to its interests," says Ms Myers.

This, of course, is what the United States has long sought to do. But there is far more consciousness of that in Latin America, and more independent thinking about how to respond. "Nobody is thinking in an organised way about Chinese investment," says the foreign minister. There is no strategic vetting of foreign investments, as happens in Europe or the United States. A state-owned Chinese firm has a clearly different relationship to its home government than, say, a private European one. There is a shortage of China experts in the region, and China is financing the work of several of the few foreign-policy think-tanks that do exist.

Both the EU and the United States are talking more about investing in Latin America. At a summit last year the EU pledged to invest over €45bn ($48bn) in the region by 2027, focusing on green energy, digitalisation and critical minerals. Shortly after, Mr Biden hosted ten countries from Latin America and the Caribbean for the first summit of an "Americas Partnership for Prosperity", backed mainly by funds from the Inter-American Development Bank. Latin American diplomats say both initiatives are largely repackaging existing programmes and lack content. More muscle might come from the Americas Act, a bill sent to Congress in March with bipartisan backing. This would offer trade benefits, infrastructure funding and investment subsidies for near-shoring to Latin America and the Caribbean.

If approved, at least this might mean that China faces a bit more competition in the region. As for Latin America, to make the most of its various suitors while minimising the risk of dependence, it needs much sharper eyes. ■

Republic of China

The cost of loyalty

Paraguay's embrace of Taiwan means it misses out on Chinese investment

When Taiwan's new president, Lai Ching-te, took office in May, his first meeting was with Santiago Peña, the president of Paraguay. It is one of just 12 countries that recognise Taiwan as the legitimate China, rather than the larger People's Republic of China.

China claims Taiwan as its territory. Formal links with other countries lend legitimacy to Taiwan's claim to statehood. Paraguay, together with Guatemala, is one of Taiwan's largest remaining friends. The country advocates for Taiwan at the United Nations, from which the Asian island is excluded.

The logic on Paraguay's side is less obvious. Francisco Urdinez of ICLAC, a Chilean think-tank, says the relationship costs Paraguay more than 1% of its GDP a year in missed investment and credit from China. Taiwan does what it can, building social housing and donating to Paraguayan presidential campaigns, but Paraguay is still missing out. Between 2010 and 2019 Beijing invested an average of $14bn annually into Latin America. Hardly a cent went to Paraguay. Its trade with China is among the lowest in the region (see chart).

The relationship runs through Paraguay's Colorado Party, which has ruled the country nearly continuously since 1948. Between 2019 and 2023 Taiwan pledged to provide Paraguay with $150m in aid. Its official purpose was to fund housing, education and transport. But people close to the government, speaking on the condition of anonymity, described those funds as discretionary. They go into what one called the government's stash of "petty cash". Its recipients feel little pressure to change course.

Prominence is another factor behind Paraguay's support for Taiwan; it gets to play a role in one of the world's most pressing geopolitical dilemmas. It also helps relations with the United States (as does Paraguay's backing of Israel in its war against Hamas). Relations have been strained. In 2023 the US Department of the Treasury put sanctions on a former president, Horacio Cartes, Paraguay's wealthiest person and leader of the Colorado Party, for alleged corruption.

The price of Paraguayan loyalty is rising. The last administration asked Taiwan for a billion dollars in investment, but did not receive it. Paraguay continues to support Taiwan. But as cross-strait tensions mount and its neighbours benefit from booming trade with China, that calculus could change.

Weak trade, no relations

Imports from China, % of total
Selected countries

Source: IMF

Psychedelics in Mexico

A different kind of help

MEXICO CITY

Mexico has become a testing ground for the therapeutic use of psychedelic drugs

OLIVIA HAS suffered with depression and struggled to form romantic attachments ever since she was sexually assaulted. Counselling and medication scarcely helped. So in September 2023 she flew to Mexico and joined a retreat that uses 5-MeO-DMT, a psychedelic compound, as a therapeutic agent. She was "terrified", but says the drug was "an opening" and that it let her body "feel what it needed to feel to start processing" her assault. She plans to return to Mexico for more psychedelic therapy this year.

Indigenous people across Latin America have long used naturally occurring psychedelics. As a result, they tend to be legal and easy to obtain in the region, not banned as they are in the United States. After *Life* magazine published an article in 1957 by Gordon Wasson, an amateur botanist, about his experience taking magic mushrooms in Mexico, hippies and rockstars flocked there. Now growing numbers of people like Olivia (not her real name) are coming to use psychedelics therapeutically rather than recreationally. Lysergic acid diethylamide (LSD) is the best known, but the category includes 5-MeO-DMT (which can be synthesised but is also found in a toad and plants), psilocybin (found in mushrooms), mescaline (cactus) and DMT (found in ayahuasca, a drink brewed from a South American vine).

Joël Brierre says people come hoping to receive relief from anxiety, post-traumatic stress disorder (PTSD) and other emotional afflictions. His company, Tandava Retreats, offers psychedelic therapies in Tepoztlán, 100km south of Mexico City. Most customers are middle-aged and are not habitual drug users. They often come when other treatment has failed.

Psychoactive soldiers

Many of those turning to psychedelics are former soldiers. Martin Polanco, a doctor who runs The Mission Within near Tijuana, says he has treated 1,000 veterans with ibogaine since 2016 (researchers do not classify ibogaine as a psychedelic, but it provides some of the same effects). Michael Higgs, a former Navy Seal, went to Mission Within in 2020 after a suicide attempt; he realised that anti-depressants and therapy weren't solving his depression and PTSD. He is a convert to the process, and now works with Mission Within.

The public's growing interest in using psychedelics to treat mental-health conditions is starting to be matched by a resurgence in attention from academics. Research on LSD started in the 1950s. But it was shut down after the United States enacted the Controlled Substances Act in 1970. Today there are several ongoing clinical trials for therapeutic psychedelics. Last year the US Food and Drug Administration issued draft guidelines for trials that use psychedelics.

Studies completed to date show promise. "I think it's unreasonable to believe that there's no signal for potential benefits of psychedelics at this point," says David Yaden of Johns Hopkins University. Researchers believe the drugs work by making the mind more flexible, helping people to see their lives and actions in a new light.

But much more research is needed. While some people experience benefits from psychedelics, others report no impact at all, and for a few the effect is negative. In June an FDA advisory panel advised the agency to reject the use of MDMA, which has some psychedelic properties, in treating PTSD because the dangers outweighed the benefits. Some studies suggest that psychedelics may be not notably better than standard medicines.

Psychedelics are "another thing in the toolbox rather than a miracle cure", says Rosalind McAlpine of University College London. But the potential benefits arrive in a very different manner to those of conventional medications. Robin Carhart-Harris of the University of California, San Francisco points out that psychedelics often have an effect after only a single dose, unlike, say, anti-depressants.

Experiences in Mexico vary. Unlike ibogaine, which puts stress on the heart, psychedelics don't tend to have adverse physical effects. But they can have mental ones. Mr Brierre screens users in advance for conditions such as psychosis and does "integration"—read therapy—sessions afterwards. Mr Polanco monitors his patients' hearts. But head to the beach in Tulum in southern Mexico and you will find ice-cream sellers offering "bufo", 5-MeO-DMT in its natural form, derived from a toad found in the Sonoran Desert. "A concert or party setting is different from a session in someone's living room," says Mr Yaden.

State-sanctioned hallucination

Mexico may soon become the first country to regulate the therapeutic use of psychedelics. Alejandra Lagunes, a senator, believes that innovative therapies are needed to deal with mental-health issues, and is pushing for rules governing the use of magic mushrooms. (She also wants to recognise and protect psychedelics' indigenous roots.) She says she has seen a "180-degree change" in lawmakers' interest in the past two years. Cofepris, Mexico's regulatory body for drugs, is also looking into psychedelics.

The United States is likely to be more resistant to adopting psychedelic therapy than Mexico. But the lobby is growing. One organisation, Veterans Exploring Treatment Solutions, now offers to pay for soldiers' trips south. If ever there were a group of people who could change minds north of the border, it's them. ■

A trip down south

Middle East & Africa

Israel v Hizbullah

Dangerous sparks

JERUSALEM AND TEL AVIV

A war between Israel and Lebanon would set the region ablaze

A WAR IS looming in Lebanon. For months Israel and Hizbullah, an Iranian-armed Shia militia, have traded drones, rockets and missiles (see charts on next page). Northern Israel has been blasted and depopulated: 70,000 people have been displaced. More have left southern Lebanon. On July 3rd Israel killed a senior Hizbullah commander; the group responded with a heavy rocket barrage. Several countries, including America, are telling their citizens to leave Lebanon. Israel's leaders talk of war as though it is inevitable. It would be the most intense conflict in the region in decades—a calamity for Israel and a disaster for Lebanon.

There are still ways out. American and European diplomats continue to shuttle between Israel and Lebanon, hoping, with less and less optimism, to get Hizbullah to withdraw 7-10km away from the border. On July 2nd the group said it would stop firing if there was a truce in Gaza. Even then, the result would be a tenuous peace, with the threat of cross-border raids by Hizbullah dissuading many Israelis from returning.

If Israel decides to launch a war to weaken Hizbullah and push it north, it might involve a limited ground invasion of southern Lebanon, an area that it occupied until 2000. That alone would be a major military undertaking. In 2006, when the two sides fought a 34-day war, Hizbullah squads used hundreds of anti-tank weapons to blunt Israeli armoured assaults, shocking the Israel Defence Forces (IDF).

In the 18 years since, both sides have learnt from that experience. In 2006 the Israeli Air Force (IAF) attacked about 100 targets a day. Now, officers boast, they could hit over 3,000. Hizbullah has been weakened over the past nine months; it has lost nearly 400 fighters and much of its military infrastructure in the south. Iran does not believe the group is ready for a big war, say people in Western intelligence.

Others in the IDF warn of complacency. Hizbullah is far better prepared for an Israeli ground invasion of Lebanon than Ukraine was against Russia in February 2022, says an officer who has studied the Lebanese group. The IDF would advance, but probably more slowly and at far higher cost than in the last war. Hizbullah will probably "absorb the shock", says Khalil Helou, a retired Lebanese general, before striking Israel's flanks and rear with "guerrilla tactics", including from an extensive tunnel network, built with help from North Korea.

There have been four big changes since 2006. One is that Hizbullah has acquired a wide range of Iranian-designed kamikaze drones. Many of the IDF's tanks and armoured vehicles now have active-protection systems that can counter anti-tank missiles. But the drones target weaker points on the top of vehicles.

The second change is the development of Hizbullah's ground forces. After 2006, younger Hizbullah fighters, observing both Iran's Revolutionary Guards and Islamic State in Syria's civil war, argued that their own leaders depended too much on ▸▸

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fixed fortifications, which could be struck or bypassed. The response was to build up its elite Radwan force, intended to strike as far as 20km into Israel. Third, the group's experience fighting in Syria alongside the Russian air force taught it the value of more and heavier explosive warheads.

Finally, that firepower has also become more accurate. Hizbullah now routinely uses small quadcopters to identify immediate targets for rockets. It has also been sending reconnaissance drones to identify targets and, one or two days later, strike drones to attack them "very accurately", says the officer. Positions that the IDF once thought were well camouflaged have repeatedly been found and hit, he says. "The only reason we don't have huge casualties in the north," he adds, "is that our forces remain out of sight." If the IDF had to go on the offensive, that would change.

Then there is the matter of scale. Israeli generals talk optimistically of a limited ground manoeuvre to capture a "security zone" to prevent Hizbullah from firing on Israeli border villages. In 1982 the IDF needed seven divisions to invade Lebanon. Four divisions were used in the smaller war of 2006. At present, the IDF is stretched thin in Gaza and the West Bank. At least one of the units sent to training bases in the north for exercises has been sent back to Gaza. "I don't see where they're going to bring enough soldiers from," says one reservist who took part in those drills.

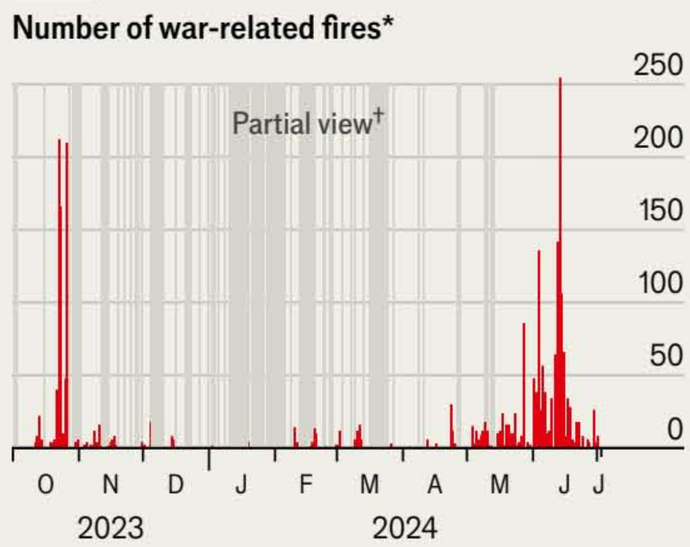
The ground war is only half the problem. Even before Israeli troops cross the border, Israel will almost certainly launch air strikes with the aim of eliminating as many of Hizbullah's missile launchers and stockpiles as it can. Civilian casualties are inevitable: many of the launchers are in villages. It will also lead to further escalation, as Hizbullah will have an incentive to launch its missiles towards central Israel before they are destroyed. If that occurs, Israel is likely to escalate with another two steps: striking political targets such as Hizbullah's headquarters in cities; and hitting Lebanon's civilian infrastructure.

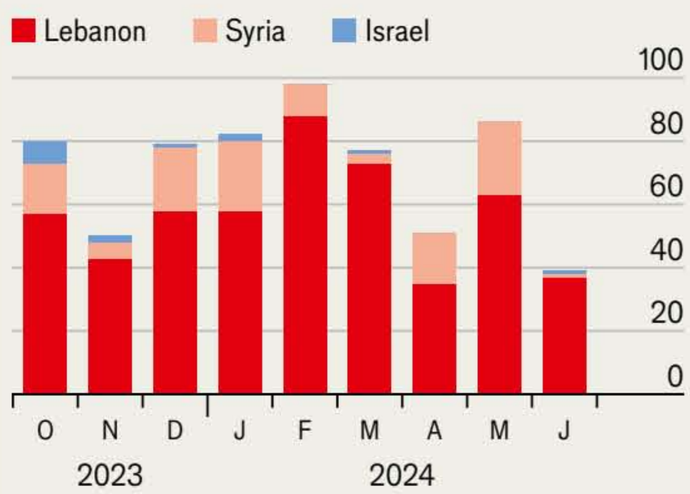
For now, Hizbullah's rocket strikes are largely confined to military targets in northern Israel. In the event of a ground invasion of Lebanon, it would probably expand the scope and intensity of that campaign. In 2006 the group had around 15,000 rockets and missiles, most of them unguided with a range of less than 20km, well short of reaching the northern Israeli city of Haifa. It fired around 120 a day, killing 53 Israelis and damaging 2,000 buildings. The next war will be far more intense. Hizbullah now has more than 120,000 rockets and missiles. Many could reach Tel Aviv and beyond with precision guidance.

The effects are described in an unpublished report by over 100 experts and Israeli former officials convened by Reichman University in Herzliya and finalised in October. It warns that Hizbullah might fire 2,500 to 3,000 missiles a day, 25 times the rate of 2006, for three weeks running. That would be the largest sustained missile barrage in history. Even if American destroyers offshore were to take out larger missiles, some of Israel's defences would be swamped, resulting in heavy casualties. Some estimates say tens of thousands.

Danger zone

Bordering areas of Israel, Lebanon and Syria





*Detected by satellite and assessed by statistical model
†Cloud cover over 50%
‡Shelling/artillery/missile attacks and drone strikes
Sources: NASA; ACLED; *The Economist*

Reality dawns

The Israeli public is beginning to grapple with what it would mean, in practice, to face that volume of missiles. On June 20th Shaul Goldstein, the head of Noga, a government-owned power company, cautioned that Hizbullah strikes on the power grid could have devastating consequences. "The bottom line is that after 72 hours, it is impossible to live in Israel," he said. "We are not ready for a real war. We live in a fantasy world." Israel's energy minister hit back, insisting that long blackouts were "an extreme scenario with low probability".

Undoubtedly the IDF would seek to curb the missile threat by tackling the problem on the ground. It has already begun doing so. In February and in May the IAF attacked buildings in Lebanon's Bekaa Valley identified as guided-missile production sites. Depots and launchers are much harder to find and hit, however. Since January Hizbullah has moved many of its most important weapons out of the south to the Bekaa Valley and Faraya, a mountainous region, says another Western intelligence source, making them even harder to target. Its air defences have also improved, which might limit the IAF's freedom of manoeuvre: the group has shot down seven large Israeli drones since October 7th.

If Israel cannot stop the missiles before they launch, it will rely on deterrence by punishment. Should it be forced into a war with Hizbullah, Israel's aims, writes Yitzhak Gershon, who was deputy commander of Israel's northern command in recent months, will be "to destroy the state of Lebanon to its foundations". Gaza would look like "paradise in comparison", he adds. "It is important for me to make it clear to our enemies," declared Eli Cohen, Israel's energy and infrastructure minister, on June 20th. "If there is a power outage lasting for hours [in Israel], in Lebanon there will be a power outage for months." Mr Helou retorts that Lebanon's infrastructure is already in such a dreadful condition that this might hardly be a deterrent.

At the outset of a war each side will also have to make tricky judgments over how far their patrons will back them. Israel is confident that America will provide a degree of air and missile defence, as it did against an Iranian barrage in April. What is less certain is whether it would play any offensive role, for instance striking coastal missile batteries that target warships.

Iran wants to avoid a direct clash with America or Israel. It would almost certainly encourage drone and missile attacks by proxy forces in Syria, Iraq and Yemen. Israeli assessments also suggest that Iran might intervene directly, probably through long-range missile strikes, if Israel were to target Hizbullah's leadership.

The point of any war for Israel would ultimately be to remove the sense of dread hanging over northern Israel that is preventing citizens from returning. After Hamas's attacks of October 7th Israel cannot tolerate the notion of such a threat on its borders. But Israeli experts are sceptical that this is presently achievable at acceptable cost. The army is tired from Gaza and needs at least six months to prepare for another war and to let its political leaders repair their ties with America and other allies, says a veteran Mossad bigwig. That is one reason why he, like so many other ex-spooks and generals, wants a deal.

The IDF could create a 10km buffer zone in Lebanon, suggests Tamir Hayman, a recent Israeli military-intelligence chief. But the result would be an exhausting war of attrition, much like the one it waged through the 1990s. "If you want to create a change, you need to destroy all of [Hizbullah's] system," he says. "And right now I think it cannot be achieved." ■

Africa's new nationalists

The geopolitics of the Sahel's coup belt

DAKAR

The strongmen who want to reshape west Africa and its relations with the world

THE WEST'S relations with countries in the Sahel seemed to have hit rock bottom in May when Niger ordered America to withdraw its forces by September—having already booted out a French counter-terrorism mission—and welcomed Russian military advisers. Then even this bottom fell out. Last month Niger, which supplies about a quarter of Europe's uranium, revoked the mining licence of France's state-owned nuclear-fuel company. Many fear the country will now hand over the rights to one of the world's biggest uranium mines to a state-owned Russian firm.

Niger's turn against the West comes amid what many in French-speaking west Africa are calling a second "independence". It is being spurred by a new generation of nationalists who have taken power in former French colonies from Senegal to Chad and the three core countries of the Sahel: Burkina Faso, Mali and Niger. They have done so amid strident appeals to sovereignty and autonomy, in language reminiscent of Ahmed Sekou Touré, independent Guinea's first president, who told Charles de Gaulle in 1958: "Guinea prefers poverty in liberty to riches in slavery". Several have strengthened ties with Russia. All want a new relationship with the West. "'Sovereignty' is the big word in the region these days," says Ibrahim Yahaya of Crisis Group, a Brussels-based think-tank. "It has become almost like a religious dogma."

Most prominent among the new nationalists are military leaders from the Sahel trio, where Western forces had been helping the previous governments battle jihadists linked to Islamic State and al-Qaeda. The wider group includes Bassirou Diomaye Faye, Senegal's newly elected president, and Lieutenant Colonel Mamady Doumbouya, Guinea's leader since a coup in 2021. "The era of the old Africa is over," Colonel Doumbouya told the UN in New York last year. "This is the end of an unbalanced and unjust era where we had no say. It is time to take our proper place."

The new nationalists portray themselves as the modern embodiments of the anti-colonial struggle. Colonel Doumbouya has set about rehabilitating the divisive memory of Sekou Touré, for instance by renaming Conakry's airport after him. Burkina Faso's 36-year-old Captain Ibrahim Traoré, who grabbed the presidency in a putsch in 2022, styles himself as the reincarnation of Thomas Sankara, a socialist leader who was assassinated in 1987.

Some scepticism is in order. Coup leaders nearly always claim to be patriots, and often turn out to be self-serving or corrupt. Abdourahmane Tchiani, the new leader of Niger, launched a putsch against a democratically elected government when he was about to be sacked as head of the presidential guard. There is no evidence that any of the new nationalists have curbed the graft they all complained about.

Demands for greater sovereignty partly reflect security concerns. Instability continues to spread across the Sahel more than a decade after France dispatched troops to Mali to put down an Islamist insurgency. With a record 11,643 fatalities linked to jihadist violence in 2023, the Sahel is now the global centre for terrorist attacks. Beginning in Mali in 2020, and followed by Burkina Faso and Niger, the Western-trained local soldiers who have seized power have blamed French troops—who numbered more than 5,000 in the region at their peak four years ago—for failing to crush the insurgents. Aggrieved local populations appear to agree.

Since 2022 French troops have withdrawn or been expelled from almost the entire Sahel. The last holdout is Chad. But sentiment is changing there, too. Mahamat Idriss Déby is thought to be considering an end to a French military presence dating back to 1899. Senegal has suggested that France should recall its troops and Mali has expelled Danish and UN peacekeepers. Burkina Faso, meanwhile, has hired Russian mercenaries. The targets of its "anti-colonial" invective now include America, the EU and NATO, says a Western diplomat based there.

United by a common hatred

After army officers in Niger toppled their elected government last year, they kicked out French troops. Less than a year later, the new junta told America to withdraw its forces and close its bases, which had been used to gather intelligence for counter-terrorism operations. Niger has followed Mali and Burkina Faso in signing a military co-operation agreement with Russia. (It has also cosied up to Iran, which may have eyes on Niger's uranium.) It is not hard to see the appeal of Russia, whose mercenaries provide regime protection and have few scruples about human rights or corruption. Chad's Mr Déby has threatened to expel American forces and replace them with Russian ones.

Resource nationalists

Another front is economic. For decades the market share of French businesses in west Africa has been dipping. But some of France's biggest firms—for instance Orange, a telecoms giant—remain highly visible. They have often become targets of popular anger. New mining codes in Mali and Burkina Faso have raised the states' minimum shareholding. In Guinea, home to some of the world's richest iron and bauxite reserves, the regime has revoked more than 100 foreign mining licences, most of them belonging to Chinese firms, and introduced "local content" requirements for contractors on mining projects. Most notably, it has renegotiated licences for a $20bn iron ore, rail and port development, pushing a consortium of Chinese state-owned firms into a joint venture with Rio Tinto, in a deal that guarantees a 15% stake for the state.

In Senegal Mr Faye has called for a "rupture" with the existing model of relations with the West and promises to pursue agricultural self-sufficiency. "If you can't produce what you eat, you can't say you are free," says Abdourahim Kebe, a bigwig in the ruling party. Mr Faye also plans to review oil and gas contracts with multinationals, which he claims are not in Senegal's interests. "We won't accept being a servant any more," says Mr Kebe.

A third front is cultural, with calls to shake off the allegedly neocolonial grip on languages and customs. Senegal's ruling party is said to be considering dropping French as its official language. Mr Faye's allies talk of reducing French influence in education. In Burkina Faso the prime minister recently urged his citizens to resist Western-imposed "cultural alienation".

Many of west Africa's nationalists admire Paul Kagame, Rwanda's strongman, ▸▸

for his hard-nosed dealings with the West, economic nationalism and aversion to democracy. Babacar Ndiaye of WATHI, a think-tank in Senegal, argues that his model appeals "because what is important for Kagame is what benefits Rwanda".

Though they may evoke the late Sankara—who, whatever his faults, promoted the rights of women—the new generation are not social progressives. Senegal's prime minister, Ousmane Sonko, used a recent press conference with the far-left French opposition leader, Jean-Luc Mélenchon, to criticise gay rights and gender equality.

Many leaders are clear-cut authoritarians. In May Mali's junta said it would seek to delay its "transition" to democracy. The military leadership in Burkina Faso followed suit two weeks later, declaring Mr Traoré eligible to contest elections in 2029. In Guinea, Colonel Doumbouya once promised an end to the era of "personalised" power. He has repeatedly told foreign officials that he will leave office in 2025. But in Conakry his image is everywhere. "Doumbouya is the alpha and omega of the state," says Sanso Barry, a journalist.

Repression is intensifying. Journalists have been locked up or forced into exile. In Guinea, dozens of protesters have been gunned down. Rights groups accuse Burkina Faso's army of massacring civilians.

The new nationalists say they are pan-Africanists. Mr Faye has already renamed the foreign ministry the "Ministry of African Integration and Foreign Affairs" and toured regional capitals. "We want the pan-Africanist view to spread," says Dame Mbodj, a trade-union leader and close ally.

All are critical of the Economic Community of West African States (ECOWAS), the regional bloc. Mali, Burkina Faso and Niger have left it, forming the rival Alliance of Sahel States (AES), a defence pact and putative confederation. Chad is thought to want to join. But Guinea's junta, which alone is strengthening its ties with Western governments, wants nothing to do with it. Colonel Doumbouya is a former French legionnaire married to a Frenchwoman; though he leads a former Soviet ally, it enjoys friendly ties with France and America as well as Russia and China. "There is a lot to be gained by being the only holdout," notes a Western diplomat. Though Mr Faye of Senegal sounds sympathetic to the AES, he wants its members to return to ECOWAS.

Some want to work with neighbours to establish a new common currency to replace the France-backed CFA franc. But the region is riven by trade spats and disputes over resources. Sanctions imposed by ECOWAS on Burkina Faso, Mali and Niger (since partially lifted) are one reason why "interstate tensions are growing to a degree we haven't seen in the region for a long time", says Crisis Group's Mr Yahaya.

West Africa's new nationalism is inchoate, sometimes contradictory, and vulnerable to authoritarian drift. But it would be a mistake to assume that its standard-bearers are unbending ideologues destined for Russia's orbit. "As much as these leaders aim to assert their sovereignty, they are not looking to make enemies," says Cameron Hudson of the Centre for Strategic and International Studies in Washington. Instead, their approach to the outside world is to look for the best deal. Niger's junta spent months trying to negotiate a new military agreement with America before it cut ties. Officials in Senegal and Guinea talk of striking "win-win" agreements with foreign governments and firms. Africa's new nationalists are ruthless and transactional—and unmistakably the product of an increasingly multipolar world. ■

EU climate policy and Africa

Unintended consequences

GELAN

New EU environmental rules may shut African crops out of European markets

SACKS OF COFFEE are piled high in an Ethiopian warehouse, dwarfing the workers who scurry between them. "Our farmers' lives are dependent on this coffee," says Dejene Dadi Dika, the general manager of the Oromia Coffee Farmers Co-operative Union, which has more than half a million member farms. He is worried about a new EU deforestation regulation, which requires that every bean sold in Europe be traced to the field it came from. It costs the co-op about $4 to geo-locate each farm, and he wonders who will pay.

With the stroke of a pen, the EU is rewriting trading practices the world over. It wants firms bringing cocoa, coffee, rubber, soya, palm oil, wood or cattle products into Europe to prove that those commodities did not come from land which was deforested after 2020. An importer breaking the rules can be fined up to 4% of its turnover in the EU. Millions of small farms will need to be geo-located and supply chains redesigned. It is a race against time before the rule kicks in at the end of this year.

Environmentalists say it is high time the EU took responsibility for its voracious consumption, which has plundered and polluted the world. Its imports are associated with the deforestation of 1,905 square kilometres a year beyond its borders, more than the area of Greater London, reckons Trase, a non-profit group that tracks commodity trade. A third of that comes from cocoa, a fifth of it from palm oil.

But exporting countries warn they do not have enough time to prepare. The new rule affects farmers everywhere, from Brazilian cattle ranches to Indonesian plantations. On Africa's small farms it will be especially hard to implement. "Everybody's trying to map their farms but they just can't do it fast enough," says Robert Byaruhanga of the Uganda Coffee Federation, an industry body. In Ethiopia, where coffee makes up 37% of exports, a local trader says it is impossible for most farmers to meet the deadline. Some will be shut out of European markets not because they are cutting down forests, but because they cannot prove compliance.

In Ethiopia, a 10% increase in the cost of exporting to the EU would shave 0.7% off GDP, reckons ODI, a think-tank in London. The EU has pledged just €70m ($75m) to help countries reduce deforestation. A spokesperson says that support for small farmers is a priority.

At the root of the problem are messy, opaque supply chains. In countries like Uganda and Ivory Coast, coffee and cocoa are traded through layers of middlemen, jumbling together beans from different fields. Multinational buyers have been happy to keep an arm's-length relationship with farmers. Only lately have they taken an interest in traceability, mostly in cocoa, nudged by the need to stamp out child labour and offer consumers feelgood stories.

An alternative approach is suggested by David Browning of Enveritas, a non-profit outfit. His team uses satellite imagery to identify fields where trees have been cut down, allowing governments to stop cultivation there. Several countries, including Ethiopia and Uganda, are pursuing this model, which would not require geo-locating every farm. It remains to be seen whether it will pass muster with the EU.

The EU's climate policies face pushback elsewhere. Last year it began a pilot programme to eventually levy imports of some industrial commodities, such as aluminium, to reflect the carbon price set by its own emissions-trading scheme. South Africa has called it "coercive". The EU cannot please everyone, especially when dirty industries lobby against change. But if it is serious about going green, it must help poor countries with the transition, too. ■

Europe

France's parliamentary election

Into the unknown

BEAUCAIRE AND PARIS

Le Pen's hard right looks set to dominate, if not control, parliament

THE FRENCH are heading to the polls, and into the dark. For the first time in the country's post-war history, a final parliamentary vote on July 7th could still enable the hard right to enter government. But after tactical party arrangements following first-round voting on June 30th, its chances of securing a majority by itself have receded. Voters may instead give no political bloc control. Far from settling France's political divisions, Emmanuel Macron's surprise decision to call a snap election looks likely to usher in a period of deadlock, apprehension and instability.

One of the few certainties about this vote is that it is shaping up to be a disaster for Mr Macron's centrist project. When he was first elected president in 2017 at the age of 39, on a wave of pro-European optimism, youthful energy and political renewal, Mr Macron vowed to "do everything" to ensure there was "no longer any reason to vote for the extremes". Now, Marine Le Pen's National Rally (RN) and friends are on course to become the biggest parliamentary bloc. After coming top in 297 out of 577 constituencies in first-round voting, the RN could triple its seats from 88. It may even come close to securing the 289 needed for a majority. Today, Mr Macron represents incumbency; youth is embodied by Jordan Bardella, Ms Le Pen's 28-year-old candidate for prime minister.

The drift away from the centre is matched on the left. The New Popular Front (NFP), a four-party alliance made up of Jean-Luc Mélenchon's Unsubmissive France, Socialists, Greens and Communists, looks set to form the second-biggest bloc. An unholy alliance that reaches from anti-capitalists and Trotskyists on the left to moderate Socialists and Greens, it came top in 159 constituencies in first-round voting. With a promise to raise the minimum wage by 14%, restore the wealth tax and back the recognition of an independent Palestinian state, it got the youth vote, and did well in a broad belt around eastern Paris and its multicultural *banlieues* (suburbs).

Mr Macron's centrist alliance, Ensemble, is bracing for calamity. It could lose around half of its 250 seats, having topped voting in just 70 constituencies. These were concentrated in the west of Paris and its smarter suburbs, as well as in western parts and Brittany. France, no stranger to revolution, seems now to be gripped by a form of regicide. Despite a strong record on job creation and business success, among other things, Mr Macron remains a remote figure, blamed for all ills. Voters glimpse a chance to punish him, and are seizing it. Young people, in particular, have deserted centrism en masse. Just 9% of 18- to 24-year-olds voted for Ensemble in the first round, next to 48% for the left-wing New Popular Front and 33% for the RN.

How did it come to this? The small town of Beaucaire, on the river Rhône inland from the Mediterranean, hints at an ▸▸

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answer. Its medieval fort, fringed by pine trees, overlooks terracotta-tiled roofs and the cylinders of a sprawling cement factory. By the canal, a smart new hotel is due on part of the site of a bottling plant. Pots of bright petunias line one narrow street; on others, shops are boarded up. The poverty rate is twice the national average. The town hall, decked with three French *tricolore* flags and not one from the European Union, has for the past ten years been run by the RN, under its mayor, Julien Sanchez.

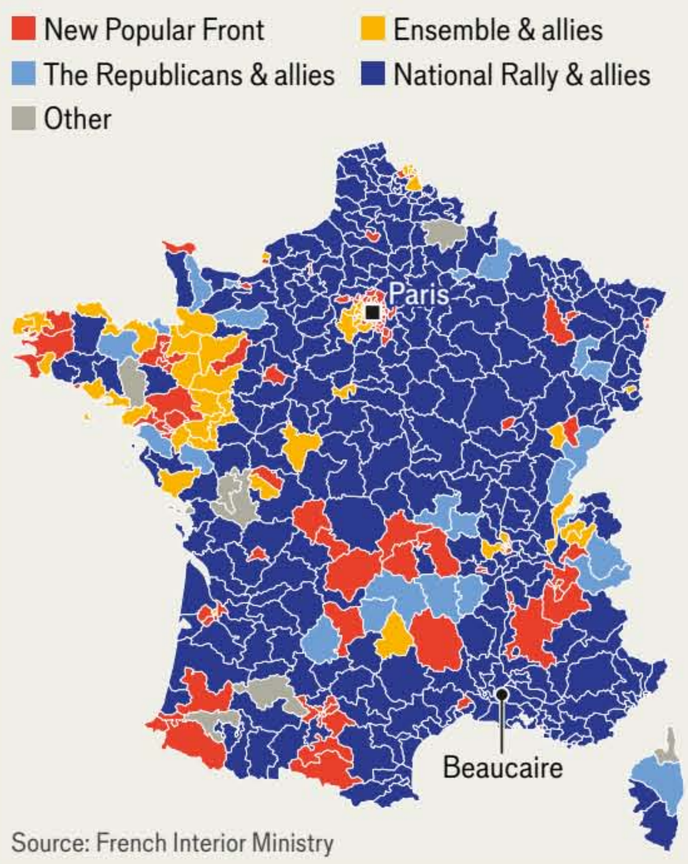
"He's popular here," says Bilal, a bus driver, who adds that the town is not crime-ridden like nearby big cities. A young assistant at a halal butcher credits the mayor with the bright street flowers. He thinks that the RN is doing well "because of Bardella" and his TikTok videos. A Franco-Malian says that he does not experience racism in the town, but would not like "to be Arab". He likes the fact that the town hall organised "traditional" festivals, including a recent one featuring *provençal* dancers in lace shawls.

Mr Sanchez puts his longevity down to the "politics of proximity". He is often on the streets "listening to people", he says, "whatever their origins". The mayor has smartened up the town's little railway stop, and secured more frequent trains. There are afternoon dances for pensioners, and festivals in the summer for locals. Mr Sanchez mixes this with unapologetic identity politics. The mayor tried to stop schools serving an alternative to pork in the canteen, and at Christmas installs a nativity scene in the secular town hall. "French voters are angry because they feel that they are not taken into account and that their problems are not acknowledged," says Mr Sanchez. Today, he argues, people vote for the RN "because they know we understand their problems."

Across the surrounding *département* of Gard, the RN topped first-round voting, as it did along most of the south coast. The normalisation of Ms Le Pen's party is patchy. It dropped a candidate this week after a photo emerged of her wearing a Nazi cap. But its town halls have given it some credibility. And its mix of identity politics and populist economics—a new wealth tax, early retirement, and lower VAT on energy bills—has broadened its base.

Going national

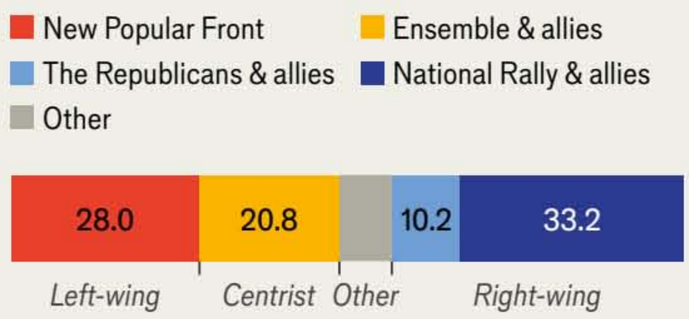
France, first round of legislative election 2024, June 30th, leading party in each constituency



Source: French Interior Ministry

Macron's meltdown

France, first round of legislative election 2024, June 30th, vote share, %



Source: French Interior Ministry

After 132 NFP qualifying candidates and 82 from Ensemble stood down in different constituencies between voting rounds, in order not to split the anti-RN vote, Ms Le Pen's chances of securing a majority have narrowed. Even without one, though, Mr Macron will be politically obliged to invite the biggest bloc to try to form a government, says a presidential adviser. Ms Le Pen this week suggested that, if the party falls short of seats, she may still be able to lure away a few more from the right to make up the numbers.

Even if the RN's efforts fail, France remains in uncharted territory. There is talk on the moderate left and centre about the idea of a "plural government" or "parliamentary coalition". This would not be a formal coalition between the NFP and Ensemble; the two blocs hate each other, and centrists could not work with Mr Mélenchon's crew. But if, as is possible, the NFP falls apart, some politicians hope to pull together a force that reaches from the Socialists and Greens on the left to the centre-right rump Republicans. Yaël Braun-Pivet, the centrist outgoing president of the lower house, says the initiative has to come from parliament. "We've got to get away from the framework of the NFP," argues Carole Delga, Socialist president of the Occitanie region. "The party machines are no longer what the French want."

The trouble is that the numbers will not add up without a big chunk of the hard left, and the politics would be complex in a country with a weak culture of political compromise. Voters who hope to see the Paris elite booted out may simply regard such a coalition as a betrayal. France is heading, it seems, at full speed and in apprehension, into the unknown. ■

Ukraine

In a black hole

KYIV

Ukraine's war has created millions of broken families

According to a survey conducted this year by the International Rescue Committee (IRC), an organisation that supports refugees all over the world, an astonishing 74% of Ukrainians report being separated from a close family member because of the war.

Anna Gorozhenko, a historical novelist, and her daughter, Yara, then just seven, fled the Russian advance and left their home in a Kyiv suburb in February 2022, just after the war started. Under martial law Ukrainian men between the ages of 18 and 60 cannot leave the country except by special permission; and so they had to leave Anna's husband, Alex, behind.

They found sanctuary in the English city of York, where a local family took them in. Anna was able to find a job; Yara thrived at school with a new set of besties. Over time, Anna saw the marriages of many of her refugee friends fail; but Yara, still frightened, refused to go back to Ukraine, even for a visit. So Anna made the difficult decision to return to Ukraine last September, leaving Yara in Yorkshire, in a small house she rented in the village of Poppleton, in the care of her mother-in-law, Yara's grandmother, who left her home in Ukraine to take her place.

Out of a pre-war population of around 40m, some 6m Ukrainians, mostly women and children, have taken refuge abroad. Another 3m or more have been internally displaced by the fighting, some since 2014 ▸▸

The real cost of war

when the war in the Donbas began and Russia illegally annexed Crimea. Elderly parents and siblings are cut off in occupied territories; mothers and fathers serving in the army are deployed for months at a time. As the army has been stretched thin with new Russian offensives, home leave is often deferred.

What Ukrainians have begun to call "the Big War" is now in its third year. For families like Anna and Alex and Yara, there are awkward decisions to make, an often impossible tug between geography and financial considerations, and between children's education and well-being and love.

Anna, now back in Kyiv, is not sure she made the right decision. Yara has changed over the seven months she hasn't seen her. "She doesn't cry any more," says Anna. "I think she is trying to be strong. She feels like she has to be the head of the family now, to take care of her grandmother, to translate for her." Anna throws herself into her work; for Alex it is also difficult. "At seven Yara was a little girl, now she's almost a teenager." When her father calls, Yara often says she is too busy to talk.

There are hundreds of thousands of similar stories. For the many fathers separated from their children, years of video calls don't make up for the lack of physical, day-to-day contact.

Oleksiy (he prefers that his last name not be used), a kitesurfing coach in Kherson before the war, was initially glad that his partner, from whom he was separated, took his young son, Yan, now six, to Chicago. But he has not seen him for almost three years. "I see him growing up through the phone," says Oleksiy. "He speaks English now. I make up games for him, like a Spiderman university where he has to complete certain tasks, like a certain number of jumps. But it's a struggle. It's a black hole. It's the biggest pain, more than the pain from being under occupation, the war or anything else."

Serving soldiers can travel outside the country, but the permissions required are often complicated to get. Denys Kulikov, a military psychologist, says that, after the fear of death, family separation is the second-most-common cause of psychological distress. "It affects soldiers' morale: they are unhappy, sad, depressed," even suicidal. He has seen cases where soldiers are "so upset that they haven't been able to see their child for so long and they can't leave the country, that they become so angry at not getting leave, that they stop wanting to obey orders."

At the front, soldiers try to maintain relationships as best they can via intermittent internet connections to their families. Mr Kulikov says fathers often make videos of animals, trench cats, a unit's mascot dog, even birds and mice, to bring a little lightness to their messages. Often, he says, single mothers serving in the army quit and go home. (Single parents are allowed to demobilise; and females make up 30% of the army.) It's a painful irony, he says, that "the main motivation for a soldier is to protect his family and provide for his family, and at the same time, the main problem for them when they serve is that they can't see their families."

Women are increasingly travelling back and forth from their host countries and Ukraine to visit husbands, relatives and homes, says Joanna Nahorska, a spokesperson for the IRC. Some 4.6m of those who fled in 2022 may now have returned permanently. Ukrainians in the EU come under its temporary protection directive, which generally gives them access to the same rights and services as EU citizens. Though this has been renewed regularly and is valid at least until March 2026, more durable solutions have not been forthcoming; it is a life in limbo. It makes an impossible choice, says Ms Nahorska, "Do you continue to be abroad, to live in cognitive dissonance between two countries, or do you try to go back and live a normal life, amid the blackouts and air alerts?" ■

Tourism in Greece

Send in the Turks

KUSADASI AND SAMOS

A cheering sign of reduced tension in the eastern Mediterranean

FOR YEARS Ahmet Bayrakli could look at the Greek island of Samos only from his hometown of Kusadasi, on Turkey's western coast. Despite the tiny distance between them—1,650 metres at the closest point—he was unable to travel there without getting a full Schengen visa, an increasingly difficult process for Turks. Since April, however, the doors of ten Greek islands, including Samos, have been flung open with a special "gate" visa that lets Turks stay for seven days. Mr Albayrak is one of tens of thousands who have taken advantage.

"It was ridiculous before—this is our neighbour," he said, as he joined the queue for the morning ferry, which crosses from Kusadasi to Samos Town, the island's capital, in 90 minutes.

The gate visa, agreed to at the end of last year, is the fruit of warming relations between Athens and Ankara. For years, the two countries have been locked in rows over maritime borders in the Aegean, gas rights in the Eastern Mediterranean, refugees, and President Recep Tayyip Erdogan's enthusiasm for turning Turkey's Byzantine-era churches into mosques.

None of those disputes has disappeared. Rather, both Mr Erdogan and Kyriakos Mitsotakis, the Greek prime minister, have decided that there is more to be gained by being friends. "The cost of geopolitical tension was considerable," says Galip Dalay, a fellow at Chatham House, a think-tank in London.

When they meet in person, Greeks and Turks tend to get on. Music, cuisine and drinking cultures on either side of the Aegean are almost identical, and the Samian dialect of Greek is scattered with Turkish words. Political rows and the pandemic hurt tourism businesses on both sides, as they rely on traffic between the islands and the Turkish coast for much of their custom.

Doing their bit

Turkey's stubbornly high annual inflation rate, which hit 75% in May, also means that Greek holidays, once a lot pricier than Turkish getaways, are now economically more attractive. Turks still have to pay a lot to get a gate visa, however: €60 ($65), only slightly less than a full Schengen visa, and they have to take out travel insurance to cover their time in Greece. Not all Samos businesses believe they will see the benefits. As one Samos artisan, selling ceramics from his village workshop, put it, "The Turks are coming, but they don't have money."

Green policies

The EU's role as heat-pump pioneer

BERLIN

But the union is falling behind

FEARING FOR her reappointment, Ursula von der Leyen, boss of the European Commission, the EU's executive arm, soft-pedalled over unpopular green policies in the run-up to the European Parliament elections on June 9th. Mrs von der Leyen had proclaimed in 2019 that the EU Green Deal, the union's strategy to achieve net-zero carbon emissions by 2050, was the EU's "man-on-the-moon moment".

But in February she blocked a draft law to slash the use of pesticides in farming, and loosened some of the environmental strings tied to the subsidies of the EU's common agricultural policy. Still more striking was her decision to delay publication of a heat-pump action plan that had been scheduled for early in the year to an unspecified time after the elections.

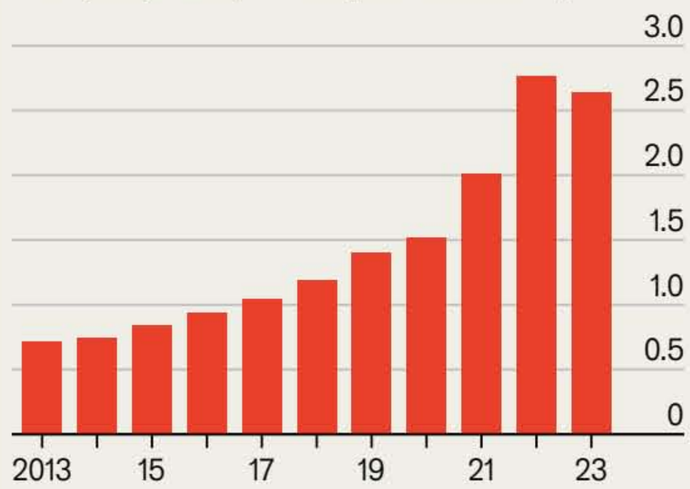
The postponement in releasing a plan considered key to the success of the Green Deal has dismayed many EU policymakers. According to Eurostat, the EU's statistics agency, about half of all energy consumed in the EU is for heating and cooling, and more than 70% of that still comes from fossil fuels, mostly natural gas. Buildings account for about 35% of energy-related greenhouse-gas (GHG) emissions. And around four-fifths of energy consumption by residential buildings is used for heating them and supplying their hot water.

EU leaders support decarbonising heating—with varying degrees of enthusiasm. The switch from boilers to heat pumps, which work rather like refrigerators in reverse, can be expensive (the price of heat pumps is two or three times that of gas boilers) and disruptive (some buildings need extensive renovations to install heat pumps) which is why it is unpopular with many voters. But crucially they run on electricity rather than gas or oil—and the electricity can come from green sources. Without a big push for cleaner heating, the EU is liable to miss its goal of 2050. Fifteen member states wrote to the commission in mid-May to lament the postponement of the launch of the heat-pump plan.

The lack of clear and consistent policies has confused people and turned residential heating in several European countries into a political issue, particularly in Germany and Italy. Last year a proposed German law that would have banned new oil and gas boilers and subsidised heat pumps powered by low-carbon or green electricity was decried as the *Heizhammer* (the heating hammer) by tabloids and the AFD, a far-right opposition party. The government caved in. The law's watered-down version says new heaters must run on at least 65% renewable energy.

Keep on pumping

Heat pump sales, 14 European countries*, m



*Austria, Belgium, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Poland, Portugal, Spain, Sweden, Switzerland
Source: European Heat Pump Association

Italy bungled the implementation of its generous subsidies to promote heat pumps. In 2020 Giuseppe Conte's government launched the popular Superbonus 110% initiative that entitled homeowners to a tax credit of up to 110% on the cost of upgrading their property through the installation of heat pumps or solar panels. Last year Giorgia Meloni, the hard-right prime minister, scaled this subsidy back to a minimum because of spiralling costs caused by widespread abuse of the bonus.

That's the way to do it

This upset homeowners, investors and builders. Sales of heat pumps in Italy dropped sharply.

"There is a lot of misinformation and angst about heat pumps," concedes Mario Kohle, chief executive of Enpal, a German green-tech firm that sells solar panels and heat pumps. Some believe they cost €100,000 ($107,000) and that you need underfloor heating to install a heat pump. In fact, says Mr Kohle, the cost of heat pumps starts at €7,800 for those who qualify for the government's subsidy. Underfloor heating increases the efficiency of heat pumps, but it is not a requirement.

The Scandinavian public is generally well informed about the long-term advantages of low-carbon heating, but in the rest of Europe the general view of heat pumps is distorted by stubborn myths, says Martin Lewerth, boss of Aira, a Swedish maker of heat pumps. A study by Jan Rosenow, an energy expert, found 18 such criticisms. Mr Lewerth considers four of them to be especially damaging to his industry: heat pumps don't work in existing buildings; they don't work when it is cold; they will increase heating bills; and their technology is new and untested.

Yet amid all the criticisms and rebuttals surrounding heat pumps, the fact remains that they have become the dominant technology in cold Scandinavian countries. Their efficiency is such that they can lower heating costs even in countries such as Britain where the price of electricity is considerably higher than that of gas. And they have been around since they were invented in 1856 by Peter Ritter von Rittingen, an Austrian engineer.

Rumpy-pumpy

If Europe is to reach its goal of having 60m heat pumps installed within its borders by 2030, up from only 20m now, both the union and its members will need to do much more to promote the technology, especially since last year heat-pump sales declined by 5% on average in 14 EU countries after rising steeply for ten years (see chart). NIBE, a Swedish heat-pump maker, had to dismiss 500 workers in February. Vaillant, a German maker, cut 700 jobs, while Stiebel Eltron, a German rival, had to furlough hundreds of workers.

Policy zigzags such as the removal of government support for heat pumps in Italy and the *Heizhammer* debacle in Germany were probably the most important factor in the decrease in sales of the pumps. The commission ought to publish its plan as soon as possible, so as to give Europeans more certainty; though it might already be too late. The fight against climate change is one area where Europe can still claim to be a world leader. The EU Green Deal can still become the continent's Apollo programme. ■

CHARLEMAGNE
From Macron to Macroff

Europe faces a new age of shrunken French influence

IN 1965 AN imperious president of France all but derailed the European project by means of an "empty chair", vetoing any schemes cooked up in Brussels by simply refusing to send French officials to any meetings there. In 2024 a no-less-imperious French president is hoping to go one better: to fill France's chair in European Union meetings with ministers who will be either powerless to act or decry the EU as a globalist plot. Back then Charles de Gaulle relented after six months, once he was satisfied that lesser Europeans would not be able to impose their will on the French. Alas, the forthcoming crisis induced by Emmanuel Macron's decision to call (and then get trounced in) snap elections is likely to last far longer. Talk of Frexit, now or later, is overdone. But the effect of the sitting president losing his authority in Europe—call it "Macroff"—is still a blow for the union. France, for years a driving force in the EU, is likely to become a handbrake.

The shape of France's future relationship with the union will depend on the second round of voting in legislative elections on July 7th. The biggest fear in Brussels and just about every EU capital bar Budapest is that the National Rally (RN) of Marine Le Pen will win a majority after coming top in the first round. Its flagship policy until 2017 was to leave the EU altogether. Until even more recently it wanted to pull out of NATO's integrated military command structure, which de Gaulle huffed out of shortly after the empty-chair spat. (Nicolas Sarkozy, another imperious French president—attentive readers may be spotting a trend here—rejoined in 2009). If the RN is the biggest party but falls short of a majority, as seems likely, it may still be able to cobble together a "national conservative" coalition oozing Euroscepticism.

More likely though is a hung parliament; and even that will be troublesome. What would then ensue is perhaps not Macroff so much as Macron-the-blink. Bar a resignation, the incumbent of the Elysée palace will remain president until 2027. That will entitle him to keep attending meetings of EU leaders, in which the most important issues are discussed. But he will be in office rather than in power. Many decisions taken in Brussels, including the torrent of regulatory measures it produces, are voted on by government ministers, not national leaders. Without a viable coalition in Paris, will there even *be* ministers to send to EU confabs? Unlike oft-fragmented polities such as Italy and Belgium, France has no tradition of "caretaker" governments to keep affairs running while complex coalitions are cobbled together. Having technocrats run the show, as some politically stuck European countries do when gridlocked, would probably look like reheated Macronism to the RN.

Assuming ministers can, in time, be rustled up, what this would mean for EU business is unclear. The club has nearly doubled in size since the last *cohabitation* started, in 1997. The then president, Jacques Chirac (imperious rating: high), grappled with an opposition prime minister with a similar outlook on Europe. Chirac went on to recover full powers after his party won legislative elections in 2002. Because of term limits—not to mention his deep personal unpopularity—Mr Macron in contrast is riding into the political sunset. In Brussels he will be an imperious lame duck.

Does this matter? With 27 members in the EU, one is always having a political wobble. Several countries are already run by politicians of a similar hue to Ms Le Pen, such as Italy and Hungary; on July 2nd a Dutch prime minister backed by a hard-right party was sworn in. But the French presidents share a penchant for haughtiness for a reason. As a founding member of the club, one half of the Franco-German engine at its heart and the bloc's sole nuclear-armed power, France has outsize influence. Mr Macron put Europe at the heart of his agenda. Two of his most notable speeches pondered the future of the EU. Big ideas like the union jointly borrowing hundreds of billions in a post-covid recovery fund were born in Paris. The notion of "strategic autonomy"—think of it as a plan for how Europe can cope with Trumpism rebooted—was Mr Macron's before it became widely adopted.

Three concerns can be heard in EU circles. The first is about Ukraine. Mr Macron had a slow start when it came to supporting it, initially talking of not "humiliating" Russia, then expressing scepticism about enlarging the EU all the way to Kyiv. But he has emerged as a strident supporter of Ukraine's cause, pushing the union in a more hawkish direction. As president, Mr Macron would keep some purview over foreign policy. But putting that policy into practice would be difficult, not least given the RN's admiration for Russia's president, Vladimir Putin. French ministers could block Ukraine's accession to the club—as the RN advocates—or derail attempts to funnel more EU money to it.

The second concern involves France's public finances. Its debt is high, at well over 100% of GDP. The European Commission has already ordered the French budget deficit—at 5.5% in 2023, nearly twice the 3% EU limit—to be reined in. A new finance minister needing to heed RN preferences might take pride in defying Eurocrats' edicts. A re-run of the Greek debt crisis at French scale is not yet on the cards. But demagogues in high places might turn what could have been a manageable spat into something uglier.

I can't live if living is without Manu

The biggest worry is that a diminished France will mean the end of the EU's recent age of ambition. In the past decade or so the bloc has reacted to every crisis—and there have been many, from the Greek one to Brexit, the environment, covid-19 and Ukraine—by doing more together. At the very least, that dynamic will not survive a French president hobbled at home. As 2027 nears, all eyes will be on Ms Le Pen, and whether her old Frexit plans will be dusted off if she wins. But even before then, with Mr Macron on the ropes, the European project will have lost an imperious ally. ■

Britain

14 years of Conservative rule

The inheritance

RICHMOND, GLASGOW AND BASILDON

The country that the next government will inherit is creaking

ALMOST A MILLENNIUM ago, Alan Rufus, a Breton warlord, helped his kinsman William the Conqueror squish a Saxon rebellion, pillaging and slaughtering across northern England. Today the view from his ruined castle in Richmond is serene, sheep gambolling beside the River Swale as it meanders through North Yorkshire. Richmond is "a lovely, historic, thriving market town", effuses Colin Grant, a champion of local regeneration projects, as he shows off its 18th-century theatre.

Since 2015 Richmond's MP has been Rishi Sunak, the (probably outgoing) Conservative prime minister. The constituency is a landscape of dry-stone walls, the blissful Yorkshire Dales, idyllic villages and pubs named after farm animals. To be sure, the locals have grievances, including over agricultural policy and rural transport. "If you look under the surface, life has become harder," insists Daniel Callaghan, the Liberal Democrat candidate in the general election on July 4th. But there is scant deprivation or crime. What would a pensioner, relaxing in Richmond's cobbled marketplace, like to change? "Nothing, really."

At what is likely to be the end of 14 years of Conservative rule—this article was published before the election result was known—there is more than one story to tell about Britain. Up close, life is more nuanced than the headline tale of dereliction and decay. The safest generalisations about a population of roughly 68m may be demographic. Since the Tories were elected in 2010 it has grown by a whopping 5m people; as immigration surged to record levels despite the vows to bring it down, it has become even more diverse. And as all countries are, Britain has been shaped by forces beyond politicians' control: the death of the queen, a unifying figurehead; the rise of social media.

But another way to summarise the mosaic of modern Britain is to say that its burdens have been shared unequally. Because, in some ways and places, it seems to be falling apart.

The big picture is that public services are crumbling. Begin with the National Health Service, the most vital and cherished. Patients wait dangerously long minutes for ambulances, grim hours in emergency rooms and agonising months for treatment. Hospital performance, judges the Institute for Government, a think-tank, is arguably the worst since the NHS was created in 1948. After peaking in 2010, overall satisfaction with it has plummeted to the lowest recorded level. Meanwhile the courts are overwhelmed and prisons are bursting. Local authorities are going bust; libraries and swimming pools have closed. University finances are precarious.

"There's a general feeling in the country that nothing is working well," Sir Ver- ▸▸

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— The first 24 hours in Downing Street

non Bogdanor of King's College London says delicately. The farce of High Speed 2, a botched railway project on which tens of billions were wasted, is a handy parable of wider mismanagement. The frequent dumping of sewage in the country's waterways—including the picturesque River Swale—is another ready-made metaphor. Sometimes, amid a litany of shortages and strikes, Britain seems to be turning into a giant, dysfunctional metaphor for itself.

The public finances, which the Tories pledged to fix, are buckling. As belt-tightening was followed by shocks and splurges, public debt has rocketed. As a share of GDP, tax is at its highest level in 70 years. The economy is limping. In real terms incomes have disappointed since the financial crisis of 2007-09, the worst period of wage stagnation in two centuries.

Little wonder that three-quarters of Britons tell pollsters the country is in a worse state than it was in 2010. The ambient mood, reckons Jack Thorne, one of its best modern playwrights, is of "genuine confusion about why we're in this mess".

Unhappy and inglorious

Part of the background is the programme of austerity—deep, fast cuts to public spending—that began in 2010. Poor places, which rely most on state support, were hit hard. The architects of austerity "don't know what life is like living here", says Richard McShane, who founded the Phoenix community centre in a derelict library on the Easterhouse estate in Glasgow. "We are the forgotten people."

Easterhouse is a landmark in Tory thinking. Its deprivation inspired Sir Iain Duncan Smith, a former party leader and welfare secretary, to rethink the causes and costs of poverty. Before taking office in 2010, David Cameron, the first in a run of five Tory prime ministers ending with Mr Sunak, spoke there about what he called Britain's "broken society", vowing to replace despair with hope. Part of his remedy was the "Big Society", a wishy-washy plan to galvanise community groups. Along with "levelling up" and "take back control", the "Big Society" is among the defunct Tory slogans which, like embarrassing relatives, are no longer much mentioned.

There have been improvements in Easterhouse. "You've seen 'West Side Story'?" asks Stuart Patterson, once a teenage gang member and addict, now the pastor of a church in a dingy local shopping centre. "It was lived out in these streets." He points out the fields that hosted gang battles in the 1980s and the roads he couldn't walk down safely. Now the gangs have largely been tamed. A lot of the shoddy tenement housing has been replaced.

"That's cosmetic," laments Mr McShane. Many of the underlying problems—ill-health, drinking, unemployment—endure. Easterhouse remains one of the most deprived parts of Scotland. Across Britain as a whole, the proportion of children living in poverty has risen. In 2022, calculated the Joseph Rowntree Foundation, a think-tank, around 3.8m people experienced destitution (ie, a lack of heat, shelter or other essentials), well over double the number in 2017. Reliance on food banks has spiked, especially during the cost-of-living crunch of the past few years. Even before the pandemic, life expectancy was flatlining (see chart).

"We will not put the Union at risk," promised the Conservative manifesto of 2010. Four years later Scotland voted against independence. Yet the union does not look entirely secure, partly because of the other, bilious referendum that followed. Voters in both Scotland and Northern Ireland opted to stay in the EU in 2016; the decision to leave bolstered the argument for divorcing Britain instead.

Brexit was the great political rupture in the rickety Tory imperium. Its causes are debatable; the ongoing consequences are clearer. From Brexit flowed the disgrace of Boris Johnson's premiership and the tragicomic cameo of Liz Truss's. Chaos and distraction engulfed politics; a miasma of dishonesty seeped across it. Meanwhile long-term prospects for economic growth and productivity have been damaged further. Investment has suffered.

Paperwork, a smaller talent pool, extra costs on imports and exports, delays: leaving the EU, says David Barnes, a pony-tailed IT entrepreneur in Basildon, in south-east England, has been a bureaucratic "nightmare". In 2016 Basildon was overwhelmingly pro-Brexit, despite (or because of) the fact that it has had little foreign immigration, one of Brexiteers' main gripes. "It was going to be so wonderful!" a retired Basildon nurse says sardonically of the policy. Instead the country is "on its knees now. Any more and it'd be on its elbows—and your face would be in it!"

In central Basildon, you can see what she means. The liveliest spot is a pie-and-mash café, where the menu—the other option is hot eels—is a clue to the town's origin as a post-war alternative to London's bombed-out East End. Boarded-up shops, a recurring sight and complaint across the country, abound. The throbbing capital is 25 miles (40km) away but feels much farther. Kathy Kentish, who runs the regional branch of Citizens Advice, a charity, says steep energy costs and higher interest rates have brought money troubles to locals who hadn't known them before.

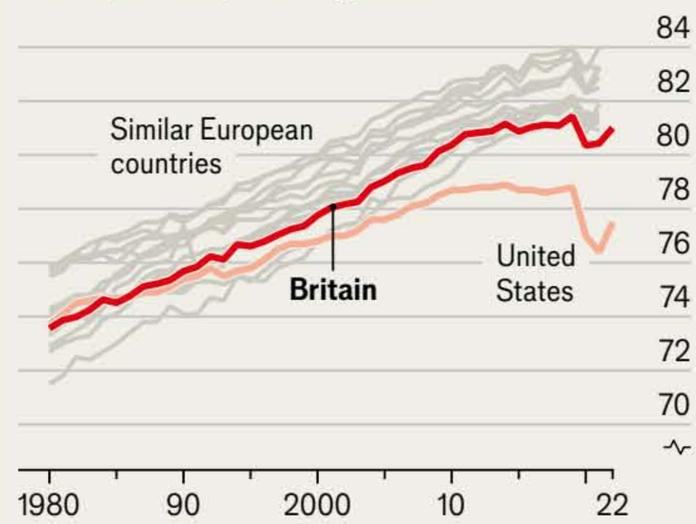
A peculiarly British malaise afflicts many such towns and cities. In part that is a hangover from the pandemic, the other defining rupture of the Tory era. Other problems common to rich countries—stuttering growth, ageing populations, inflation—have contributed. But these have been exacerbated by long-term economic sclerosis, the misjudgments of austerity and Brexit. You could call the whole predicament an exercise of sovereignty, just not the kind the Brexiteers intended.

For instance, because the NHS was creaking even before covid-19, it has recovered more slowly than other European health-care systems. Treatment backlogs, and surging mental-health complaints, have led more people to withdraw from the labour market. Around 2.8m Britons are out of work because of chronic illness (up from 2.2m in 2010).

Young people are among the malaise's main victims. The pandemic disrupted their education, and continues to: many more pupils are missing much more school than before it. Housing, an even more widespread worry than vacant shops, is prohibitively expensive for many. Amid strangulating planning rules, the average house price in England has risen to 8.3 times average earnings, almost double the ratio at the turn of the millennium. Housing costs are "astronomical round here", says a 17-year-old in Basildon. According to Ipsos, a pollster, 21% of 18- to 34-year-olds were pessimistic about the economic future in 2010. Now that figure is 55%.

Anglo-klaxon

Life expectancy at birth, years



Sources: OECD; ONS; National Records of Scotland; Northern Ireland Statistics and Research Agency

Our election coverage

This issue of *The Economist* went to press on election day. To read all our analysis of the results and receive an updated weekly edition, download our app or visit **economist.com**

Pointing out the concrete downtown buildings that are due to be redeveloped, Jessica Power, a can-do Basildon councillor, offers a summary that resonates more widely. Too many people and businesses are stuck, she says. As the town is outpaced by glitzier rivals, "People need to realise that, yeah, you can do better."

That judgment could apply to Britain as a whole. Some countries are forging ahead of it; others are catching up. After receding for decades, says David Kynaston, a distinguished historian, the sense of being a nation in decline has returned. Perhaps the past 14 years will be seen as the age in which Britain subsided into its fate as a "poor rich" country.

Naturally there are bright spots—and not only in the Yorkshire Dales. London's resilient dynamism is one—though the gap between the metropolis and the rest has stretched when it was meant to shrink. Immigration embarrassed ministers but is also a compliment. Britain, notes Ben Page of Ipsos, "remains one of the most attractive countries on Earth to outsiders".

Under the Tories, British pupils have risen in some international academic rankings. Renewable energy is more prevalent. Less tangibly, and inadvertently, the country may have found an overdue humility. Henceforth it may be less likely to brag about its health care or armed forces being the "best in the world"; less reflexively determined to "punch above its weight".

The dogs that didn't bark

And alongside the woes Britain has faced, consider those it dodged. Despite the efforts of some cynical politicians, American-style culture wars—over statues, history and the like—have fizzled. Britons are just a bit less excitable about that kind of thing. Theirs is still an orderly sort of country. Sir Vernon Bogdanor calls it "profoundly stable, profoundly constitutional and profoundly moderate". In confounding times, it has once again proved less susceptible to extremism than some others.

At least, it has proved so thus far. For another recurring theme, from Scotland to northern England and the south, is rage against politicians as a caste. "They're all liars," spits that retired nurse in Basildon. "They tend to be looking after themselves and to hell with the country," thinks a farmer in Yorkshire. "All they've done is line their own pockets," says a regular at the Phoenix centre in Easterhouse.

The second world war, notes Mr Kynaston, fostered expectations of state support that lingered in Britain for 35 years. Recent trials, from the financial crash to covid-19 and beyond, have fomented similar attitudes—just as the state malfunctions. That is a corrosive tension which, for its own sake and the country's, the next government must try urgently to resolve. ■

Investing

Deplatforming

The travails of Hargreaves Lansdown

On the face of it, Hargreaves Lansdown is still mightily successful. The financial-services firm enables British savers to buy shares, bonds and funds directly, as well as invest in tax-free vehicles and manage their pensions. A business that began with a borrowed typewriter in a spare bedroom in 1981 now has 1.8m clients, many of them wealthy baby-boomers. It boasts a 36% share of Britain's do-it-yourself investment market and manages £142.2bn ($180bn) in assets under administration, dwarfing rivals such as AJ Bell, which oversees £80.3bn.

Yet its glory days are behind it. In the past year Hargreaves Lansdown has crashed out of the FTSE 100 index of most valuable companies on the London Stock Exchange, and lost a CEO and a chairwoman. Its share price is down by half from its peak in 2019, which has attracted the interest of would-be buyers. The company's board has said it is minded to accept an offer from a consortium of private-equity funds, which includes CVC Capital Partners; they have been given until July 19th to table a binding offer. Peter Hargreaves, the company's co-founder and still its largest shareholder, has blamed the firm's previous management for the "shambles".

New business is slowing. The platform brought in 27% fewer clients in 2023 than it did in 2022. This is partly a result of increased competition from slick new trading apps like Robinhood, but also because Hargreaves Lansdown looks overpriced in comparison with more established rivals. Customers who have £250,000 invested in funds on its platform can expect to pay £1,125 in annual fees, compared with £637 at AJ Bell and £375 at Vanguard, a gigantic American investment adviser.

On the road to private ownership

Past scandals have cast a shadow. Trust in Hargreaves Lansdown took a dive after the collapse in 2019 of Neil Woodford's fund-management empire, which had been heavily promoted by the investment platform. Its customers accounted for £1.6bn of the £3.7bn lost when the Woodford Equity Income Fund was frozen. The company is still struggling to shake off its association with the celebrated stockpicker. This year it was hit by a second lawsuit seeking compensation for victims.

Regulation is a worry, too. Last year the Financial Conduct Authority (FCA), the City watchdog, introduced reforms known as the "consumer duty", which pledged to end rip-off fees and improve customer service. As part of that the FCA is looking at the interest that firms earn on client cash, which was equivalent to two-thirds of Hargreaves Lansdown's pre-tax profit last year. Under another set of rules called MiFID 2, DIY investors also now face an assessment before they are allowed to invest in complex financial products.

A private-equity takeover would offer Hargreaves Lansdown the chance of a fresh start away from the glare of public markets. In 2022 a £175m plan to upgrade its technology infrastructure at the expense of a special dividend attracted the ire of shareholders; that news, coupled with lower profits, sent its share price into freefall. New owners would also focus on cutting Hargreaves Lansdown's costs, which rose by more than a tenth last year.

There is room for growth, too. Despite an explosion in retail-trading apps since the covid-19 pandemic, only a quarter of Britons own shares, compared with almost two-thirds of Americans. More than 8m people are sitting on over £10,000 in cash, money that would be better off invested. These are precisely the sorts of customers that Hargreaves Lansdown had in mind when its founders set out more than four decades ago to democratise stockpicking. By creating Britain's largest funds supermarket, they succeeded. But they also made themselves a target. ■

BAGEHOT
England away

A weekend with Gareth Southgate and friends

ON THE 302 tram to Gelsenkirchen, a grim industrial city near the Rhine, a group of England fans are hammering the ceiling and chanting: "He comes from Barnsley/He plays in blue and white/He hates the Germans/He thinks they're fucking shite/He's breaking ankles, everywhere he goes/His name is Johnny, Johnny fucking Stones." Then the tram pulls up to a stop named after Willy Brandt, a former West German chancellor. Singing about the English centre-back stops and a discussion of German historical trivia begins. "Shame his secretary was a spy," says one of the chanters, displaying a surprisingly detailed knowledge of 1970s cold-war history.

England's men's football team is the faultline where high and low culture meet. Gareth Southgate, the England manager, has become an avatar for progressive patriotism. A recent play about his tenure, "Dear England", was nominated for a slew of awards. At the European championships in Germany, the other side of this fissure is on display. Englishmen take the opportunity to revel in offensive chants while they get completely wasted. Some do it with a wink, others do it with a snarl. But almost everyone joins in.

England away is not for every football fan. Many do not bother. Successful clubs qualify for European competitions, which means that their supporters already enjoy regular trips to Milan or Munich. Fans of Walsall FC? Not so much. The St George's flags that hung from the Arena AufSchalke for England's game against Slovakia on June 30th were emblazoned with the names of these fans' towns: a tour of Mercia, the M62 corridor and various miserable spots around London. "These places that we're told sound like shit places," says the character of Mr Southgate in "Dear England". "But they're our shit places."

England fans provide a political barometer of sorts. At the European championships in 2016, supporters engaged in a retro bout of bottle-hurling at police, chanting: "Fuck off Europe, we're all voting out." At Euro 2024 views are more eclectic, if still nasty. "I'm semi-racist," says one fan, semi-baldly. Have Mr Southgate's attempts to foster a new sense of civic nationalism all been for nothing? "And I'm voting Lib Dem," he adds. Perhaps not.

On the concourse of the stadium before the match, a chant of "Ten German Bombers" begins. The Football Association insists that any England supporter caught singing the song will be banned. Yet to the tune of "She'll Be Coming Round The Mountain", a bouncing horde of Englishmen chant: "There were ten German bombers in the air/And the RAF from England shot one down." Ironic transgression blends with outright xenophobia. How much is sincere? ("99.9% of it," says one fan.) How much is ironic? ("All of it," replies another.) Everyone is simply having a laugh, even if no one agrees about what.

For a crowd fuelled by lager and cocaine (Gelsenkirchen is only 60 metres above sea level but there were still a few nosebleeds), it is a remarkably friendly mob. Slovakian fans pose with England fans before the game. An angelic child asks to borrow a megaphone from a German volunteer. "No swearing!" warns his father. Instead, in his sweet unbroken voice, the child claims he's on a bender and that a rival player is a sex offender.

English exceptionalism comes in two forms. One is the idea that England is uniquely brilliant; the other that it is uniquely embarrassing. On a train to Dortmund, a well-refreshed Danish fan puts paid to this second myth. "Why *can't* England fans sing 'Ten German Bombers'?" asked the Dane. "I dunno, I don't make the rules," replied one England fan. "But why?" asked the Dane. "Because loads of people died," muttered another England fan, staring at his shoes. Why skip a chance to goad the Germans, wondered the Dane: "They know what they did."

Pour six hours' worth of lager into a man from Coventry, Copenhagen or Cologne and the results are similar. During this tournament a Scottish fan has exposed himself live on German television; fans of Balkan teams have been criticised for chanting in favour of genocide. Reputations matter, and England's fans still have a poor one, but the terrifying violence of the 1980s is long gone. Genuine psychopaths have their passports confiscated.

Even if the problem of hooliganism has largely been solved, its causes remain. Ennui compelled English men to pummel each other every weekend, wrote Bill Buford in "Among The Thugs", the best account of 1980s hooliganism. Working-class jobs disappeared; all that remained was a grotesque pastiche of working-class culture in the form of football thuggery. It was "a bloated code of maleness, an exaggerated embarrassing patriotism, a violent nationalism, an array of bankrupt antisocial habits".

We're just normal men. Just innocent men

The description fits as well in 2024 as it did in 1990, save for the violence. Today's England fans instead offer a "hold-me-back, hold-me-back" pretend masculinity. A smattering of men with an air of genuine menace are outnumbered by shirtless IT workers and wealth-management professionals with a 2:1 from a redbrick university, who can shout abuse at opposing fans in the knowledge that nothing dangerous will happen. It is performance, a chance for a grown man to scream "England till I die" into a news camera before running off, giggling.

On the shuttle bus away from the stadium, another chant begins. "Slovakia's going home and England's on the piss", with all the ironic bravado of fans who have just watched their team struggle to dispatch opponents from a country of 5m people, 40 places below them in the world rankings. A silence falls over the shuttle bus as it zips through the grey industrial suburbs. It will be work again tomorrow. Then a new chant starts up: "The wheels on the bus go round and round." ■

International

The threats to Western alliances

Hardly a celebration

Donald Trump and Marine Le Pen will haunt NATO's 75th birthday party

AT HIS FIRST summit with European leaders in 2021, after years of upheaval under Donald Trump, Joe Biden exulted: "America is back." To which Emmanuel Macron of France asked: "For how long?" The question will resonate more loudly than ever as NATO leaders meet in Washington on July 9th-11th. Mr Biden is limping behind Mr Trump in the race for the White House. Mr Macron himself is being overwhelmed by a populist wave. And the German chancellor, Olaf Scholz, is languishing in the polls. Sir Keir Starmer, set to become Britain's new prime minister this week, may feel he is joining NATO's last supper, not its 75th birthday party.

It was all supposed to be very different: a celebration of the world's most successful alliance, created in 1949 in the early days of the cold war. Its longevity has defied naysayers for decades. And its purpose has been bitterly re-affirmed by Russia's all-out invasion of Ukraine. Yet NATO again lives in dread for its future. Partly this is owing to external threats, but mainly it is because of the internal convulsions that will result if NATO-sceptics such as Mr Trump and Marine Le Pen, leader of the hard-right National Rally, come to power next year and in 2027, respectively.

The uncertainty will spread beyond NATO to America's globe-spanning alliances, and could scarcely come at a worse moment. The dangers to the democratic world are greater than at any time since the cold war's end. Russia invaded Ukraine in 2022 and has threatened to use nuclear weapons. China menaces Taiwan, a self-governing island it claims as its own, and is bullying neighbours such as the Philippines. Russia and China have intensified their "no limits" partnership, and both have drawn closer to other Eurasian autocracies. Iran and its proxies are engaged in a deepening conflict with Israel and American forces. Iran has also sold drones and ballistic missiles to Russia. Similarly, North Korea has shipped hundreds of thousands of artillery shells and just signed a mutual-defence pact with Russia.

Against this axis of autocracy, Mr Biden has revitalised America's democratic alliances and other partnerships. NATO has been strengthened and enlarged. Asian allies are bulking up and becoming a bit more NATO-like. And the two groupings are co-operating more closely. "America's unique ability to bring countries together is an undeniable source of our strength and our power," Mr Biden said in a speech to mark the 80th anniversary of D-Day last month. But will voters undo such efforts?

In 1796 George Washington urged the young American republic to "steer clear of permanent alliance" with foreign powers. Since the second world war, though, America has signed defence pacts with roughly 60 countries, depending on how they are counted, pledging to defend about 25% of the globe's population and 65% of its GDP (see chart overleaf). These alliances endured beyond the cold war in part because they became institutionalised, and in part because they found new missions or rediscovered old ones.

In Europe, America created a collective-defence alliance based on Article 5 of the NATO treaty, which holds that an armed attack on one ally is an attack on all. In Asia, meanwhile, America established a hub-and-spoke system, in which countries have defence pacts with America but typically not each other. These include the ANZUS treaty with Australia and New Zealand, and separate treaties with Japan, ▸▸

South Korea, the Philippines and Thailand. America has close defence ties with Israel and Taiwan, though they are more ambiguous than treaty-based alliances. Beyond is a nebula of looser security partnerships.

Academics argue over whether alliances encourage war or ensure stability. Even the closest ones come under strain: the American protector fears entrapment; the protected fear abandonment. Nuclear dilemmas are especially sharp. Charles de Gaulle, the late French president, said America would not sacrifice New York to defend Paris. Still, most allies shelter under America's nuclear umbrella; America extends it to limit nuclear proliferation.

Demonstrating American commitment involves constant effort: frequent exercises, the forward deployment of conventional forces and, in NATO's case, the sharing of nuclear-related missions with allies. The drawback is that allies inevitably free-ride. America has grumbled since the time of Dwight Eisenhower about its European allies skimping on defence.

Whereas Mr Trump mused about leaving NATO, Mr Biden has doubled down on it. With the recent entry of Finland and Sweden it has grown to 32 members. Last year's summit in Vilnius approved NATO's first detailed plans to defend allied territory since the cold war. Defence spending in Europe is rising. This year 23 allies are expected to meet or exceed (in some cases by a wide margin) the target of spending 2% of GDP on defence, compared with three in 2014, when the pledge was formalised.

NATO's most immediate task will be to keep supporting Ukraine, now in the third year of its war, as Russian forces grind forward. The summit will endorse a plan for NATO to take over co-ordination of military aid to Ukraine, hitherto overseen by the Pentagon, and training for Ukrainian forces. Ukraine's friends have committed about €297bn ($319bn) in economic and military aid since early 2022, about 60% of which has come from European countries, according to the latest figures compiled by the Kiel Institute in Germany. The months-long halt in American weapons because of delays in congressional funding is a warning to European allies that they need to do more, and for years to come, if Ukraine is to survive. One tricky question will be how to signal that Ukraine is moving closer to NATO without promising it membership in wartime, which America and Germany, in particular, oppose.

In the Indo-Pacific, meanwhile, China accuses America of building an "Asian NATO". That is a far cry from reality. Nevertheless, America and its allies are weaving an ever-thickening "latticework" of agreements to connect the various military spokes. These include the AUKUS deal with Britain to supply Australia with nuclear-powered submarines and jointly develop other weapons; co-operation with Japan and South Korea to defend against ballistic missiles; a defence-industrial deal with India to produce jet engines; the Philippines' agreement to grant America access to several bases; and various deals to host each others' forces. Japan is also creating, for the first time, a joint military headquarters to co-ordinate air, naval and ground forces. America, in turn, will have to overhaul its own command arrangements to operate seamlessly with Japan.

Asked if an Asian NATO was needed, Admiral Samuel Paparo, the head of America's Indo-Pacific Command, which would oversee any war with China, recently hedged: "At this time, I do not think that it is necessary that the region coalesces into a larger treaty organisation." But, he argued, allies have the "technical capability" to become a regional alliance "if there was a sufficient threat in the Pacific".

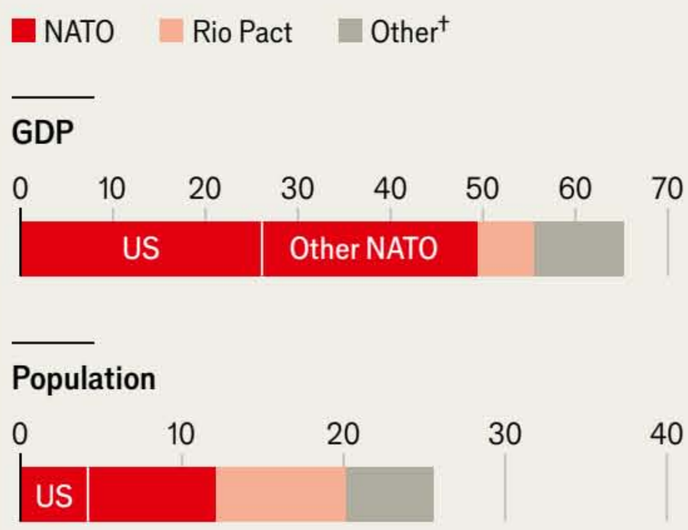
American strategists have long sought to bind their eastern and western allies closer together. One idea, dating to 2004, is to create an "Alliance of Democracies" of 60-odd members to overcome both the geographical limitations of NATO and the paralysis of the UN. Another is to expand the G7—"the steering committee of the major democracies", as Antony Blinken, America's secretary of state, calls it—so as to bring in more Indo-Pacific allies. Some would include South Korea and Australia (and the EU) to create a "Democracies Ten" or D-10; others would also add New Zealand and NATO itself for a G12. The big but still unrealised geopolitical prize is India. Warily it has moved closer to the West even as it remains friendly with Russia.

Co-operation between east and west has certainly grown. Japan joined in sanctions against Russia; Australia and South Korea have provided vital weapons for Ukraine. European allies are taking a greater interest in the east. NATO's strategic concept in 2022 for the first time noted the "systemic challenges" posed by China. Some Europeans conduct "freedom of navigation" patrols in the Taiwan Strait. Asian leaders are regularly invited to NATO and G7 summits. But Alexander Lanoszka of the University of Waterloo in Canada argues that co-operation will be limited by constraints and hesitation on both sides.

Mr Biden often divides the world between autocracies and democracies, an imperfect classification that risks alienating non-democratic friends and potential allies, such as Vietnam and Saudi Arabia. But as rival alliances coalesce, history suggests democratic ones are more likely to hold together and their members are more likely to fight for each other, says Matthew Kroenig of the Atlantic Council, an American think-tank. Pacts between autocrats tend to be more fractious (eg, Nazi Germany double-crossed the Soviet Union in 1941).

Pacts Americana

Selected US military allies*, 2023, % of world total



*Formal and informal †Australia, Israel, Japan, New Zealand, Philippines, South Korea, Taiwan, Thailand
Sources: World Bank; IMF; *The Economist*

Tough crowds

The rise of nationalist populism in the West may test the proposition. NATO has grappled with the likes of Recep Tayyip Erdogan and Viktor Orban, the leaders of Turkey and Hungary, delaying the accession of Finland and Sweden. But the challenge is now of a different order. France, though historically semi-detached, is one of Europe's two nuclear-weapons states. And America still remains NATO's indispensable protector.

France's National Rally, which topped the poll in the first round of the parliamentary elections and is likely to do so in the second round on July 7th, has said it will not push for France's withdrawal from NATO's integrated military command, which it rejoined in 2009, while the Ukraine war is raging. But it said it would stop giving Ukraine long-range cruise missiles.

Mr Trump has vowed to end the war quickly, giving no details. His acolytes suggest he would threaten to halt weapons supplies if Ukraine did not agree to peace talks (and conversely tell Russia that America would remove all restrictions on weapons if it did not talk). More serious is his threat to forsake Europe altogether. He shocked allies in February when he told a rally he would not defend "delinquent" allies (ie, those who fail to spend 2% of GDP on defence) from the Russians. "In fact, I would encourage them to do whatever the hell they want." He repeated the threat in his recent debate with Mr Biden.

Perhaps power and the darkening geopolitical balance will tame the anti-alliance impulses of Mr Trump and Ms Le Pen. After all, Giorgia Meloni, Italy's prime minister, and her party have shown it is possible to have roots in fascism, support NATO and Ukraine—and win elections. Even so, nationalists and populists will prove disruptive. Their contempt for elites and foreigners sit uncomfortably with the ideas underpinning alliances: sharing burdens and risks for common security. ■

Business

Amazon at 30

Growing closer

SAN FRANCISCO

As the e-empire enters middle age it is stitching together its disparate parts

IN THE SUMMER of 1994 a job vacancy for software engineers was posted on Usenet, an early precursor to online forums. The company in question planned to "pioneer commerce on the internet". Eligible applicants needed to be capable of designing complex systems "in about one-third the time that most competent people think possible". Résumés were to be addressed to Jeff Bezos at a Seattle-based startup named Cadabra.

The name didn't stick—on phone calls "Cadabra" was too easily confused with "cadaver"—but the ambition did. Amazon, which turns 30 on July 5th, has indeed changed the world of online shopping. This year its websites will sell an estimated $554bn-worth of goods in America, reckons JPMorgan Chase, a bank. That gives it a 42% share of American e-commerce, far beyond the 6% captured by Walmart, its nearest online competitor (and the country's biggest retailer overall).

And Amazon did not stop its pioneering at retail. It subsequently invented the Kindle, an e-reader, Alexa, a smartspeaker and, more consequentially, cloud-computing—Amazon Web Services (AWS) has a 31% share of that $300bn market, according to Synergy Research, a data firm. It also runs Prime Video, America's fourth-most-watched video-streaming service. Its newish, high-margin advertising business is already the third-largest in the world behind Alphabet (Google's parent company) and Meta (Facebook's). One subsidiary, Zoox, is building self-driving cars. Another moon-shot project, Kuiper, which is developing a fleet of communications satellites in low-Earth orbit, quite literally aims for the heavens.

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On June 26th Amazon got an early birthday present, when the market value of its tech empire surpassed $2trn for the first time (see chart 1 on next page). As with all such milestones, however, Amazon's 30th anniversary is not just a moment to celebrate its achievements but also to look ahead. The big question that hangs over the company as it enters its fourth decade is how to deal with its increasing sprawl (see chart 2).

In the words of a former executive, Amazon's business units are "rather independent" of each other. Often this was by design. At first AWS was operated at arm's length from the rest of Amazon, because the firm did not want to give the impression that it was selling spare computing power during Amazon's off hours, says Rick Villars of IDC, a research firm. Later Mr Bezos wanted to separate the ads business from e-commerce so that the retail arm would not become overly dependent on the advertising unit's fat margins. More recently some investors have even called for the cloud business to be spun out altogether, in the belief that this would create shareholder value.

Instead, Amazon's fourth decade looks poised to be an era of integration. The company has grown to the size that any needle-moving new investment is costly and high-risk. Andy Jassy, the former boss of AWS whom Mr Bezos installed as his successor as CEO in 2021, therefore appears ▸▸

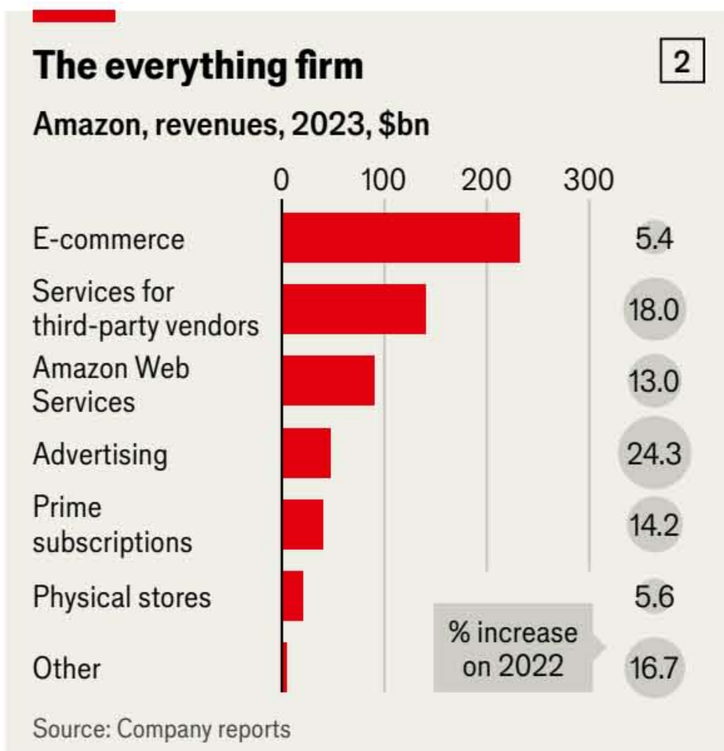
keen to generate value by stitching the company's existing businesses together more tightly. Mr Bezos, who for now retains a 9% stake and a big say over strategy, seems to approve. This metamorphosis would make Amazon more similar to Apple and Microsoft, two older big-tech rivals which have bundled and cross-sold their way to world domination in consumer devices and business software, respectively—and to $3trn valuations.

One patch where Mr Jassy already has his sewing kit out is retail and advertising. The thread running through the two businesses is Prime, Amazon's subscription service, which has 300m-odd members around the world, providing shoppers with free delivery and access to Prime Video. Prime members spend twice as much on Amazon's websites as non-members do and they tend to be logged in more often. Amazon also has intimate knowledge of their shopping behaviour, which allows it to target ads more accurately.

Ad value

Advertisers are willing to pay handsomely for this service: analysts estimate that Amazon's ads business enjoys operating margins of around 40%, higher even than those of the cloud operation, not to mention the much less lucrative retail division. Most of these adverts, responsible for four-fifths of the company's ad sales, are nestled among search results on its app or next to information about products. But a growing share is coming from third-party websites and, most recently, from Prime Video. In January Amazon started showing commercials to viewers in America, Britain, Canada and Germany.

Only one in seven Prime members is expected to fork out the additional fee ($3 per month in America) for ad-free streaming. That leaves perhaps 260m Prime members who are potential viewers of ads on the platform. JPMorgan Chase reckons that video ads alone will boost Amazon's ads sales by about 6% this year, adding $3bn to the top line. Given the ad operation's fat margins, the impact on profit will be considerably larger.



To turn more Prime members into actual ad-watchers, Amazon is splurging on content. It recently signed a contract with MrBeast, a YouTube superstar, rumoured to be worth $100m. It is trying to seal a deal in which it would pay $2bn a year for the rights to show National Basketball Association games on Prime Video. It is already reportedly spending $1bn annually to stream some National Football League (NFL) fixtures.

This hefty price tag is worth it, the company thinks, because popular sporting moments, such as "Thursday Night Football", have turned out to be among the biggest sign-up days for Prime. And, as Mike Morton of MoffettNathanson, a research firm, points out, adverts aired during sports events are some of the most lucrative in all of the ads business.

Mr Jassy's bigger task concerns making the retail business and AWS into a more seamless whole. Prime once again has a role, albeit a smaller one: the cloud unit helped Prime Video win NFL streaming rights because the deal terms demanded ultra-reliable internet infrastructure that AWS could provide more easily than rival bidders (fans of live sports would not brook buffering).

Other salient stitches include deals such as a recent one with Hyundai, which included making AWS the South Korean carmaker's main cloud provider as well as selling its cars on Amazon websites. Analysts speculate that clever AWS software may also be assisting the retail operation's 750,000 warehouse robots in sorting shoppers' packages. And having a business as gigantic as Amazon's retail arm as a captive customer gives AWS the confidence to scale up, helping spread costs.

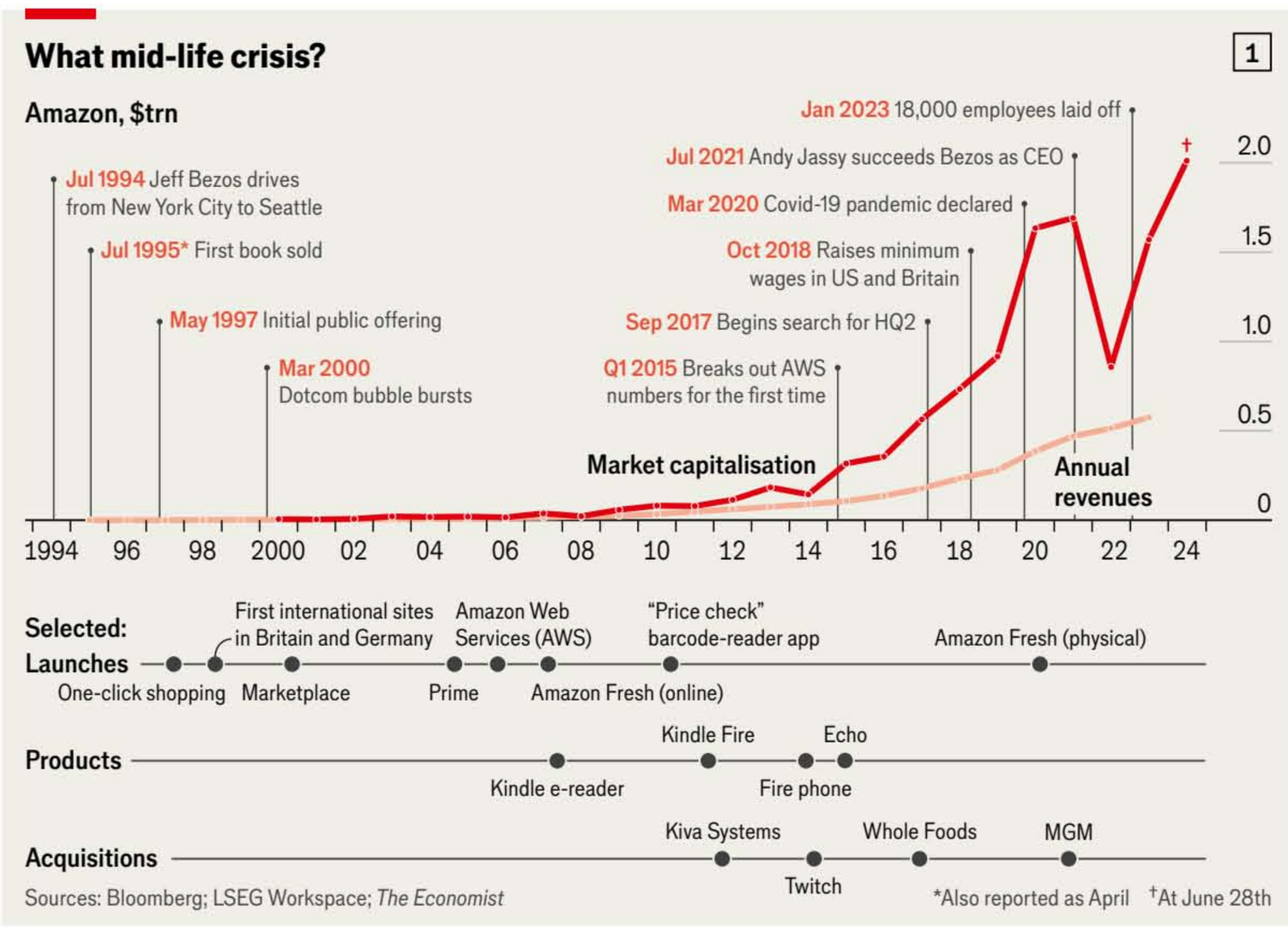
Stitch-up job

The most important thread stitching Amazon's two main businesses together is generative AI. Most rivals will struggle to match Amazon's access to specialised AI hardware, which is in short supply but which it has in abundance thanks to long-standing commercial partnerships with companies like Nvidia, which makes advanced AI semiconductors.

Amazon has already launched a number of products that use the technology, including a tool that sums up customer reviews, a virtual shopping assistant and an image creator for advertisers. Sellers on its e-commerce platform can use the same technology to speed up the creation of product listing pages by, say, pointing the software at their personal website where the good is already sold. Amazon's nascent pharmacy business is using generative AI to help fill prescriptions and manage stocks of medications. The retail division, for its part, provides a vast trove of data on which to train AI models, which can then be offered to AWS customers.

The company's ever tighter integration may not be to everyone's liking. Binding the e-commerce, streaming and cloud businesses closer together may put off AWS's big clients such as Netflix, which competes with Amazon in streaming, or Ocado, a rival online grocer.

Regulators are even more suspicious. Last year America's Federal Trade Commission (FTC) brought a lawsuit against Amazon, accusing it of monopolistic practices such as discriminating against sellers that offer products more cheaply elsewhere on the internet and locking merchants into its fulfilment network. The ▸▸



agency has called for penalties "including but not limited to structural relief"—trust-buster-speak for a break-up. Amazon denies the charges.

Investors seem to shrug off such concerns. Amazon's recent share-price rise was uninterrupted by the FTC lawsuit. And for every cloud customer that AWS loses to rivals such as Microsoft Azure or Google Cloud Platform, it could win one that is repelled by Microsoft's and Google's new businesses in their own increasingly tightly knit empires.

Indeed, the greatest risk to Amazon thriving as a 30-something is not antitrust cops or cross cloud-computing clients. It is competition. Alphabet, the world's largest advertiser and owner of YouTube, and Meta are once again trying to break into the e-commerce business. Walmart, which dominates the $2trn American grocery market, is moving zealously into advertising and has launched a Prime-like subscription service that helps it convert purchases into data.

Most threatening of all, Microsoft is widely regarded as having taken the lead on integrating generative AI into its assorted enterprise offerings, thanks to its partnership with OpenAI, the startup at the technology's bleeding edge (and maker of ChatGPT). If it wants to avoid a mid-life crisis, Amazon will have to show it is the better seamstress. ■

The new Hollywood

Erase and rewind

LOS ANGELES

As austerity hits Tinseltown, old rivalries give way to alliances

WITH SOUND-STAGE doors made big enough for performing elephants, the century-old Paramount Pictures lot on Melrose Avenue is a living museum of the film business. Now the studio, one of the world's first—and the last still based in central Hollywood—is for sale. Paramount's controlling shareholder, Shari Redstone, is seeking a buyer for the teetering empire she inherited from her father Sumner, who died in 2020. For six months suitors have come and gone. On July 2nd it was reported that David Ellison, a tech heir whose previous bid for Paramount was rebuffed only in June, had reached a preliminary agreement to buy Ms Redstone's stake in the company.

The turbulent picture at Paramount reflects the state of Hollywood. Show business has entered an age of austerity. Cinema is suffering from long covid; this year's domestic box-office takings are forecast to be 30% lower than in 2019. Cable subscriptions are falling faster than ever, with a record 2.4m Americans cancelling their pay-TV in the latest quarter.

Streaming, the lifeboat that was supposed to rescue entertainment companies from these sinking legacy businesses, is still a money-loser for everyone except Netflix. In the past two years subscriptions have levelled off at about four per household in America. Netflix, with 270m subscribers worldwide, is reliably among them in most homes. Disney, which has clocked over 200m subscriptions (and expects to make a profit on streaming in the third quarter of this year), also looks safe. Amazon gives its video service away to 300m Prime subscribers around the world and is not going anywhere. Apple, likewise, can afford to sink money into its TV+ service for as long as it likes.

The rest are fighting a losing battle for attention. In the past two years some studios have shed more than half of their market value (see chart on next page). "There are a lot of players. There are a lot of players that are losing a lot of money," David Zaslav, head of Warner Bros Discovery (WBD), another troubled studio, summed up in May. The way to survive, Mr Zaslav intimated, was for studios that once bitterly competed to come together. "M&A fervour is in the air in Hollywood," says Robert Fishman of MoffettNathanson, a firm of analysts. The result is that, like a bad movie in post-production, the industry is being trimmed and edited back together. Will the result be any more watchable?

There is certainly lots of action. In recent months Paramount held fruitless merger talks with Comcast, a cable giant which owns NBCUniversal, as well as with WBD and Sony. In June Paramount was on the verge of selling to Mr Ellison, who runs Skydance Media, a production company, only for Ms Redstone to pull out at the last minute. The deal is now said to be back on because Skydance improved its offer. Until Paramount's future is settled, other deals are up in the air. "People are dying for Paramount to get its mojo back," says one frustrated executive at a rival studio.

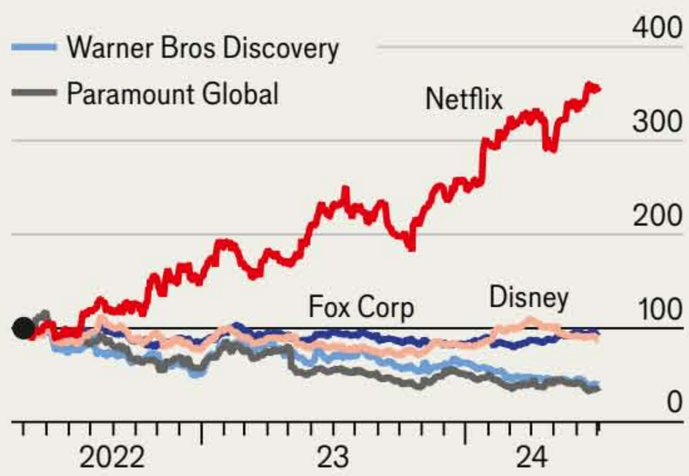
Another company in need of more heft is WBD, itself the result of a merger two years ago. Its Max streaming service is stuffed with Emmy-bait, from "Succession" to the expanding "Game of Thrones" universe. But it lacks scale and is thought to be losing money on streaming (the firm does not break out the numbers). Since the second anniversary of its formation in April, it has been free to buy or sell assets without being clobbered by tax penalties. Jason Kilar, former head of Warner, said recently that he did not expect it to be a standalone business in 18 months' time.

One possible partner for WBD is another subscale streamer, NBCUniversal's Peacock. Some observers wonder if WBD could do a deal with Fox, which sold its 21st Century studio to Disney in 2019 but retains television interests, including a quietly successful streamer called Tubi (which expanded into Britain on July 2nd). ▸▸

Leaving the golden years behind

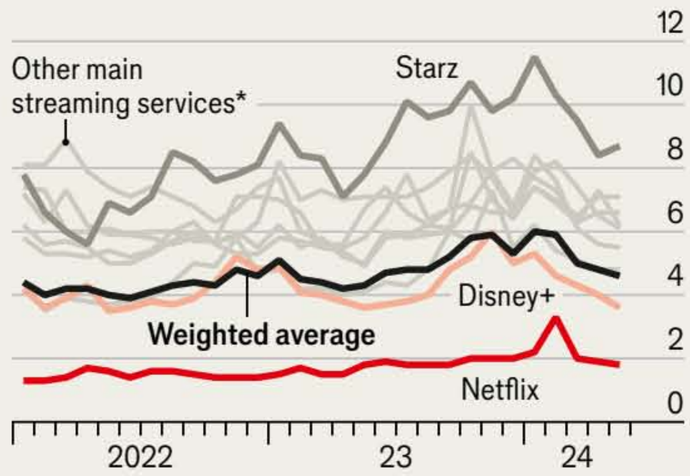
Trouble in Tinseltown

Share prices, May 1st 2022=100



Sources: LSEG Workspace; Antenna

United States, streaming services, monthly cancellations as % of subscriber base



*Apple TV+, Discovery+, Hulu, Max, Paramount+ and Peacock

Fox is undervalued relative to its asset mix, which includes a studio lot in Century City, argues Mr Fishman. The great unknown is what its 93-year-old controlling shareholder, Rupert Murdoch, and his heirs, want to do with Fox, particularly its fiery news operation.

That may become clearer after America's presidential election in November. The potential return of Donald Trump, who leads in most polls, complicates the regulatory picture. His unpredictable administration waved through Disney's $71bn acquisition of 21st Century Fox. But it tried (unsuccessfully) to stop AT&T buying Time Warner, a move which many attributed to Mr Trump's dislike of Warner's CNN news channel. A second Trump presidency could make it hard for Comcast to do big deals: the company owns the MSNBC news network, which Mr Trump despises as much as CNN.

In the meantime, entertainment companies are finding other ways to team up. Disney, WBD and Fox will launch a sport-focused streaming service, Venu Sports (pronounced "venue"), in the autumn, if regulators allow it. Paramount's leaders told staff on June 25th that they were in talks with potential streaming partners "that will significantly transform the scale and economics of the service" internationally. Paramount and NBCUniversal already run a streaming joint venture in Europe called SkyShowtime.

Former rivals are also packaging their services. Disney and WBD unveiled a discounted bundle of their streamers in May. Weeks later Comcast launched a "StreamSaver" bundle for its broadband customers, rolling Netflix, Peacock and Apple TV+ together. The aim is to reduce customer churn, a problem stalking Hollywood. Streamers lose about 5% of their American subscribers every month, according to Antenna, a data company. This leaves them replacing more than half their customers each year—something that the older studios are not used to, having previously dealt with cable companies, which handled customer acquisition.

Bundles make for "healthier subs", one executive says: more content means less quitting. Antenna calculates that last year monthly churn among subscribers to Disney's entertainment-and-sport bundle was 3-4%, versus 5% or so among those who get only Disney+.

Perhaps the starkest example of the grudging new co-operation is the return of licensing. In the early days of streaming studios kept their content to themselves. Bob Iger, Disney's boss, compared licensing Disney shows to Netflix to "selling nuclear-weapons technology to a third-world country". Now, as studios strive to improve their cash flow, the arms trade is back in business. Disney titles such as "Lost" and "Home Improvement" are on Netflix.

Play-it-again sums

WBD is renting out its back catalogue, too, including shows like "Sex and the City" and "Young Sheldon". Paramount said in June that it was exploring more licensing. The ability to raid rivals' archives is allowing big spenders like Netflix to rely less on original production. Acquired content made up nearly half of viewing on Netflix in the second half of 2023, including 11 of its 20 most-watched series, according to MoffettNathanson.

With subscribers increasingly being steered towards big bundles of content, streaming is "just cable over the internet now", concludes an executive. That is an exaggeration: it is still much easier for viewers to flit between subscriptions, which is why the profits even at Netflix are nowhere near those of the cable era.

Still, the consumer bonanza of a few years ago is over. Prices are rising (Disney+ costs twice what it did at its launch in 2019), commercials are creeping in, content budgets are tightening and competition is turning to co-operation. As show business shifts its focus from boosting growth to breaking even, the new Hollywood will look a little better for shareholders—but less fun for audiences. ■

Security

A bunker mentality

BERLIN

German builders of private shelters are thriving

KIM KARDASHIAN spotted the trend early, true to form. In 2021 the American reality-television star and her sister Khloé went bunker shopping. They tested a $200,000 facility made by a firm called Atlas Survival Shelters which provides 46 square metres (500 square feet) of safe space. Mark Zuckerberg, the billionaire founder of Meta, a social-media empire, is reportedly building a less cramped 450-square-metre facility under his ranch on a remote Hawaiian island. Now many Europeans, too, are running for cover. And not just plutocrats.

In the days after Russia's invasion of Ukraine in February 2022 Bunkers Shelters Systems Germany (BSSD), a company in Berlin, began to receive as many as 1,000 calls a day from prospective clients. Created in 2014 and employing 100 people, it was the only German company making bunkers for private individuals when the Ukraine war began. Its founders, Mario and Katrin Piejde, quickly installed a hotline to deal with the barrage of requests. Since then its order book has swollen three-fold, as more Germans worry about various conflicts spinning out of control.

Instead of a pool or a garage, many people now want a bunker, says Ms Piejde, who runs BSSD day-to-day. Clients range from tycoons to a typical middle-class family ("husband is an electrical engineer, ▸▸

A safe investment

wife is a shop assistant"). Most go for a fortified shelter in the basement of their house, though a family in Brandenburg is building a big bunker in the garden of the new house it started constructing at the beginning of the year. BSSD sells its bunkers in three standard sizes, starting at €79,000 ($85,000). Less elaborate panic rooms start at around €15,000.

Germans feel they need their own safe place to hide because after the end of the cold war the government stopped making efforts to ensure them a spot in a public shelter. Today there is enough room in such installations for just 480,000 people, out of a population of 84m. Protecting Germans, as Swiss and Finnish governments do for nearly all their 8.8m and 5.5m citizens, respectively, would require building more than 210,000 big bunkers. This could take 25 years and cost €140bn, according to official estimates.

It is, therefore, not going to happen. So the private sector is stepping in. BSSD is hiring and looking for new offices beyond its current headquarters (appropriately, in the basement of a Berlin apartment block). More specialists, such as German Shelter Centre, are popping up. Deltamodul, a builder of modular homes, has added bunkers to its offering. These companies are not yet at the scale of their counterparts in America, such as Atlas Survival Shelters, which have catered to customers' paranoia for years. But, like their products, their future looks secure. ■

BARTLEBY

Delegate authority

A conference-survival handbook

AN EMAIL URGING you to download the "forum-networking app" to start "making new connections" ahead of next week's "knowledge-sharing experience" reminds you of something you had pushed to the back of your mind: you are going to a conference. If you are a paediatric nephrologist meeting colleagues to discuss the latest in children's dialysis, a founder looking for investors or a speaker, you know what to do. But if—like most conference attendees, including, on occasion, this guest Bartleby—you are not sure why you are here, you need a strategy.

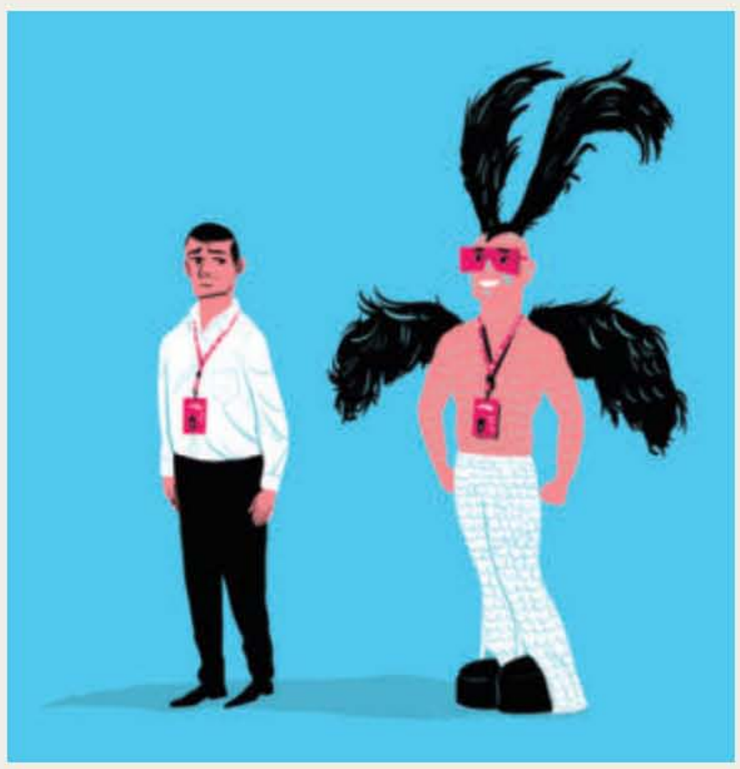
First, manage your expectations: "convention", "summit", "event", "roadshow" and "festival" sound more fun than a conference, but don't bring your Glastonbury or Burning Man kit. You are still just going to a gabfest. No need to wear a three-piece suit, and by all means dress for comfort, but avoid the Midwest-account-manager-out-for-a-golf-weekend look. You never know whom you might run into.

Next, remember that all icebreakers are a trick. If you are encouraged to draw something jolly on your name badge or use a "fun" sobriquet, politely resist. Similarly, if you are asked to share something nobody knows about you, this is a trap. Never say anything awkward about your own body or physiology ("I have a third nipple", "I can burp the alphabet"), or anyone else's. Avoid the temptation to be a pompous ass: "I was a junior swim champion and once dated Kylie Minogue." Being memorable means people will expect you to be both present and attentive. Blandness is a good goal.

Pick sessions selectively. Keynote speeches are usually reruns and can be skipped, unless bragging rights are useful in your line of work ("Check out my selfie with Elon"). Panels with more than four talking heads are always pointless. The term "fireside chat" has become wildly misappropriated—unless there is an actual fireplace, you are unlikely to get a cosy, honest conversation. If the breakout "tracks" do not appeal, choose the hallway track: lingering in the corridors and chatting with people too important to be in sessions.

Do turn up every day. But do not expect a prize for being a super-attender. If some form of presenteeism is required—ie, if you are accompanying your boss—apply the "first round" rule: stand up and ask a decent question early in a session, ideally near a photographer. Like getting the first round at the bar, people will remember you well after you have left.

Choose your seat wisely. Too close to the front and you cannot escape a dull session, too near the back and nobody will see you. As in aeroplanes, avoid the middle of rows. Standing in the wings offers maximum flexibility (though it brings the risk of an organiser asking you to sit down once all the good seats have been taken).



Be even more careful about where you eat, and what. For a sit-down meal, be ruthless about your company. A bad dinner will be more tolerable if you nab a spot next to David Attenborough or Michelle Obama. As with all buffets, keep your eye on the full array before you load up on coleslaw. Unless you can smell the sea, avoid the fish. If waiters offer canapés, remember that handling drink and dip is a recipe for disaster. In coffee breaks, avoid anyone flouting the icebreaker rule (if you hear talk of "explosive" anything, move in the opposite direction). Considering happy hour? Ask yourself: are these people really happy?

Still, for most people, the main value of conferences is networking. This usually happens around the refreshment area. So even introverts should not skip all the socials and wine snobs ought to be prepared to drink bad wine for a good cause. Circulate carefully: better to invest in a few targeted conversations than play business-card bingo by skipping from one short chat to the next. Darting your eyes around for a conversation upgrade is rude, and a bit sad.

Done well, a conference is the perfect alibi for getting some much-needed rest, recuperation, maybe even inspiration. Research shows productivity gains from holidays are greatest when people truly disconnect. To maximise the RoC (return on conference), stay offline. Start the day slow, use the hotel gym or pool, take yourself out for a leisurely breakfast. Make the most of being away from the office: go for a walk in a new city and take catnaps between sessions. This is what others do when they say they "have to take a call". With spirits lifted, and some of the snark shaken off, you might actually get something out of this thing. Oh, and don't be afraid to leave early.

SCHUMPETER

The conquistador of commerce

Lessons in risk-taking from a buccaneering Spanish bank

FEW BOSSES worry about European politics more than its bankers. In Italy and Spain new taxes have been levied as punishment for higher profits. The populist surge in France has redoubled concern. When Emmanuel Macron announced shock parliamentary elections in June, investors in French banks legged it. The final round of the election, held on July 7th, is likely to empower reckless spenders on the hard left or hard right. In an interview with Bloomberg in May, Mr Macron made a rare political pitch for a more integrated banking market, including cross-border deals. Now the sharp election-related fall in the price of France's government debt has instead revived memories of the "doom loops" of the euro-zone crisis of the early 2010s, when worries about the solvency of sovereigns and of lenders fed off one another.

More volatile politics could make European banks even more parochial and less ambitious than they already are. One exception is Banco Bilbao Vizcaya Argentaria (BBVA), which cannot be accused of being either. The Spanish lender makes more than half its profit in Mexico. After Spain, its next largest market is Turkey, where the economy is so dire that BBVA uses "hyperinflation accounting" in its bookkeeping. And it is no shrinking violet at home. In May BBVA made a €12bn ($13bn) hostile offer to acquire Sabadell, a Spanish competitor it came close to buying in 2020.

Absorbing Sabadell would make BBVA about the tenth-largest bank in Europe by assets. That is hardly enough to earn it more than a cult following. But there are good reasons to study its fortunes, and not just because its return on equity of 17% makes it one of Europe's most profitable lenders. BBVA also offers a window on America's efforts to reroute supply chains away from China, in which Mexico plays a big role. And the pulse of European integration can be taken by examining the deal the bank is pursuing at home. BBVA is, in short, business's political bellwether.

In what could be mistaken for a fictional warning about Spanish nuclear weapons, an advertisement printed in this newspaper during the 1980s shows more than a dozen arcs thrusting outwards from BBVA's headquarters in Madrid. One lands in Mexico, denoting a solitary office in the country—it was not until after the "tequila crisis" a decade later that BBVA went all in. In December 1994 Mexico's peso was devalued and its banking system collapsed. Looser restrictions on foreign ownership allowed outsiders to recapitalise lenders and in 2000 BBVA bought into Bancomer, now the country's biggest bank.

"Mexico is a clear winner of the nearshoring trend, no matter what happens in the US election," says Carlos Torres Vila, BBVA's chairman. Or indeed what happened in the Mexican one a month ago, when Claudia Sheinbaum, a left-winger, was elected as president—an event that, to Mr Torres Vila, "confirms our bullish view", referring to her promises of fiscal discipline. As China's star rose, Brazil's financial sector grew along with its commodity exports. Now BBVA hopes decoupling could do the same thing in Mexico. According to Jefferies, an investment bank, the stock of bank loans to the private sector in Mexico stands at a fifth of GDP, less than half the level in Brazil, leaving lots of room to grow. The spread between the interest BBVA pays on deposits and receives on loans in Mexico is three times larger than in Spain.

BBVA's domestic dealmaking is similarly bold. Hostile takeovers among banks are vanishingly rare and not without theatre. An investment banker close to Sabadell's defence strategy counters that the offer "ignores the reality" of soaring bank valuations. Mr Torres Vila says that his offer is a "knock-out" and dismisses the suggestion of improving it to tempt Sabadell's board. Its shareholders were expected to approve the share issuance needed to buy Sabadell on July 5th, after we published this.

There are, of course, risks. As Chinese firms set up shop in Mexico, some American politicians question how much their country's dependence on China has really been reduced. If Donald Trump returns to office next year, the self-styled "tariff man" could stunt investment in Mexico. Many are less sanguine than Mr Torres Vila about the spending plans of Mexico's new president and her huge majority.

BBVA might find itself wrongfooted at home, too. Courting shareholders is the easy part of a gruelling assault course of approvals. The merger requires a nod from the European Central Bank and Spain's market and competition authorities. It also requires the assent of the country's government, which opposes the deal. That its own competition worries, seemingly not shared entirely by technocratic trustbusters, concern the banks' operations in separatist Catalonia (where until 2017 Sabadell had its headquarters) suggests politics rather than antitrust may be at play.

Should BBVA fail to win government approval for a full merger, it could settle for owning Sabadell as a subsidiary; it would own the bank without being able to integrate the businesses completely and benefit from cost savings—at least until more amenable officials decide to give it the green light. Still, the fact that the merger may be derailed by messy domestic politics is testament to the reality that European banking—like business more broadly—is not a dispassionate and sensible affair overseen by Brussels alone.

Yellow-and-red-blooded capitalist

BBVA's business is often described as an exercise in balancing fast growth abroad and a sturdy business at home. It looks to have made an analogous political bet—on an embrace of protectionism by America and a respect for markets in Europe. If BBVA continues to thrive in Mexico and manages to complete its conquest in Spain, it will reap the rewards—and may even encourage other businesses to follow suit. These are risky manoeuvres. But a bit of risk-taking is what Europe needs. ■

Finance & economics

Technology and the economy

A sequence of zeroes

SAN FRANCISCO

What happened to the artificial-intelligence revolution?

MOVE TO SAN FRANCISCO and it is hard not to be swept up by mania over artificial intelligence (AI). Advertisements tell you how the tech will revolutionise your workplace. In bars people speculate about when the world will "get AGI", or when machines will become more advanced than humans. The five big tech firms—Alphabet, Amazon, Apple, Meta and Microsoft, all of which have either headquarters or outposts nearby—are investing vast sums. This year they are budgeting an estimated $400bn for capital expenditures, mostly on AI-related hardware, and for research and development.

In the world's tech capital it is taken as read that AI will transform the global economy. But for AI to fulfil its potential, firms everywhere need to buy the technology, shape it to their needs and become more productive as a result. Investors have added more than $2trn to the market value of the five big tech firms in the past year—in effect projecting an extra $300bn-400bn in annual revenues according to our rough estimates, about the same as another Apple's worth of sales. For now, though, the tech titans are miles from such results. Even bullish analysts think Microsoft will make only about $10bn from generative-AI-related sales this year. Beyond America's west coast, there is little sign AI is having much of an effect on anything.

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One problem is the rate of adoption. Reputable companies are putting out startling estimates of how many people are using generative AI. Close to two-thirds of respondents to a recent survey by McKinsey, a consultancy, say that their company is "regularly using" the tech, nearly twice as many as the year before. A report by Microsoft and LinkedIn, an online platform for professionals, finds that 75% of global "knowledge workers" (folk who sit in front of a computer all day) use it. People are, by such accounts, already in an AI world.

And in a sense, they are. Almost everyone uses AI when searching for something on Google or picking a song on Spotify. But the incorporation of AI into business processes remains a niche pursuit. Official statistics agencies pose AI-related questions to firms of all varieties, and in a wider range of industries than Microsoft and LinkedIn do. America's Census Bureau produces the best estimates. It finds only 5% of businesses have used AI in the past fortnight (see chart 1 on next page). Even in San Francisco many techies admit, when pressed, that they do not fork out $20 a month for the best version of ChatGPT.

It is a similar story elsewhere. According to official Canadian numbers, 6% of the country's firms used AI to make goods and provide services in the past 12 months. ▸▸

British surveys suggest use there is higher—at 20% of all businesses in March—though the questions are asked differently. And even in Britain use is growing slowly. The same share used AI last September.

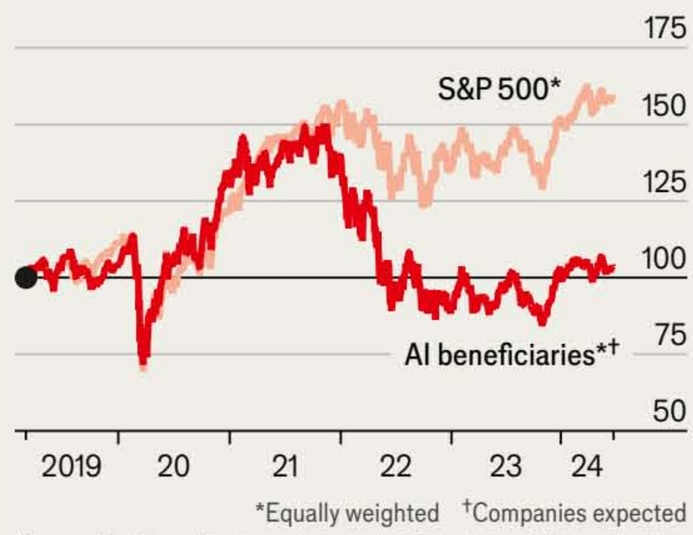
Concerns about data security, biased algorithms and hallucinations are slowing the roll-out. McDonald's, a fast-food chain, recently canned a trial that used AI to take customers' drive-through orders after the system started making errors, such as adding $222-worth of chicken nuggets to one diner's bill. A consultant says that some of his clients are struck by "pilotitis", an affliction whereby too many small AI projects make it hard to identify where to invest. Other firms are holding off on big projects because AI is developing so fast, meaning it is easy to splash out on tech that will soon be out of date.

Companies that are going beyond experimentation are using generative AI for a narrow range of tasks. Streamlining customer service is perhaps most common. ADP, a payroll firm, boasts of "a new feature that enables our small-business clients to...leverage gen AI to answer questions and better understand how to initiate an HR action". Others use the tech for marketing. Verizon, a telecoms firm, says it employs AI to create a better "personalised plan recommendation" for its customers; Starbucks, a coffee chain, uses it to make "more personalised customer offers".

If you think that such efforts seem faintly unimpressive, you are not alone. Goldman Sachs has constructed a stockmarket index tracking companies that, in the bank's view, have "the largest estimated potential change to baseline earnings from AI adoption via increased productivity". The index includes firms such as Walmart, a large grocer, and H&R Block, a tax-preparation outfit. Since the end of 2022 these companies' share prices have failed to outperform the broader stockmarket (see chart 2). In other words, investors see no prospect of extra profits. The technology could even be distracting executives from more pressing matters.

The intelligent investor 2

United States, share prices, March 4th 2019=100



*Equally weighted †Companies expected to gain most from adoption

Source: Goldman Sachs

What of the anecdotes that some firms are using AI to transform their operations? Klarna is one frequently cited example. The online financial-services firm recently claimed its AI assistant was doing the work of 700 full-time customer-service agents. Its boss says that, as a result of the tech, employment at the company is falling by a fifth each year. Yet this is, at best, an incomplete picture. Klarna is hoping to go public before long: talking about its use of AI drums up press. According to data from CB Insights, a consultancy, Klarna's headcount started to drop long before AI came on the scene. The company is worth perhaps half as much as it was in 2021. If it is now cutting employees, overhiring during the covid-19 pandemic deserves as much blame as AI deserves credit.

Doesn't compute

Indeed, there is no sign in the macroeconomic data of a surge in lay-offs. Kristalina Georgieva, head of the IMF, recently warned that AI would hit the labour market like "a tsunami". For now, however, unemployment across the rich world is below 5%, close to an all-time low. The share of rich-world workers in a job is near an all-time high. Wage growth also remains strong, which is hard to square with an environment where workers' bargaining power is supposedly fading.

Nor does an AI effect emerge if you dig more deeply into the numbers. Workers are not moving between companies faster than usual, as would probably happen if lots of jobs were disappearing. Using American data on employment by occupation, we focus on white-collar workers, who range from back-office support to copywriters. Such roles are thought to be vulnerable to AI, which is becoming better at tasks that involve logical reasoning and creativity. Despite this, the share of employment in white-collar professions is a percentage point higher than before the pandemic (see chart 3).

Some economists think AI will transform the global economy without booting people out of jobs. Collaboration with a virtual assistant may improve performance. A new paper by Anders Humlum of the University of Chicago and Emilie Vestergaard of Copenhagen University surveys 100,000 Danish workers. The average respondent estimates that ChatGPT can halve time spent on about a third of work tasks, in theory a big boost to efficiency.

However, macroeconomic data also show little evidence of a surge in productivity. The latest estimates, using official figures, suggest that real output per employee in the median rich country is not growing at all. In America, the global centre of AI, output per hour remains below its pre-2020 trend. Even in global data derived from surveys of purchasing managers, which are produced with a shorter lag, there is no sign of a productivity surge.

For such a spurt, firms need to invest in AI. Besides big tech—which is spending chiefly to develop AI products for others, rather than to boost its own productivity—most companies are not doing so. Capital expenditure (capex) among the rest of the S&P 500, an index of America's largest firms, is likely to fall this year in real terms. Across America's economy as a whole, it is hardly rising. Overall business investment in information-processing equipment and software is increasing by 5% year on year in real terms, well below the long-run average. Across the rich world, investment is rising more slowly than in the 2010s.

In time, businesses may wake up to the true potential of AI. Most technological waves, from the tractor and electricity to the personal computer, take a while to spread across the economy. Indeed, on the assumption that big tech's AI revenues grow by an average of 20% a year, investors anticipate that almost all of big tech's earnings from AI will arrive after 2032, according to our analysis. If an AI bonanza does eventually materialise, expect the share prices of the users of AI, not only the providers, to soar. But if worries about AI grow, big tech's capex plans will start to look as extravagant as its valuations. ■

What's a chatbot? 1

United States, use of artificial intelligence, % of companies

Sources: Census Bureau; *The Economist*

Managing just fine 3

United States, white-collar jobs, % of employment*

Sources: BLS; *The Economist* *12-month moving average

Business creation

The frappuccino effect

How Starbucks branches caffeinate local economies

STARBUCKS OFFERS endless opportunities for innovation. Parts of social media delight in hacking the chain's menu to create highly instagrammable drinks. Fancy a "cake batter Frappuccino"? Simply order a "vanilla bean crème Frappuccino", add a pump of hazelnut syrup and ask the barista to put a cake pop in the blender. How about some "liquid cocaine"? That involves four shots of espresso with four pumps of white-chocolate syrup, served over ice.

A new working paper suggests the purveyor of coffee-based milkshakes offers other innovation, too. Choi Jinkyong, Jorge Guzman and Mario Small, all of Columbia University, find that a new Starbucks in an American neighbourhood without a coffee shop leads to the creation of between 1.1 and 3.5 new companies a year over the next seven years. That, the authors argue, owes to the café's role as a "third place"—somewhere people can gather without a purpose. Branches "help entrepreneurs form and mobilise networks", they write.

Perhaps Starbucks spots neighbourhoods where the flat-white-sipping entrepreneurs of tomorrow will settle and boost business-creation numbers. To control for this, the authors lean on two sources of randomness: nimbyism and Earvin "Magic" Johnson, a basketball player. They compare places that gained a Starbucks with those where the chain had hoped to expand only to be foiled by planning objections, ensuring it was not the chain's foresight which explained the later business growth. They also look at places that gained a branch following a partnership with Mr Johnson which aimed to push the chain into poor neighbourhoods, and were thus not its usual sort of site.

The authors provide further evidence that the benefits are thanks to a new third space. They find no similar effects for Dunkin' Donuts, which does not typically provide much seating. By contrast, Caribou Coffee, a chain in the Midwest, has a similar model to Starbucks and provides similar benefits.

Although the paper is not yet peer-reviewed, it has historical plausibility. London's coffee houses were the site of 18th-century innovation. They were known as "penny universities": for the price of a cup one could gain access to the era's finest minds. Lloyd's of London, an insurance market, is the descendant of Lloyd's coffee house; London's stock exchange has a similar pedigree.

The results also provide a puzzle. Starbucks drew from Europe's cafés. Yet the presence of third spaces across the continent has not been enough to overcome its innovation struggles. Maybe there is something about the chain itself. Italians should trade their espresso for a "cotton candy Frappuccino" just in case.

Lending problems

Disappearing act

SHANGHAI

Chinese banks are now vanishing

THE SAVINGS AND LOAN (S&L) CRISIS terrorised America's banks for years. Starting in the mid-1980s, a mix of aggressive lending growth, poor risk controls and a property downturn contributed to the collapse or consolidation of over 1,000 small lending institutions. China's smallest banks are now suffering from many of the same ailments. But until recently few have collapsed or merged with others.

That is starting to change. In the week ending June 24th, 40 Chinese banks vanished as they were absorbed into bigger ones. Not even at the height of the S&L crisis did lenders disappear at such a clip.

China's regulators have been trudging through various reforms and consolidations for years. Since 2019 several mid-tier banks have collapsed. Powerful investment managers and state financiers have melted down. But it is small, rural banks that provide the most complex problem.

Some 3,800 such institutions dot the Chinese countryside. They have 55trn yuan ($7.5trn) in assets—13% of the total banking system—and have long been mismanaged, accruing vast amounts of bad loans. Many have lent to real-estate developers and local governments, gaining exposure to China's property crisis. In recent years some have revealed that 40% of their books are made up of non-performing loans.

Cleaning up this mess is an extremely delicate task. Many banks were established in order to serve small businesses, especially in China's poorest areas. Those stuck with toxic debts struggle to supply firms with new loans, which can hurt vulnerable companies and local economic growth. The worst-performing small banks have already threatened social stability, the main concern of Xi Jinping, China's leader. Fraud on a large scale caused several to freeze withdrawals in 2022, drawing depositors onto the streets of a provincial capital. But state intervention is risky, too. Rumours of distress, restructuring or consolidation can lead to bank runs.

One solution has been steady but meagre recapitalisation. Local governments are issuing special-purpose bonds, which they use for a number of things including bailing out banks. Although last year just 218bn yuan of proceeds went to regional banks, an amount equal to 1% of their risk-weighted assets, some troubled provinces have dished out more. Between December 2020 and May this year, Liaoning in Chi-

na's north-east injected 17% of special-purpose-bond proceeds into its banks.

Liaoning is also at the centre of what has now become China's main way of dealing with small, feeble banks: making them disappear. Of the 40 institutions that vanished recently, 36 were in the province and absorbed into a new lender, called Liaoning Rural Commercial Bank, which was created as a receptacle for bad banks. Since it was set up in September, five other institutions have been established to do similar work. More are expected.

This regulatory vanishing act will probably pick up pace. S&P Global, a rating agency, reckons it will take a decade to complete the project. Supporters say that fewer bigger banks will be easier for regulators to keep watch over. Critics argue that it is little more than sleight of hand. Combining dozens of bad banks, they say, only creates bigger, badder banks.

Regulators are doubling down on consolidation because they lack mechanisms to allow banks to fail and leave the market. During the S&L crisis American lawmakers passed the Financial Institutions Reform, Recovery and Enforcement Act. This created a way for small lenders' assets to be sold off and helped resolve the crisis in an orderly manner. China has fumbled such a law for years. Draft legislation, called the Financial Stability Law, was proposed at a lawmaking session in Beijing in June but was once again delayed. Such ineptitude is now common in Chinese policymaking. As economic growth slows further, technocrats will need to do more than wave a wand at the problems of the lowest rung of the banking system. ■

Conflict finance

In the wars

As a loan-repayment freeze runs out, Ukraine heads for default

War is still exacting a heavy toll on Ukraine's economy. The country's GDP is a quarter smaller than on the eve of Vladimir Putin's invasion, last year the central bank tore through foreign reserves and Russia's attacks on critical infrastructure have hurt growth forecasts. "Strong armies", warned Sergii Marchenko, Ukraine's finance minister, on June 17th, "must be underpinned by strong economies."

After American lawmakers' decision in April to belatedly approve a funding package worth $60bn, Ukraine is not about to run out of weapons. In time, the state's finances will also be bolstered by G7 plans, which were announced on June 13th, to use the profits from Russian state assets in Western financial institutions to lend another $50bn. The problem is that Ukraine faces a cash crunch—and soon.

When the lights go out

For the past two years, Ukraine's creditors have agreed to suspend debt-service payments. The let-off—from both government and private lenders—is worth 15% of GDP a year. If payments had been required, they would have been the state's second-biggest expenditure behind defence. Now, though, the moratorium from private bondholders, including Amundi, a French asset manager, and PIMCO, an American one, is set to expire on August 1st.

Therefore Ukraine has a month to avoid default. The IMF is keen for Mr Marchenko to negotiate a write-down, but a deal seems unlikely in the time available. If Ukraine does default, it will reflect a troubling lack of faith among private investors concerning the West's commitment. In the long run, that could spell disaster for the country's recovery.

Few restructurings have been undertaken in the heat of war. Countries do so to ensure access to financial markets, which requires manageable debts. A quick restructuring takes months, a difficult one years—creditors are never eager to give up claims. But Ukraine has been shut out of international capital markets since the war began, meaning there is little urgency. In June Mr Marchenko offered creditors a deal that cut 60% from the present value of its debts. The creditors coolly replied that they thought 22% was more reasonable.

Ukraine would appreciate the fiscal room. At the end of the year, its debt-to-GDP ratio will near 94%—high for an economy with its financial history and of its size. The sums that allies provide are impressive, but come in the form of artillery, tanks and earmarked funds, rather than cash. Only $8bn of America's recent package will go directly to Ukraine's government, an amount equivalent to just over a quarter of Ukraine's annual spending on social benefits, and even this is in the form of a loan. The EU plans to offer a little more, but still only $41bn over three years.

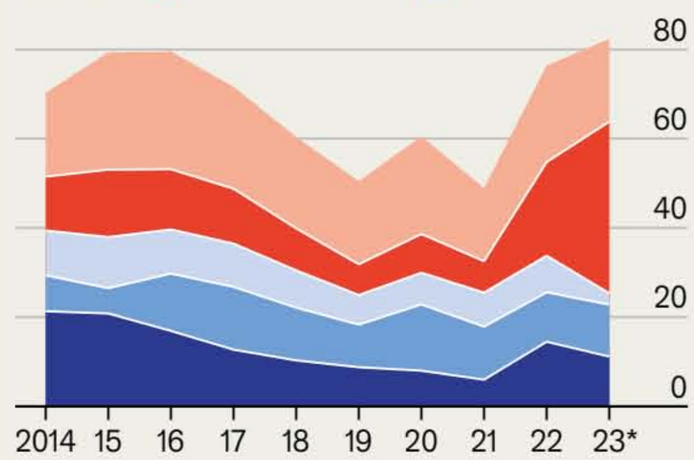
Although the let-off Ukraine wants is modest—$12bn from 2024 to 2027—the country has no spare cash to stump up if it is not granted. Under a restructuring deal as significant as the one Ukraine proposed, and bondholders rejected, the country would only just be able to make ends meet, reckons the IMF. For their part, bondholders question how exactly the fund can be so sure, especially since its analysis is now a few months out of date.

In the absence of a deal, Ukraine has a couple of options. One is to negotiate an extension on its debt-service freeze, as it has already with official creditors, who have agreed to forgo payments until 2027. The other is to default. That may sound drastic, but in reality there is little difference between the scenarios. Either way, Ukrainian payments will not resume.

The reticence of private-sector investors does not just reflect Ukraine's difficult financial outlook. In a normal restructuring, creditors gamble on a country's economic prospects. Lending to a borrower at war also entails a second gamble: that it will emerge from the conflict intact. "There has to be a country in existence to repay at the end of this," notes one bondholder. A lot will depend on the extent of ▸▸

Debts of despair

Ukraine, public debt by holder, % of GDP



Source: IMF *Estimate

Western support. Taxpayers may tire of handing over billions. Donald Trump, who has been sceptical of the amounts disbursed, looks increasingly likely to return to the White House in November. The IMF's usual models struggle to take such factors into account.

Bondholders are also sceptical about plans for Ukraine's long-term reconstruction in the case of victory. Although allies and the IMF have argued that restructuring now will enable Ukraine to re-enter financial markets as soon as the war ends and its allies forgive debts, investors are far from convinced that such a day will ever materialise. Rather, they think that a restructuring would simply be the first of many attempts by Ukraine's allies to push the financial burden of war, and the cost of reconstruction, away from governments and on to the private sector.

Much of Ukraine's recovery—including the construction of basic infrastructure and civic buildings, as well as training people to rebuild the country—will never turn a profit, and will thus need to be shouldered by the country's allies. The current impasse raises a worrying prospect: that distrust between them and private investors will slow down progress. Mr Marchenko was right to remind Ukraine's commercial creditors that a country's army is only as strong as the economy behind it. He could also have reminded Ukraine's allies that an economy is only as strong as the army keeping it in existence. ■

BUTTONWOOD

Ouroboros theory

American banks are more exposed to a weakening economy than they appear

THE EARLIEST depiction of the ouroboros—a serpent coiled in a circle, eating its own tail—was found in the tomb of Tutankhamun, a pharaoh who ruled Egypt around 1320BC. It was used in his funerary texts to depict the infinite nature of time, and later cropped up all over the place. In Ancient Rome it signified the seasonal cycle of the calendar year; in Norse mythology the snake was large enough to encircle the world. The idea is also an allegory for the modern financial system. It depicts how credit risk has been cycled out of banks, only to be gobbled up by them once more.

After the global financial crisis of 2007-09, lawmakers in America and Europe penned new rules to govern finance. These had two aims. First, to force banks to hold more capital against their assets, so as to cushion losses. Second, to curb the risky activities in which banks had indulged. Some, such as proprietary trading, were prohibited; others were simply discouraged, sometimes by assigning higher "risk weights" to spicier assets. Both aims are measured by "common equity tier 1 capital" or CET1, which divides bank equity by asset value, adjusted for risk weights.

At first glance, the effort has been a success. Big banks that held 5% CET1 in 2008 now hold 10-15%. Despite this, it is not clear that risk-weighting is doing what was intended. The rise of private credit and the growing popularity of derivatives through which banks sell credit risk to hedge funds imply that risk has been transferred out of the system. But the same firms taking the risk often turn around and borrow from the banks to fund themselves—cycling some of the risk straight back to the banks.

Start with the rise of non-bank lenders, such as those in private credit. The industry barely existed in 2007. Now it makes $1.5trn-worth of loans to firms. That is a small slice of the $14trn in debt that non-financial companies owe in America. However, it might well be the most dangerous. Large blue-chip firms, which rarely default, tend to rely on the $7trn corporate-bond market. By contrast, those companies that make use of private credit tend to be smaller, more indebted and riskier. Investors in private-credit funds are typically other non-bank financial institutions, such as insurance firms and pension funds.

The trouble is that leverage gets mixed in. Private-credit firms borrow some of the money they lend. Insurance and pension funds borrow against their investments to boost returns. Traced to its source, much of this lending will emerge from banks. After staying flat for years after the financial crisis, the amount owed to banks by American financial institutions has risen from $2.5trn in 2016 to $3.5trn now.

Next consider the spread of the "synthetic risk transfer" or SRT. These derivatives are popular in Europe and becoming more so in America, as banks prepare to implement the final phase of post-crisis regulations. Lenders create a bundle from loans they have made. Say the package in question is worth $100. The lender then slices it into three tranches. If the loans sour, the first tranche will take the first $5 in losses. The next tranche will take the next $5 in losses. The third and final tranche will wear everything else. Banks typically hold onto that third tranche, but sell the first and second tranches to hedge funds or other investors. Thus if only half the loans are paid back, the bank would lose $40. Some $25bn of SRTs were issued by banks last year, offloading risk from perhaps $300bn in loans.

Again, the issue is how hedge funds and others pay for these derivatives. Annual returns from them are typically in the single digits, meaning such outfits often borrow to juice pay-outs. Nomura and Morgan Stanley are among the lenders that accept SRTs as collateral against loans, taking some of the danger.

In both examples there has been risk transfer. Hedge funds buying SRTs will take losses before banks do. A private-credit fund that lends to a company which goes bust will lose out first, before any failure reaches a bank. Still, both examples show the difficulty of trying to push risk from the banking system. Ultimately, banks are in the business of maturity transformation: taking short-term deposits to make long-term loans. They have an unassailable advantage when doing this because they have access to a lender of last resort, the Federal Reserve, which will lend cash freely against long-term assets to solvent institutions. Attempts to cut them out are a bit like playing whack-a-mole—or perhaps whack-a-serpent.

FREE EXCHANGE

Break the safe

Cash is still everywhere. How much do central banks need to remove from the financial system?

THE WORLD is still, in a sense, swimming in cash. Or at least the electronic equivalent: central-bank reserves. The Bank for International Settlements (BIS), a club of central banks, estimates that the balance-sheets of rich-country central banks amount to roughly 50% of collective GDP. That is down from 70% in 2021—a reduction which reflects quantitative tightening (QT), or the off-loading of assets acquired while easing—but is still far above the pre-global-financial-crisis norm of around 10%.

QT is intended to enhance the disinflationary effect of raising interest rates. As assets roll off a central bank's balance-sheet, the corresponding reserves are extinguished. The process should, in the words of Janet Yellen, America's treasury secretary and a former chair of the Federal Reserve, be as interesting as watching paint dry. Yet if reserves are to return to anything like their earlier 10% level, that may not be the case. Some worry such a reduction would prompt nasty surprises in the financial system. Hawkish types nevertheless argue that central banks ought to ensure reserves once again become "scarce". They suggest that the "abundant" era created by quantitative easing has been destabilising, since banks no longer need to economise on their holdings or rely on the disciplining effects of money markets.

Commercial banks want to hold central-bank reserves for two reasons: to carry out transactions with one another and as a precaution in case things go wrong. Both reasons have become more pressing since the financial crisis. Banks are bigger and do more business; regulators have imposed stricter capital requirements. Moreover, the failure of Silicon Valley Bank last year showed that bank runs can be accelerated by digital communication. The Bank of England (BoE) now says that its preferred level of reserves in the British banking system is more or less double in cash terms what it was before the covid-19 pandemic.

Even so, the supply of reserves is still outstripping demand. Banks have to be willing to hold these abundant reserves at the prevailing interest rate. Modelling by David Lopez-Salido and Annette Vissing-Jorgensen, both of the Fed, finds that demand for reserves depends on a combination of the level of commercial-bank deposits and the spread between the rate that can be earned from lending in the money markets and the interest rate on reserves paid by the Fed. Owing to the surplus of reserves in the system, the interbank money market—in which banks lend reserves to one another—is moribund, offering barely, if anything, above the rate offered by central banks. Policymakers have therefore become borrowers of first resort, draining liquidity from the economy by offering a higher return than commercial alternatives.

So far this has not caused problems. Central banks have demonstrated over the past few years that they are able to use interest on reserves as a tool to tighten monetary policy. Regular payouts to banks may have been an annoyance for finance ministries, which own central bankers' profits and losses, but central banks exist to manage the economy, not to provide dividends to their shareholders. Critics contend, however, that this stability is illusory. Claudio Borio of the BIS is among those arguing that central banks should move back to a scarce reserve system. Their ability to secure liquidity would, for the first time in decades, have to be routinely tested in the money markets. That would be good, he has said: "If you don't use a muscle, it atrophies."

This atrophy was evident in September 2019, when the cost of American repo transactions, in which banks and others temporarily swap high-quality assets for reserves, suddenly spiked as corporate-tax payments and the settlement of some government debt coincided, raising demand for cash. The money market, where a small number of participants tend to trade similar volumes every day, was not capable of dealing with the sudden surge, meaning that the cost of borrowing spiked. The Fed had to put the brakes on QT that was then taking place, since reserves had turned out to be scarcer than thought.

Yet there are problems with the idea that a scarce reserve system is safer than an abundant one. Although advocates of a scarce system argue that, in such a system, money markets would monitor banks' creditworthiness and disseminate such information, market signals failed to flash warnings over excesses before the financial crisis. Nor did wholesale markets distinguish between institutions when the crisis hit. Banks with strong reputations found themselves frozen out alongside their shakier peers.

Threading the needle

Populist politicians are beginning to grouse more loudly about the subsidy for commercial banks inherent in the current system. For their part, central banks are now investigating hybrid approaches. The Fed wishes to move from an "abundant" system to what it calls an "ample" one, where changes to the volume of reserves have a small impact on their price. Under such a system, commercial banks would occasionally, but not always, rely on money markets. The Fed introduced a standing repo facility after the ructions of 2019, which sets a ceiling on the interbank rate. It is little used and intended as a backstop in case of emergencies.

Isabel Schnabel of the European Central Bank has eschewed the abundant-scarce framing and instead called for a move from a "supply-led" system to a "demand-led" one. Reserves would be determined by the appetite of commercial banks, at an interest rate set by the central bank via a weekly repo facility, its main refinancing operation. That should, she said, ensure the "smooth implementation of monetary policy". Andrew Bailey of the BoE has also touted a newish short-term repo facility. Under their approach, the world would still swim in cash, but it would be commercial rather than central banks in control of the hosepipe. ■

Science & technology

Barro Colorado Island

One hundred years of plenitude

GAMBOA, PANAMA

Even after a century of research, a tropical rainforest in Panama is still yielding exciting insights into Earth's biodiversity

CONSERVATIONISTS GENERALLY disapprove of flooding species-rich habitats. But the law of unintended consequences works in mysterious ways. For it was just such a flood, in 1913, that created Barro Colorado Island in central Panama. Gatun, the lake surrounding the island, was, at the time of its birth, the largest artificial body of water in the world. It formed the middle passage of the Panama Canal. Barro Colorado, meanwhile, has become the most intensively scrutinised scrap of tropical rainforest on Earth.

The field station from which this scrutiny is conducted opened in 1924, and in 1946 it was taken over by the Smithsonian Institution, which dubbed the operation the Smithsonian Tropical Research Institute (STRI). Since then, the island, and some neighbouring areas of forest on the mainland that have fallen under the STRI's auspices, have turned into biology's equivalent of a big physics facility like CERN, the home of the Large Hadron Collider. Though the STRI itself employs only 35 scientists, a further 1,200 visit each year, many of whom are regulars.

To mark the field station's centenary, a horde of old hands and enthusiastic youngsters gathered on June 18th in Gamboa, the island's nearest town, for three days of festivities to celebrate the past and plot the future. They discussed everything from how new species arise and the effect of lightning on insect ecology, to tropical forests' role in curbing climate change.

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66 A brain-controlled bionic leg

Biology's hundred-year scrutiny of Barro Colorado means its wildlife has been recorded in exquisite detail. The current roll lists 110 species of mammal (70% of which are bats), 384 birds, 33 frogs and toads, two salamanders, 23 lizards, 41 snakes, more than 400 ants, some 600 butterflies, 10,000 beetles and even 100 cockroaches. There are also 1,400 species of plants. Given this abundance, it is hardly surprising that the place has been the source of several fundamental ecological findings, and many new techniques of observation.

Early on, for example, it provided the first good test of the idea that the number of species a patch of habitat can support depends on its area. The so-called species-area relationship predicted that Barro Colorado's sudden isolation would cause local extinctions. Which it did. Ornithologists saw bird species dwindle in number by more than a quarter, while remaining unchanged in similar habitats on the mainland. Among other things, that result demonstrates the value of scale, if nature reserves are to be effective.

Barro Colorado also hosted the first serious study of wild primates (howler monkeys, by Clarence Ray Carpenter in the 1930s), the first big field investigation of echolocation in bats (by Donald Griffin in the 1950s), and the first attempt to attach ▸▸

numbers to the obvious truth that the tropics support more species of creepy-crawly than temperate climes do. This was launched in 1971, by Terry Erwin, an entomologist who "fogged" tree canopies on the island with insecticide, collected what fell out, and recorded the arthropods he found in each tree type. Combining this information with estimates of the number of tree species around the world, he concluded that Earth supported about 30m sorts of insects and other terrestrial arthropods. The current calculation is about a quarter of this, so it was not a bad estimate.

The island's plants have not been neglected. Between 1981 and 1983 a block of 50 of its 1,560 hectares was surveyed in detail by Robin Foster and Stephen Hubbell, to record the location and species of every tree and shrub with a stem-diameter of more than 1cm (initially, these numbered 242,000). The Forest Dynamics Plot, as it is known, has since been resurveyed every five years, permitting the life cycles of many woody plants to be understood in far better detail than was previously possible. It has also inspired the establishment of 77 similar plots in forests around the world, both tropical and temperate, containing 7m specimens of 13,000 species.

On top of all this, the STRI has itself provided a salutary example of the social evolution of American science over the past century. The field station's founders were men carved in the image of Theodore Roosevelt, the American president whose methods for getting the Panama Canal built included involving his country in a minor war. (The old-boy culture endured, as sexual-misconduct allegations revealed in 2021 made plain.) Today, though, the institute has become—fittingly—more representative of human diversity.

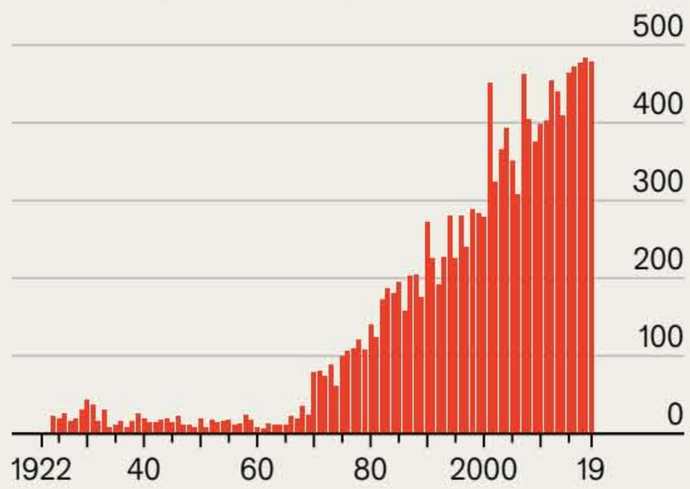
It is one thing to measure and describe the luxuriant biodiversity of the tropics, though, and quite another to explain it. Speciation's details can be hard to demonstrate. But in the case of trees of the genus *Inga*, which boasts 300 species, Phyllis Coley of the University of Utah, one of the station's old hands (she began her work there in 1995), thinks she has done so. The driving force behind *Inga*'s diversity, according to Dr Coley and her team, is herbivory—specifically by the moth and butterfly caterpillars that eat its members' leaves.

Over the years, they have studied 174 of these lepidopteran persecutors. They have shown that most are picky eaters, choosing their meals based on which toxic chemicals (there are about 200 varieties) particular trees pack into their leaves. Such specialisation in turn encourages diversification, as new species with new, temporarily insect-proof toxin profiles emerge.

Predation by insects is not, however, the only thing that encourages arboreal speciation. Habitat differences can help.

Turning trees into papers

Number of publications by STRI*



*Smithsonian Tropical Research Institute and its predecessors
Source: "The Smithsonian Tropical Research Institute: a century of ecological and applied research", by S.J. Wright, 2020

Camila Pizano, of Lake Forest College in Illinois, studies the island's population of *Trema micrantha*. This comes in two types, distinguishable by the sizes of their seeds, which prefer subtly different habitats.

As she explained, both require the forest's otherwise-uninterrupted canopy to have been opened to the sky by some accident to provide light for their growth. One variety, though, does best if the opening was caused by a landslip, which clears the soil of nitrogen-rich leaf litter and exposes the phosphorus-rich subsurface. The other thrives in the aftermath of a tree fall, when the soil remains nitrogen-rich and phosphorus-poor. Whatever the details, *T. micrantha* looks like a species dividing in two.

How insects speciate is also under investigation at the STRI. Owen McMillan and his group study a genus of toxic butterflies called *Heliconius*, which warn predators off by evolving distinctive colour patterns mimicked by other, less toxic, species. As part of their work this group's researchers have used CRISPR genetic editing to create a novel butterfly wing-colour pattern that looks, superficially, at least, like a new species. Whether the new morph, with its ivory-coloured wings, would prosper in the wild is unlikely ever to be tested, for releasing gene-edited organisms is frowned on. But the ability to create new heliconid designs is intriguing.

Treasure island

There was more. Much more. Rachel Page, heir to Griffin as head of the institute's bat research, reviewed classic studies of how the island's 74 bat species are defined not only by what they eat (fruit, frogs, fish, insects and, for vampires, blood) but also by when and where, thus minimising competition and increasing the effective number of ecological niches.

Kane Lawhorn entertained the troops with an explanation of how the frequency of lightning strikes regulates beetle populations (by providing food in the form of dead and injured trees), while Andrew Seiler talked of a different sort of "weather": the constant rain of arthropods pitter-pattering from the canopy to the forest floor.

Roland Kays described his adventures tracking kinkajous (arboreal relatives of raccoons) with GPS-enabled radio tags and told of one particularly large and dominant male being posthumously crapped on in apparent triumph by rivals. His collaborator, Meg Crofoot, explained that kinkajous, which have smaller brains than the local monkeys, are just as successful at foraging for food, suggesting better foraging is not the reason big brains have evolved.

Such findings are striking. But Barro Colorado's most important contribution to ecology may be in serving as inspiration to try similar things elsewhere. Those 77 simulacra of the Forest Dynamics Plot, for example, constitute, together with the Panamanian original, a network called the Forest Global Earth Observatory (ForestGEO), which is an attempt to compare and contrast forest ecology across the planet. Stuart Davies, ForestGEO's director, told the meeting that ForestGEO itself is being recruited, along with similar networks covering tropical, temperate and boreal forests, into a megaproject called GEO-TREES. The organisers of this hope to use local estimates of biomass to calibrate satellite measurements of the same areas. That would make extrapolations from space-based measurements more reliable.

This is important. Tropical rainforests are huge stores of carbon that might otherwise add to atmospheric carbon dioxide. Understanding whether they are, in any given place, increasing their carbon stocks or releasing them into the air, is crucial to monitoring global warming. More accurate measurements would also enable more regular check-ups to police untoward changes. For, much as urgent change is needed to combat global warming, when it comes to forests, the urgent need is for nothing to change at all. ■

Surgery

The brains of the operation

NOTTINGHAM

Ultrafast genomic sequencing could guide the hands of neurosurgeons

LÉO WURPILLOT was ten years old when he learned he had a brain tumour. To determine its malignancy, sections of the tumour had to be surgically removed and analysed. Now 19, he recalls the anguish that came with the subsequent three-month wait for a diagnosis. The news was good, and today Mr Wurpillot is a thriving first-year biomedical student at Cardiff University. But the months-long post-operative anticipation remains hard for patients to bear. That wait may one day be a thing of the past.

On June 27th a group of brain surgeons, neuropathologists and computational biologists met at Queen's Medical Centre in Nottingham to hear about an ultrafast sequencing project developed by researchers at Nottingham University and the local hospital. Their work will allow brain tumours to be classified from tissue samples in two hours or less. As brain surgeries typically take many hours, this would allow results to come in before the end of surgery and inform the operation itself.

Different tumours require different types of treatment. Some can be dealt with by radiation therapy or drugs alone, whereas others require surgery. But deciding how much of the tumour must be cut away in the delicate area of the brain, where removals can have lifelong consequences for the patients, is exceptionally tricky. And without knowing how dangerous the tumour is, surgeons cannot make the right judgments about how aggressive to be.

To help them out, the Nottingham team is relying on a technology called nanopore sequencing. This sequences molecules of DNA or RNA by passing them through tiny holes engineered into a membrane. By measuring how an electric current running through those holes changes as different parts of the molecule pass through, the DNA can be read in real time. Nanopore sequencers can also speed up the analysis by doing something called adaptive sampling. This scans each DNA strand to see if it contains specific mutations that might be of interest. If none is found, the strand is ejected from the pores, leaving them open to sequence another strand.

As data come out of the sequencing device it is processed by algorithms that classify the tumour as malignant or otherwise. Since March last year the team have analysed tumours from 90 patients. Thirty were retrospective samples to check their technique matched the answers given by conventional molecular and genomic classification methods. A further 60 were prospective samples taken during surgery. Across all 90 patients, the results matched those obtained by the old techniques in over 90% of cases, says Simon Paine, a consultant neuropathologist at Nottingham University and part of the project team.

Stuart Smith, a consultant neurosurgeon at Nottingham University Hospitals Trust and another member of the team, has canvassed colleagues about the data they have previously been able to generate on patients' tumours. His results suggest the new technique would have changed the surgical strategies employed between 18% and 50% of the time. In some cases patients would have needed only one brain surgery rather than two.

The approach is attracting interest. Dr Paine says that many of Britain's neurology centres have contacted them about the technique. They think it could eventually spread to the analysis of other types of tumour, including lymphomas and leukaemias, for which a battery of tests already exists. If ultrafast sequencing can be speeded up even further, drugs capable of effecting genetic changes in a brain tumour could one day be given during the operation itself. The team hopes they can get the test validated and approved for use as a diagnostic tool in the coming months.

Neurosurgeons are not the first clinicians to discover the benefit of nanopore sequencing. A recent three-year study at Guy's and St Thomas' NHS Foundation Trust used it to sequence the pathogens found on patients in intensive care, and found that 3% of patients were harbouring pathogens responsible for dangerous diseases such as Legionnaires' as well as nasty strains of MRSA. Bringing genetic sequencing to the medical front lines heralds a new era of diagnostic possibilities. ■

A cut above

Fermentation

Brewed awakenings

New strains of yeast can produce untapped flavours of lager

AS FREQUENT PUB-GOERS will be well aware, beers come in two varieties—lagers and ales. Lagers are brewed at cool temperatures and typically have a crisp taste. Ales, known to be spicy and flavourful, are brewed in the warmth. Both get their distinctive flavours from fermentation—the conversion of sugars into alcohol and carbon dioxide—by single-celled fungi known as yeast.

Different yeast strains fed the exact same sugary diet will create different flavours of beer. Yet lager-fanciers have been short-changed—there are only 85 strains of lager yeast, compared with 358 strains for ale. If a team led by Jennifer Molinet and Francisco Cubillos at the University of Santiago, in Chile, get their way, though, new types of lager may soon arrive, with completely different aromas and flavours from anything currently on tap.

Lager yeast are hybrids, a combination of *Saccharomyces cerevisiae* and *Saccharomyces eubayanus*. *S. cerevisiae* is the old faithful of brewers and bakers—a central ingredient in wines and breads, as well as beers. *S. eubayanus* is more specialised, thriving in chilly environments.

Strains of *S. eubayanus* and *S. cerevisiae* first crossed over somewhere in Germany ▸▸

more than 400 years ago. Ever since, lager yeast have been carefully bred and selected to maximise their taste, speed of fermentation and durability. To this day all extant lager strains are derived from this original hybrid, and belong to one of only two genetically distinct groups, Saaz and Frohberg, named after a Czech town and a German brewery, respectively.

For centuries these were thought to be the limits of the lager universe. But in a paper in *PLOS Genetics*, Dr Molinet, Dr Cubillos and their colleagues unveiled new hybrids of *S. cerevisiae* and *S. eubayanus*. Such hybrids would have been impossible to create before 2011, says Dr Cubillos. That was when a different team of researchers uncovered new strains of *S. eubayanus* in the bark of Southern beech trees in Patagonia. Dr Molinet's interest was first sparked by the yeast's ability to survive the cold, harsh climes of Tierra del Fuego, the region's southernmost tip. Only later did she think of making new lager hybrids.

The first hybrid that Dr Molinet and colleagues created in 2021 was a failure. It was no better at converting sugars into alcohol than its parent strains. That was no surprise—today's top lager yeasts have benefited from centuries of careful breeding. Undeterred, the researchers artificially accelerated evolution. Over the next seven months or so, the team created hundreds of generations of lager yeast, each time selecting the ones with the most desirable traits for making a delicious brew. They soon noticed that yeast that inherited mitochondria (the energy-producing part of cells) from *S. eubayanus* rather than *S. cerevisiae* did particularly well. The researchers suspect that since these mitochondria come from the cold-loving *S. eubayanus*, they are better suited to the brewing conditions necessary for lager.

After 250 generations, the researchers found that improvements plateaued. The final hybrid, called H3-E, was a more effective fermenter than any of its ancestors. It was also hardier and more flavourful. Compared with the citrusy taste of a commercial lager, the H3-E hybrid is spicy with hints of clove. (Even ale drinkers might be tempted.) When the researchers presented their work at a microbiology conference in Chile last year, they did so alongside 500 litres of their brew. It was a hit. "People were unhappy when it ran out," says Dr Cubillos. Breweries in Chile have since used their hybrid for local competitions and to sell to customers in limited-edition batches.

Don't try to order it from a nearby pub quite yet, though. Commercial lager yeast typically ferments in seven days, half the time the new hybrid needs. That will slow down large-scale production. But Dr Cubillos and his team are refining their technique, and are optimistic about the future. That calls for a drink. ■

Bionics

Best foot forward

People can now control robotic leg prostheses with their brains alone

BEFORE HUGH HERR became a professor at the Massachusetts Institute of Technology (MIT), he was a promising rock climber. But after being trapped in a blizzard during a climb at age 17, he lost both his legs below the knee to frostbite. Since then he has worked on creating prosthetic legs that would work and feel like the real thing. He appears to have succeeded.

In an article published on July 1st in *Nature Medicine*, Dr Herr and his team at MIT describe seven people with below-the-knee amputations who can now walk normally with the help of surgery and new robotic prostheses. For the first time, Dr Herr says, people have been able to walk with bionic legs—mechanical prostheses that mimic their biological counterparts—that can be fully controlled by their brains.

As the most important muscles in an intact leg come in pairs, so that one muscle can stretch while the other contracts (the hamstrings and the quadriceps are one such agonist-antagonist pair), the goal of Dr Herr's procedure was to replicate this structure in those who had undergone amputations. The surgery, therefore, involved stitching together the ends of two sets of leg muscles in the remaining part of the participants' legs. Each of these new connections forms a so-called agonist-antagonist myoneural interface, or AMI. This, in effect, replicates the mechanisms necessary for movement as well as the perception of the limb's position in space. Traditional amputations, in contrast, create no such pairings in place of the ones removed.

Movin' on up

Dr Herr's team then gave each of the participants a battery-powered prosthesis developed in their lab, along with a small electrical controller. The prosthesis was connected to the AMI by electrodes on the skin, such that the controller could pick up the AMI muscle movements and translate them to movement in the prosthesis.

Once the robotic leg was linked to the AMI, nerve signals travelling from the brain to the muscles and back allowed the participants to have full control of their new legs. Though prosthetics controlled by nerve signals have been designed before, these were typically only controlled by the participants' brains during certain movements, such as when the foot was off the ground, in the "swing phase" of walking. But in the latest study the participants were in charge at all times. "No previous study was able to show this level of brain control," says Dr Herr.

Nor was any previous study able to show such spectacular results. People with the AMI-linked robotic leg increased their walking speed by 41% compared with people who used the same prosthetic but had received a below-the-knee amputation without an AMI. That gave them equivalent performance to people with intact legs. They were also able to walk up and down stairs and navigate slopes and obstacles, which meant they could adapt to different terrains between 32% and 43% faster than those with standard amputations.

AMIs can bring benefits even without a fancy bionic limb. Many people with amputations feel a phantom limb, a sort of ghostly remnant of their lost leg, which can be uncomfortable—Dr Herr has previously described his own experience as feeling like his feet were stuck in hard ski boots. More than 50 people have received AMIs since 2016, and at least one study reported a reduction in the pain and discomfort associated with phantom limbs. Those benefits may mean it becomes the standard way to perform amputations, says Adam Stokes from the University of Edinburgh, who was not involved with the work.

Stanisa Raspopovic from ETH Zurich, who was also not involved, adds that Dr Herr's "promising and beautiful" approach could be the end goal for below-the-knee amputations. But it remains to be seen if it could achieve similar results for people with amputations involving knees or upper-body limbs. Nor will everyone be able to get the AMIs they need. Decades after his amputation, Dr Herr has only enough muscle mass to construct an AMI for a robotic ankle, but not a whole robotic foot. He says he is considering it regardless. Even if he cannot get the full effect, it may prove a sensible step. ■

Culture

Visiting the Middle East

Call of the desert

AL ULA

Saudi Arabia has sun, sea and (lots of) sand. Can it become a premier tourist destination?

RECENT EVENTS in Saudi Arabia have not been a good advert for tourism. Between 2m and 3m Muslims visit the country each year for the *hajj*, the annual five-day pilgrimage that all Muslims aspire to do at least once. Last month, as temperatures exceeded 50°C, more than 1,300 people died, many from heat stress. The country's authorities have been castigated for failing to take care of the pilgrims.

Despite the calamities this year, believers will still flock to the desert kingdom. In 2023 some 13.5m people came for the *umrah,* a lesser pilgrimage that takes place all year round. But for many non-Muslims, the conservative country is not high on their travel bucket lists. Saudi Arabia is better known for its crude-oil reserves, autocratic governance and use of the death penalty than for its sightseeing or luxury resorts.

Saudi authorities are eager to change that. Tourism is a key part of Vision 2030, an economic-reform plan announced in 2016. Muhammad bin Salman (MBS), the crown prince and de facto ruler, is the driving force behind the strategy, which is designed to promote new industries, create jobs and eventually wean the economy off oil. MBS sees Vision 2030 as a way to improve the country's image—and his own.

The numbers sound impressive: the government says it is investing $800bn in the tourism sector. (The sum includes some spending on Neom, a vast development in the north-west that is not all about tourism and has been beset by problems.) Since 2019 tourism has risen from 3.6% to 4.5% as a share of GDP; the aim is to reach 10% by 2030. If achieved, that would make the sector a far bigger part of the economy than in tourism heavyweights such as France and Spain. There is plenty of supply, then, but what about demand?

Currently most tourists are locals. Of the 100m trips taken in the country in 2023, 79m were taken by Saudis. But the number of international tourist arrivals to Saudi Arabia is rising fast (albeit from a lower base than its competitors). According to the UN World Tourism Organisation, Saudi ranked third in tourism growth in 2023 when compared with pre-pandemic rates. The goal is 150m tourists annually by 2030. The government is targeting rich visitors who live relatively close, particularly those from China, Europe and India.

The people who do travel to Saudi Arabia tend to have some kind of connection to the country: in 2022 only 2.5m visited for pure leisure purposes rather than for business or religion or to see family and friends. It has rather a lot of catching up to do if it wants to rival Britain, say, which attracted 12m fun-loving foreigners that year.

Nonetheless there has been a wholesale change in the kingdom's attitude towards outsiders. Visas used to be hard to get. They limited pilgrims to the two holy cities, Mecca and Medina, and lasted only as long as the pilgrimage. Before 2019 entry for non-religious tourists was impossible.

Today e-visas are available almost instantly to citizens of 66 countries; people can stay for up to three months. The six members of the Gulf Co-operation Council plan to offer their own version of the ▸▸

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Schengen visa, allowing tourists to travel through the region on a single permit.

In the past, Saudi Arabia emphasised its Islamic history to the exclusion of all else. Today, to widen its appeal, it draws attention to its pre-Islamic past as well. Al Ula, around 350km from Medina, boasts some of the finest remains of the Nabataean civilisation after those at Petra in Jordan. More than 2,000 years ago the Nabataeans carved tombs into the hulking rocks; the inscriptions, sphinxes and griffins have survived the constant erosion of the sand. Tour guides point out shrines to the goddesses Uzza, Manat and Allat.

Such ancient sites give Saudi Arabia an advantage over its regional rivals, according to Allan Schwartzman, a member of the advisory board for the Royal Commission for Al Ula. In other countries religious extremists have destroyed evidence of pre-Islamic history, such as the city of Palmyra in Syria and the Buddhas of Bamiyan in Afghanistan, once one of the great tourist attractions of the Silk Road. Not everyone is pleased with this new approach to the past, however. Saad al-Fagih, a dissident in exile, thinks that MBS is trying to sponsor a pagan revival: "It's like Druids taking over Britain and replacing Westminster Abbey with Stonehenge."

A decade ago a visit to Al Ula was an endurance test. One Saudi woman says the single hotel there was so unappealing that she slept in her car rather than risk staying in it. The tombs were roped off. Now the experience is rather different. At sunrise visitors can glide over the ruins in hot-air balloons. Air-conditioned buses take visitors to a centre where they can buy gelato before going to visit the tombs. Where women were once shut away behind closed doors, the guides now include women who delight in describing burial rites. Music plays through speakers in Al Ula's old town, giving the site a Disneyland feel.

Luxury accommodation is a key part of the great touristic vision. People should think of Saudi Arabia as the new Maldives, enthuses one hotelier, pointing to the turquoise waters of the Red Sea. At the newly opened St Regis, on a private island in Al Wajh Lagoon, visitors can stay in villas floating over the water. Hilton, an American chain, aims to quadruple the number of its hotels in the kingdom to 100; many of them are already under construction. Ironically, for a country built on oil wealth, these resorts tout their eco-credentials. The St Regis bans single-use plastic on its site. Red Sea Global, the developer behind the project, makes much of its plans to protect the area's coral reefs.

But Saudi Arabia is spreading its bets. If ancient ruins and hotel rooms that start at $1,500 a night don't appeal to visitors, perhaps big sporting events will. In 2029 the kingdom will host the Asian Winter Games at a "planned" mountain resort in the Neom development; it is bidding to host the football World Cup in 2034.

The government is also hoping to establish Saudi as a cultural hotspot by building scores of museums and hosting music events such as Soundstorm, a rave in the desert. A short drive from Al Ula is Maraya, a mirrored concert hall (pictured on previous page), which has hosted the likes of Lauryn Hill, an American rapper.

Celebrity chefs including Wolfgang Puck have opened eateries in Riyadh to cater to the demands of hungry visitors. Gymkhana, a Michelin-starred Indian restaurant in London, has established an offshoot in Riyadh. So have Sarabeth's, a popular New York brunch spot, and Angelina, a Parisian café.

The tourism board has clearly thought long and hard about what makes for an attractive destination. Its determined efforts are creating a sense of buzz. But challenges remain. One is that much of the country is blisteringly hot for large parts of the year, and climate change will make the heat even less bearable. Another is that many Western tourists like a cold beer by the pool. Rumours abound that the laws prohibiting alcohol may change in the near future—as they have in nearby places such as the United Arab Emirates—but for now the country remains almost completely dry. And the latest unrest in the Middle East taints Saudi Arabia by association, even if the kingdom itself is safe to visit.

Above all, the country has an image problem. The murder of Jamal Khashoggi, a journalist; the stifling of political speech; the limits on the rights of women: all loom large in many outsiders' impressions of the kingdom. Many remain unaware of its recent transformation. People still wonder whether they can wear shorts or if they can stay in the same room as their wives, says Jerry Inzerillo, who is in charge of developing Diriyah, a mud-brick city that was originally the home of the Saudi royal family. (The shorts depend on the location, but wives are welcome.)

Some potential visitors worry that tourism, like sport and big art projects, is being used to launder the country's reputation for human-rights abuses and as a fossil-fuel producer. When Saudi Arabia started welcoming holiday-makers in 2019, social-media stars were lambasted for posting photos from sponsored jollies. Accusations that Saudi forces have been told to use lethal force to clear land for The Line, part of Neom, will not help change outsiders' perceptions of the kingdom.

The country's new tourism slogan implores people to: "Go Beyond What You Think." Many travellers may find that too difficult. But officials in Saudi Arabia are putting their faith in another, time-worn maxim: "Build it and they will come." ■

Shakespeare in the 21st century

Not of an age, but for all time

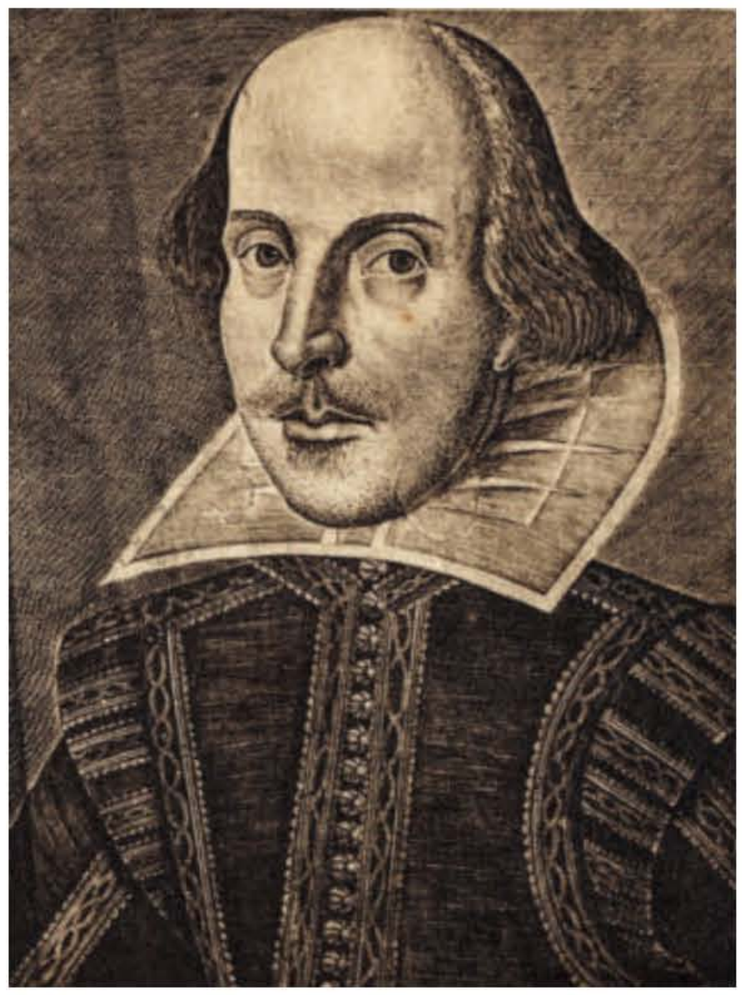
WASHINGTON, DC

The Folger Shakespeare Library reopens, with a renewed purpose

WHAT IS THE world's largest Shakespeare collection doing in Washington, DC? Across the street from the Library of Congress, diagonally opposite the Supreme Court, sits the Folger Shakespeare Library. At first glance, the large neoclassical block of white marble looks like another government building. Approach the entrance, however, and you will be greeted by a statue of Puck, the mischief-making sprite from "A Midsummer Night's Dream". At his feet, a quotation reads: "Lord, what fooles these mortals be!"

The library was established by Henry and Emily Folger, Gilded Age philanthropists who spent their oil fortune obsessively collecting First Folios and rare Shakespeare materials. After years of hoarding the collection in bank vaults, they decided to create a monument to Shakespeare in America's capital. "The poet is one of our best sources, one of the wells from which we Americans draw our national thought, our faith and our hope," Emily said. The Founding Fathers similarly adored Shakespeare, seeing in his tyrants the need for institutional checks on power.

The Folger Shakespeare Library opened in 1932 and ever since has catered to a rarefied community of scholars and theatre patrons. In 2020 it closed for a renovation to the tune of $80.5m, aimed at making the library more welcoming. "We're trying to take down barriers," says ▸▸



Shakespeare, looking to the future

Greg Prickman, the director of collections and exhibitions. "Our mission is to make the collection accessible."

Most of the Folger's holdings—which include some 277,000 books and 60,000 manuscripts—had been housed in a vast underground storage facility. To share more of its treasured hoard with the public, the library has created new galleries, adding 12,000 feet of public space underneath the Great Hall and theatre.

The extension comes at a time when Shakespeare's exalted place in the public imagination is increasingly under threat, at least in America. To those on the political right, he is obscene; schools in Florida have abridged the plays because of their "raunchiness". Some on the left see him as colonialist, racist and misogynistic. Teachers have questioned whether he is still relevant to students and suggested setting the plays aside in favour of works by non-white or female authors. Few leading American universities still require literature students to take a module on Shakespeare.

The Folger wants to make the case that Shakespeare belongs to everyone, even if he seems pale, male and stale. Washington's population is 44% black. Beyond the political sphere is a neighbourhood with "all kinds of folks who haven't been aware of the Folger because the Folger has behaved like it wasn't aware of them," says Peggy O'Brien, its director of education.

So a new exhibition addresses the subject of race head-on. It includes a portrait of Ira Aldridge, who in 1825 became the first black actor to play Othello (the role had hitherto been assumed by white actors in blackface). "For too long, Shakespeare was seen as both the property of white culture and evidence of its supremacy," a display notes. The Folger itself is implicated in this thorny history. In 1932 Joseph Quincy Adams, who became the library's first director, praised Shakespeare as the "cornerstone" of Anglo-Saxon culture, key to forging a homogenous American nation when "The forces of immigration became a menace to the preservation of our long-established English civilisation."

Elsewhere the challenge is making the old artefacts look exciting. In the centre of the hall, the First Folios—the Folger's crown jewels—glow dimly in a glass vitrine. Around 750 copies of Shakespeare's collected plays were originally printed in 1623. Only 235 survive today; the Folger owns more than a third. Visitors are now able to see all 82 copies for the first time. "They were stored in the furthest corner of the deepest vault and now they're inside the front door," says Ms O'Brien.

To help visitors explore the collection, the Folger has turned to technology. An interactive light show highlights the Folios' unique qualities. Which was the most expensive? A copy acquired by Henry Folger in 1903 for $48,732 ($1.7m today). How many of them were owned by women? A third. Visitors can explore the Folios via touchscreen. What is the rust stain on one Folio? An outline of spectacles from a reader who left their glasses on the book.

Another exhibition hall will rotate rare books and manuscripts, from Geoffrey Chaucer's "Canterbury Tales" to Mark Twain's "Is Shakespeare Dead?". In the short book, Twain expounded his view that someone else wrote the works. "So far as anybody actually knows and can prove, Shakespeare of Stratford-on-Avon never wrote a play in his life," wrote Twain. "All the rest of his vast history, as furnished by the biographers, is built up, course upon course, of guesses, inferences, theories, conjectures—an Eiffel Tower of artificialities rising sky-high."

Ironically Henry Folger seems to have harboured similar doubts; so did several Supreme Court justices who visited the Folger's collection. "I think the evidence that he was not the author is beyond a reasonable doubt," said John Paul Stevens, who suspected that Edward de Vere, the Earl of Oxford, was the true author. "People have a lot of different opinions about Shakespeare," says Ms O'Brien. "That's to be acknowledged and invited. It's a dialogue." In its expansion, the Folger has even made room for heretical views. ■

Rules of conduct

Manners maketh money

Etiquette training is a booming business

A CENTURY AGO, Emily Post made manners popular. Her bestselling book, "Etiquette" (1922), framed the "fundamentals of good behaviour" as fashionable rather than fusty; she offered practical advice ("when in doubt, wear the plainer dress") as well as dramatic warnings (a young lady "unprotected by a chaperone" is like "an unarmed traveller walking alone among wolves").

Readers were gripped. Post received thousands of letters a week. In 1950 *Pageant*, a magazine, named her the second-most powerful woman in America. (Eleanor Roosevelt—at that point the chair of the UN commission on human rights—topped the list.)

A century after Post's magnum opus, people are again saying "yes please" to politeness. A host of influencers offer etiquette lessons online, preaching on posture and teaching table manners. #Etiquette posts on TikTok have been viewed

more than 5bn times. William Hanson, a British etiquette coach with some 5m fans on Instagram and TikTok, leads The English Manner, an "etiquette and protocol institute". Sara Jane Ho, a Chinese instructor, has taken niceties to Netflix. "Mind Your Manners", a reality show, was nominated for an Emmy award in 2023.

People are looking for help at the office as well as at home. Influencers cover topics such as how to start meetings (promptly) and advise on digital faux pas, including how to leave a group chat (quietly). More than half of American companies are enlisting experts to help employees hone their professional personas, according to a survey of bosses. The Institut Villa Pierrefeu—which claims to be the only traditional finishing school in Europe that is still operating—used to teach debutantes proper deportment. It now teaches managers how to run a department.

Old institutions are adapting to 21st-century norms. Courses at the Institut Villa Pierrefeu mix "modern conventions" with "time-honoured traditions". Debrett's, a guide to Britain's aristocracy, has updated its "A-Z of Modern Manners" to include behaviours such as "manspreading" and "ghosting". Other books offer lessons in modern cordiality. Ms Ho recently published her etiquette teachings. Mr Hanson's guide to decorum will be published in September.

This flurry of politesse comes at a time when most people think manners are in decline. Some 85% of Americans believe society is less civil than it was a decade ago, according to a recent survey; 90% of parents think youngsters aged between six and 18 are disrespectful. Most blame social media and peer pressure.

As well as concerns about impertinence, interest in gentility has surged for two reasons. The first is covid, which ▸▸

stopped folk interacting face-to-face. People started worrying that their social skills were getting as much use as their formal wear. Mr Hanson says attendance at his in-person sessions increased by 60% after the pandemic. His clients tend to be between 25 and 45 years old, but those who came of age during covid are particularly self-conscious. Big consulting firms such as KPMG have introduced soft-skills training for pandemic-era graduates.

The second reason is a confusion about what constitutes best practice in a global, digital age. There are guides online to everything from #emailetiquette to #selfieetiquette, #flyingetiquette to #airbnbetiquette. Following experts such as Ms Ho, who says her viewers "know what to do anywhere, with anyone, in any situation", can seem like a sure-fire way to avoid embarrassment. Finishing schools, which offer courses such as "international etiquette" and the "European art of dining", appeal to people who want to socialise or do business in foreign cultures.

Like all customs, what is deemed genteel is subject to change. Post knew this, and criticised people who said the young were rude because they followed less formal etiquette. Louise Mullaney, a sociolinguist, looks at cordial language in "Polite", a new book. People have long seen linguistic shifts as a sign of crumbling civility, she notes, but they are a "natural and inevitable process of language evolution". An oft-cited example is the phrase "if it please you", which was popular in Shakespeare's day. By the time Post published "Etiquette" it had been shortened to "please". Young people now find it perfectly acceptable to type "pls" on mobile phones.

Artificial intelligence (AI) will change politeness once more. McKinsey, a consultancy, reckons soft skills will become only more important for business leaders in an age when generative AI can do much of the analytical heavy lifting. Good manners may become more appreciated.

At the same time, AI could also make people ruder. Parents worry that children who bark instructions at virtual assistants such as Amazon's Alexa are becoming terse. Google has tried to remedy this with its "pretty please" feature, which prompts children to say "the magic word".

A growing field of research suggests polite prompts make AI models perform better. A new study by researchers in China, Japan and Britain found that rude requests cause chatbots to make things up and omit important bits of information. AI mirrors human receptiveness to social etiquette, the researchers think, because it is trained on massive amounts of data created by people. (Excessive flattery, too, prompts mistakes in chatbots.) In the digital world, as much as the physical one, it helps to mind your Ps and Qs. ■

A Western love story

Melancholy in the mountains

The Heart in Winter.
By Kevin Barry. *Doubleday; 256 pages; $28. Canongate; £16.99*

TOM ROURKE is a dope fiend with one foot already in the grave. He fancies himself a poet; the rest of Butte, Montana, fancies him a "mad little Irish motherfucker". When he meets Polly Gillespie, newly wed to another man, both feel something shift. They don't loiter long in Butte. The lovers strike out together for Pocatello, Idaho, from which they plan to ride the rails to San Francisco—and to freedom.

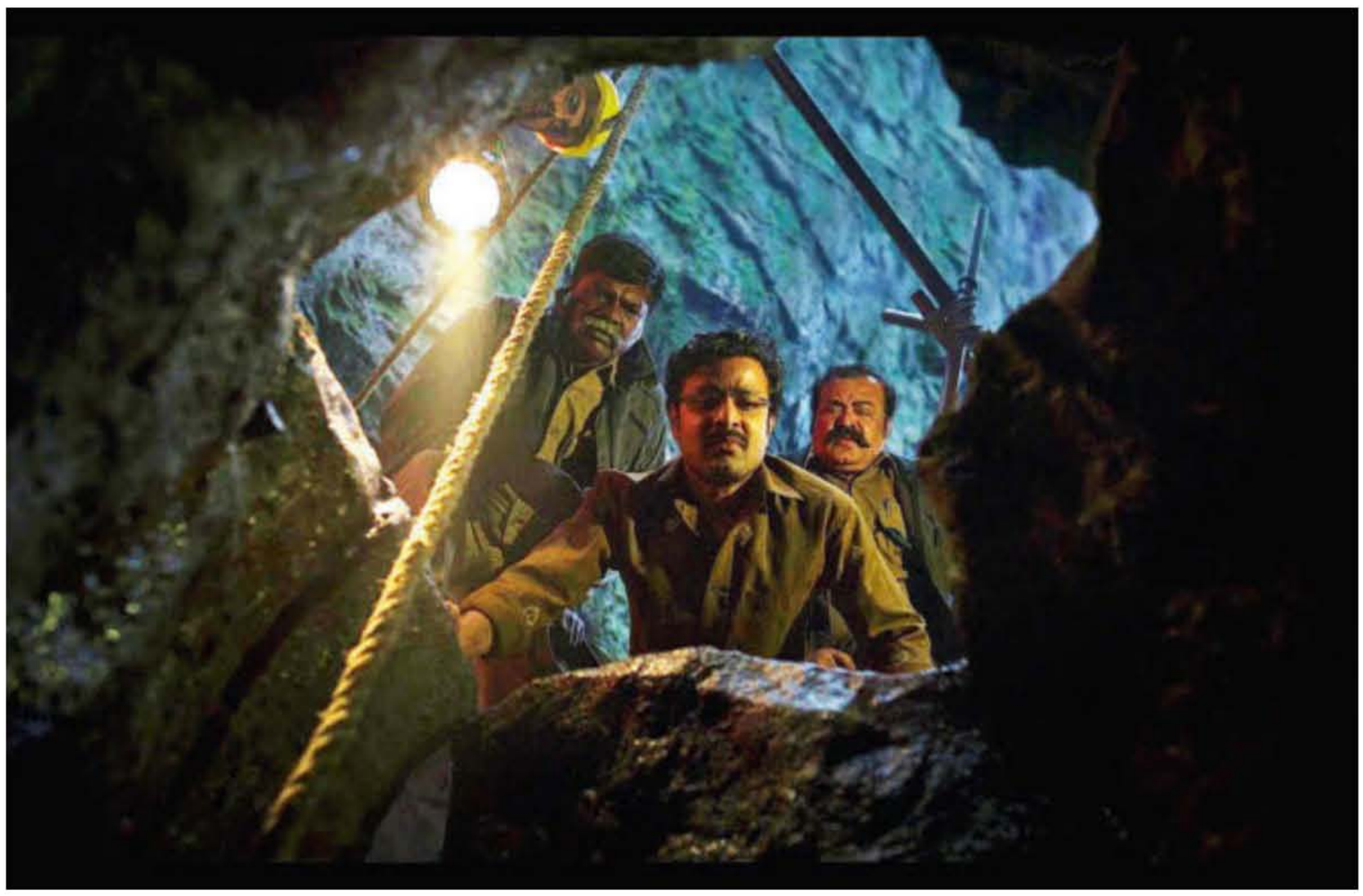
From the very beginning of "The Heart in Winter", a tragedy seems to be in the offing. This is typical of Kevin Barry, who writes lyrically of melancholic Irishmen. His previous book, "Night Boat to Tangier", about two aged gangsters, was longlisted for the Booker prize in 2019. In this new novel, as in that one, a sense of foreboding is shot through with dark humour.

Here Mr Barry's concern is the Irish diaspora and the men who crossed the Atlantic to toil in the copper mines of boomtowns in the 1890s. Tom is one of these emigrants, though he prefers to eke out a living by writing songs and love letters on commission rather than down the mines.

It is tempting for writers contemplating the American West to try to craft a story as grand as the land itself, an epic tale that roves across half the continent. Mr Barry does not shy away from using the landscape—his lovers traverse the wilds between Butte and Pocatello partly on horseback—but the yarn is intimate in scope. This love story revolves around the impetuousness and restlessness of the two main characters. Before meeting Polly, Tom haunts the streets of Butte searching for drugs, and for God. Sometimes he finds both, as when "He took a smoke of what meagre dope he had left...and he experienced the truth and glory of God the Almighty in the here and now of the opiate night."

Yet the couple's escapades do reflect the two sacred tenets of a great Western novel: a reverence for the landscape and an awareness of its brutality. Readers may see flashes of Cormac McCarthy, whose Westerns are filled with a violence he saw as endemic to the region, or glimpse the influence of Jack Kerouac, whose characters in "On the Road" careen across the country in search of feeling. Both Tom and Polly are bloodied on their journey. But "Love and death they coexist in our violent and sentimental world," Mr Barry writes. "They might even depend one on the other."

The land of the loving



Stories from Kerala

Features great and small

The rise of Mollywood, India's more subtle film hub

To outsiders, and indeed many in the country, Indian cinema is all about *masala* movies. Named after the blend of spices ubiquitous in the country's cuisine, these films feature a mix of genres, formulaic plots and larger-than-life heroes. Most of India's highest-grossing movies—many from Bollywood, the behemoth Hindi-language film industry—can be classified as *masala*. But these big-budget, action-packed melodramas belie India's diverse cinematic output.

It is Mollywood which is leading the way in variety and sophistication. (The name nods to Malayalam, the language of Kerala state, where the film-makers are based.) It is arguably India's most productive film industry: some 200 Malayalam films were released in 2023. Bollywood—which caters to around 500m Hindi speakers, 15 times Kerala's population of 35m—produced roughly the same number.

There is quality as well as quantity, and nuanced fare is increasingly appealing to Indian audiences. "Manjummel Boys" (pictured), released in February, brought in 2.4bn rupees ($29m) at the box office, making it the highest-grossing Malayalam movie ever and the third-most successful film in India in 2024 so far. Unlike other national hits, the film's cast is relatively unknown and its plot is unusual. The survival thriller, based on a true story, follows a group of boys trying to rescue their friend who is trapped in a cave.

In its simplicity and parsimony—it cost 200m rupees to make—"Manjummel Boys" stands in stark contrast to "Fighter", Bollywood's biggest hit of the year to date. That blockbuster cost 13 times more and featured an ultra-nationalist plot, pitting India's air force against Pakistan's. The film also threw in a romance between Bollywood's biggest stars for good measure.

Yet "Manjummel Boys" is no exception: there have been a string of Malayalam box-office hits of late. Of the ten highest-grossing Indian movies this year, three have been Mollywood productions. They depict fresh stories. "Aadujeevitham" ("The Goat Life"), released in March, recounts the true tale of an immigrant labourer in Saudi Arabia forced into slavery as a goatherd. "Aavesham" ("Excitement") follows college students who become entangled with an eccentric gangster. Even "Bramayugam" ("The Age of Madness"), a horror movie shot in black and white—these days, the ultimate artistic indulgence—has achieved commercial success.

For years, Kerala's movies were limited to audiences within the state, but they are now finding fans farther afield. Thanks to the rise of streaming, dubbed or subtitled regional movies can reach a national audience. The trend accelerated during the pandemic, as film-starved Indians stuck at home discovered Malayalam movies for the first time. "The Great Indian Kitchen", released on Prime Video in 2021, told the story of a housewife struggling in a patriarchal household. It was shot in one location and became a surprise hit; it has been remade in Hindi. (Bollywood has often adapted successful Malayalam stories, rarely with the same panache.)

What explains Mollywood's distinctiveness? One reason is the industry's history. Many early Indian films were based on stories from Hindu epics such as the Mahabharata; portraying deities, including the elephant-headed Ganesha, required expensive prosthetics and costumes. But Kerala's production studios eschewed such tales, says G.P. Ramachandran, a film critic. That was partly out of financial necessity, but mostly out of choice. The industry was shaped by the literary and social movements of the state, which was a hotbed of communism in the 20th century, as it is now. Films both niche and commercial still explore social issues.

Another factor has been the state's demography. Just 55% of Kerala's population is Hindu (compared with 80% nationally). The state's Christian and Muslim populations (18% and 27% of the total, respectively) demand content that speaks to a broad audience. Malayalam films avoid the religious tropes that have infiltrated Bollywood with the rise of the Bharatiya Janata Party (BJP), India's Hindu-nationalist governing party. For the same reason the BJP has struggled to make much headway in Kerala, which has always been dominated by secular, left-leaning parties.

The cinema-going public in Kerala is also discerning. The state is India's most developed and its population the most literate. Keralites take pride in their taste and film groups have proliferated since the first society was set up in 1965. Cineastes organise screenings of offbeat flicks and expose aspiring film-makers to cutting-edge techniques from around the world.

C.S. Venkiteswaran, a critic, estimates that roughly 50% of all Mollywood movies are made by first-time producers, who may offer new ideas. As with independent films in the West, small budgets can prove helpful, as they force film-makers to focus on storytelling and character development rather than whizzy effects or elaborate set pieces. A study by a consulting firm in 2021 found that, compared with other regional cinema, Malayalam movies feature more humble, "people-like-us" protagonists, and far fewer antagonists.

Mollywood is not yet a potent commercial force—last year only 7% of its films turned a profit—but this crop of celebrated films shows that subtle stories can find a wide audience. India's box office can be volatile, Mr Ramachandran points out, and Indians are unlikely to abandon their beloved *masala* fare entirely. In time, however, Malayalam movies may contribute to a more balanced cinematic diet. ■

Economic & financial indicators

	Gross domestic product, % change on year ago, latest		quarter*	2024†	Consumer prices, % change on year ago, latest		2024†	Unemployment rate, %		Current-account balance, % of GDP, 2024†	Budget balance, % of GDP, 2024†	Interest rates, 10-yr gov't bonds, latest, %		change on year ago, bp	Currency units, per $, Jul 3rd	% change on year ago
United States	2.9	Q1	1.4	2.2	3.3	May	3.0	4.0	May	-3.8	-6.3	4.4		50.0	-	
China	5.3	Q1	6.6	4.7	0.3	May	1.0	5.0	May‡§	1.2	-4.8	2.0	§§	-47.0	7.27	-0.3
Japan	-0.7	Q1	-2.9	0.8	2.9	May	2.4	2.6	May	3.2	-4.8	1.1		67.0	161	-10.5
Britain	0.3	Q1	2.9	0.4	2.0	May	2.6	4.4	Mar††	-2.8	-4.2	4.3		-15.0	0.78	1.3
Canada	0.5	Q1	1.7	1.9	2.9	May	2.4	6.2	May	-0.4	-1.1	3.6		34.0	1.36	-2.9
Euro area	0.4	Q1	1.3	1.0	2.5	Jun	2.4	6.4	May	3.0	-3.1	2.6		21.0	0.93	-1.1
Austria	-1.1	Q1	0.7‡	0.5	3.2	Jun	3.5	5.0	May	2.9	-2.3	3.1		8.0	0.93	-1.1
Belgium	1.3	Q1	1.1	1.2	5.5	Jun	3.5	5.9	May	-0.6	-4.6	3.2		6.0	0.93	-1.1
France	1.3	Q1	0.6	1.2	2.5	Jun	2.7	7.4	May	-0.3	-5.2	3.3		45.0	0.93	-1.1
Germany	-0.2	Q1	0.9	0.3	2.5	Jun	2.4	3.3	May	6.5	-1.5	2.6		21.0	0.93	-1.1
Greece	1.9	Q1	3.0	2.6	2.4	May	2.8	10.6	May	-5.8	-1.3	3.8		7.0	0.93	-1.1
Italy	0.7	Q1	1.4	1.0	0.9	Jun	1.5	6.8	May	1.0	-5.4	4.0		-2.0	0.93	-1.1
Netherlands	-0.6	Q1	-2.0	0.1	3.4	Jun	3.4	3.6	May	8.6	-1.4	2.9		17.0	0.93	-1.1
Spain	2.4	Q1	3.2	2.4	3.5	Jun	3.0	11.7	May	2.2	-3.5	3.4		7.0	0.93	-1.1
Czech Republic	-0.2	Q1	0.9	1.3	2.6	May	2.3	2.7	May‡	0.4	-2.5	4.2		-13.0	23.3	-6.6
Denmark	1.3	Q1	-5.4	1.4	2.2	May	1.7	2.9	May	9.5	1.6	2.6		-7.0	6.90	-1.0
Norway	-0.8	Q1	0.7	1.0	3.0	May	3.3	4.1	Apr‡‡	15.9	12.0	3.7		10.0	10.5	1.5
Poland	2.0	Q1	2.0	2.9	2.6	Jun	3.8	5.0	May§	0.5	-5.4	5.8		-3.0	3.98	2.3
Russia	5.4	Q1	na	2.7	8.3	May	7.1	2.6	May§	1.8	-1.6	15.1		404	88.5	0.7
Sweden	0.3	Q1	2.9	0.3	3.7	May	2.1	8.7	May§	5.5	-1.0	2.3		-26.0	10.5	3.6
Switzerland	0.6	Q1	1.8	1.0	1.4	May	1.4	2.4	May	6.6	-0.3	0.7		-21.0	0.90	nil
Turkey	5.7	Q1	9.9	3.0	71.6	Jun	55.8	8.5	Apr§	-2.8	-4.7	25.7		967	32.6	-20.3
Australia	1.1	Q1	0.5	1.7	3.6	Q1	3.2	4.0	May	0.3	-1.3	4.3		36.0	1.49	0.7
Hong Kong	2.7	Q1	9.6	3.2	1.1	May	2.2	3.0	May‡‡	8.1	-2.8	3.6		-11.0	7.81	0.3
India	7.8	Q1	5.4	6.9	4.7	May	4.8	9.2	Jun	-1.1	-5.1	7.0		-12.0	83.5	-1.9
Indonesia	5.1	Q1	na	5.1	2.5	Jun	3.0	4.8	Q1§	-0.3	-2.2	7.1		88.0	16,370	-8.2
Malaysia	4.2	Q1	na	4.4	2.0	May	2.5	3.3	Apr§	2.5	-4.4	3.9		-5.0	4.72	-1.1
Pakistan	2.8	2024**	na	2.8	12.6	Jun	14.5	6.3	2021	-1.7	-7.4	14.1	†††	-124	278	2.9
Philippines	5.7	Q1	5.3	5.4	3.9	May	3.7	4.0	Q2§	-2.5	-5.9	6.6		4.0	58.7	-5.8
Singapore	2.7	Q1	0.2	2.4	3.1	May	2.9	2.1	Q1	19.5	0.1	3.3		20.0	1.35	nil
South Korea	3.1	Q1	5.3	2.7	2.4	Jun	2.6	3.0	May§	2.8	-1.6	3.3		-34.0	1,391	-6.0
Taiwan	6.6	Q1	1.1	3.3	2.2	May	2.0	3.4	May	14.2	0.5	1.8		61.0	32.7	-4.7
Thailand	1.5	Q1	4.6	2.8	1.5	May	1.0	1.2	May§	2.4	-3.6	2.8		nil	36.8	-4.2
Argentina	-5.1	Q1	-9.9	-3.2	276	May	225.1	7.7	Q1§	0.2	-0.8	na		na	916	-71.8
Brazil	2.5	Q1	3.1	2.0	3.9	May	4.2	7.1	May§‡‡	-1.4	-7.8	12.5		185	5.58	-14.2
Chile	2.3	Q1	7.8	2.7	3.4	May	3.8	8.3	May§‡‡	-3.2	-2.3	6.3		98.0	936	-14.7
Colombia	0.9	Q1	4.4	1.0	7.2	May	6.6	10.3	May§	-2.8	-5.7	10.6		45.0	4,097	1.9
Mexico	1.6	Q1	1.1	2.1	4.7	May	4.4	2.6	May	-0.6	-5.0	10.0		128	18.1	-6.0
Peru	1.4	Q1	3.2	2.5	2.3	Jun	2.6	6.2	May§	-0.4	-3.1	7.1		15.0	3.79	-4.5
Egypt	2.2	Q1	na	2.6	28.2	May	30.9	6.7	Q1§	-3.4	-5.0	na		na	48.1	-35.8
Israel	-0.5	Q1	14.4	1.4	2.8	May	3.0	3.4	May	5.7	-6.8	5.2		141	3.76	-1.6
Saudi Arabia	-0.8	2023	na	1.0	1.6	May	2.0	3.5	Q1	-0.3	-2.2	na		na	3.75	nil
South Africa	0.5	Q1	-0.2	1.1	5.1	May	4.8	32.9	Q1§	-2.0	-5.2	9.9		-56.0	18.3	2.2

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

Markets

In local currency	Index Jul 3rd	% change on: one week	Dec 29th 2023
United States S&P 500	5,537.0	1.1	16.1
United States NAScomp	18,188.3	2.2	21.2
China Shanghai Comp	2,982.4	0.3	0.3
China Shenzhen Comp	1,608.1	-2.0	-12.5
Japan Nikkei 225	40,580.8	2.3	21.3
Japan Topix	2,872.2	2.5	21.4
Britain FTSE 100	8,171.1	-0.7	5.7
Canada S&P TSX	22,223.7	2.0	6.0
Euro area EURO STOXX 50	4,965.8	1.0	9.8
France CAC 40	7,632.1	0.3	1.2
Germany DAX*	18,374.5	1.2	9.7
Italy FTSE/MIB	33,845.0	0.9	11.5
Netherlands AEX	931.1	0.9	18.3
Spain IBEX 35	11,056.8	0.2	9.5
Poland WIG	87,927.1	0.1	12.1
Russia RTS, $ terms	1,137.5	nil	5.0
Switzerland SMI	12,018.3	nil	7.9
Turkey BIST	10,682.2	1.9	43.0
Australia All Ord.	7,986.1	-0.5	2.0
Hong Kong Hang Seng	17,978.6	-0.6	5.5
India BSE	79,986.8	1.7	10.7
Indonesia IDX	7,196.8	4.2	-1.0
Malaysia KLSE	1,615.3	1.5	11.0

	Index Jul 3rd	% change on: one week	Dec 29th 2023
Pakistan KSE	80,233.7	2.5	28.5
Singapore STI	3,415.5	2.5	5.4
South Korea KOSPI	2,794.0	0.1	5.2
Taiwan TWI	23,172.4	0.8	29.2
Thailand SET	1,294.7	-1.9	-8.6
Argentina MERV	1,603,517.0	1.8	72.5
Brazil BVSP*	125,661.9	2.5	-6.4
Mexico IPC	52,796.3	0.6	-8.0
Egypt EGX 30	28,161.2	2.4	13.1
Israel TA-125	1,961.4	-0.1	3.9
Saudi Arabia Tadawul	11,595.2	-0.5	-3.1
South Africa JSE AS	80,772.8	1.9	5.0
World, dev'd MSCI	3,537.5	0.5	11.6
Emerging markets MSCI	1,079.8	-0.6	5.5

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 29th 2023
Investment grade	107	154
High-yield	372	502

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

Commodities

***The Economist* commodity-price index** 2020=100	Jun 25th	Jul 2nd*	% change on month	year
Dollar Index				
All Items	131.9	132.8	-3.5	5.8
Food	142.5	141.1	-5.3	1.5
Industrials				
All	123.2	125.9	-1.9	10.0
Non-food agriculturals	136.9	135.5	-0.7	18.0
Metals	119.7	123.5	-2.2	8.0
Sterling Index				
All items	133.8	134.6	-2.7	6.2
Euro Index				
All items	140.9	141.3	-2.3	7.3
Gold				
$ per oz	2,324.4	2,328.8	0.1	20.8
Brent				
$ per barrel	85.6	87.0	12.2	14.2

Sources: Bloomberg; CME Group; Fastmarkets; FT; LSEG Workspace; LME; NZ Wool Services; S&P Global Commodity Insights; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

For historical indicators data, visit economist.com/economic-and-financial-indicators

OBITUARY

Ángeles Flórez Peón ("Maricuela")

The last militiawoman to defend Spain's Second Republic died on May 23rd, aged 105

SHE NEVER carried a rifle. Ángeles Flórez Peón was not one of those redoubtable women, in aprons or overalls, who lined up with guns at their shoulders in 1936 to shame the men into fighting. Instead, what she usually carried during her months as a *miliciana*, defending the Second Republic at the start of Spain's civil war, was a huge pot of stew. She and her sister-comrades would cook it up and haul it to the front line at Oviedo. Sometimes they had to crawl beneath the bullets that crackled from balconies and windows. Her friend Angelita, covering for her one day, was killed outright by a sniper. She herself felt lucky to survive.

When women were withdrawn from the front line, which annoyed her, she briefly became a nurse in a field hospital. It was set up in the cavernous spaces of an old match factory in Gijón, where she had charge of 30 beds. Here she carried mostly bandages and water. She did the job for two months only, but it was still enough to get her arrested, when Oviedo fell to General Francisco Franco's forces, for *rebelión militar* that earned her 15 years in jail.

As the decades passed, the vital burden she carried was simply memories like those. As she neared 100, very few minds stretched back that far. For almost 40 years, under Franco's dictatorship, Spain had been made to forget the trauma of the civil war. The deep wounds that remained went untouched. Eventually there would be no one left who had actively defended the republic, a fervent socialist dream that lasted a mere eight years before it fell. But she remembered that fight with the vivid passion of the rebel she always was. When she became the last living militiawoman, the only repository of this history, it was her duty to tell it. A country without memory was a country without a soul.

Her first memories were of misery, into which bright socialism burst like the sun. Asturias, her province, was rugged coal country, where bosses worked miners almost to death. Her miner-father came home filthy every day because there were no showers. Pathetic little vegetable gardens were planted to supplement the meagre pay. Her parents, both of the left, separated when she was nine, but her mother's earnings as a midwife did not stretch to toys or school. Instead of going to class Ángeles mopped other people's floors, and grew up illiterate. But then came the day, in 1931, when the republic was proclaimed. Her mother's hand grasped hers as they rushed into the street, the flags and the cries of "Viva la Republica!" The general joy and those repeated shouts, liberty, equality, justice, marked her for life.

Tragedy then made her an activist. In 1934 her elder brother Antonio, a communist, took part in a miners' strike and was shot dead by the Civil Guard. Because she had adored him she plunged into the socialist cause, joining a youth group and selling socialism in the villages with talks and plays. In one, "Rise up, poor people of the world!", she played the lead, a girl called Maricuela. The name was really ugly to her, but it stuck. It was Maricuela rather than Ángeles who had just finished rehearsing in the village of Pola de Siero on July 18th 1936, and was dancing in the park, when loudspeakers announced the coup and pleaded for defenders. At once she and her sister Argentina rushed to help.

Within months she was in a women's jail. Here memory was sharp. A car idling outside her house; a 15-minute trial, and the stupid, false accusation that she had killed two "Moorish" soldiers. Once inside, nuns came to make her pray. She had to do the fascist salute and sing their anthem, "Facing the Sun". Refusal meant five days on bread and water in a solitary cell. Footsteps past her door at night were women being taken to be shot. Her boyfriend Quintin, meanwhile, was killed in the fighting. He left her a ring, a bracelet and a letter warning her to be careful.

So much for that. After five years she was let out on parole, only to fall into activism again, marry a militant miner and, in 1948, go into exile. On Holy Thursday that year, a very hot day, she dressed as a tourist in three layers of clothes and hid under an oilcloth on a fishing boat with her baby daughter in her arms. They were going to join her husband Graciano in France. She and he did what they could for Spain from there, in the soul-less Franco time. Apart from one trip in 1960, when she was stopped at the border as a terrorist, she did not return to her country for 56 years.

At 85 then, petite, charming and beautifully turned out, she was still Maricuela the rebel. Tirelessly she spoke her mind all across Asturias and beyond. Two books recorded her memories and drove home her themes. At 95, she got on Facebook; at 97 she had 900 friends. Twenty-first century Spain, modern, more secular and much freer, was very different from the Spain she had left. But she stayed anxious. Women were still not treated as equals by too many men. Abortion rights looked fragile. And memories were fading. Though socialist governments tried to re-examine the horrors of the war and trace the disappeared, the work had far to go.

For Spain's left-wing parties she had a simple message: unite or lose. The Second Republic and the Popular Front that grew out of it had been riven, then destroyed, by arguments between factions. Division had lost the war. Socialism had returned, but still in a fractured state. And yet they all wanted the same things: equality, liberty, justice, peace. She had seen those ideals collapse before. They must not collapse again.

Spain's new socialists feted her as their Maricuela, the precious keeper of Spain's past. Yet she felt they had especially forgotten the role women played on the socialist side. The men had fought and been made heroes; the women were largely unknown. But they had been fighters too, struggling like her for justice and to hold families together. *Luchar*, *luchar*, *luchar*. Fight and fight again. She spoke for them, using simple, weighty, repeated words: liberty, equality, unity. Or *nada*, nothing. What were a people, or a country, with no memory and no history? *Nada*, *nada*, *nada*. ■

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