

The Economist

The doom loop in British prisons

Our US election model: Trump ahead

Inside Hizbulah's finances

Putin's plan to dethrone the dollar

OCTOBER 26TH–NOVEMBER 1ST 2024

THE EVERYTHING DRUGS

Not just for
obesity—but
addiction,
Alzheimer's and
ageing too?



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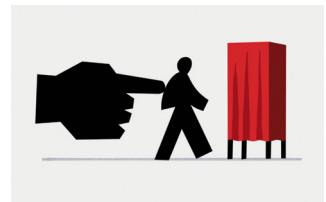
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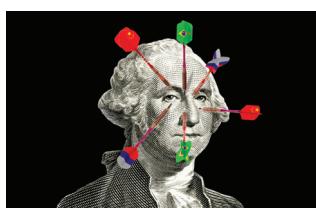
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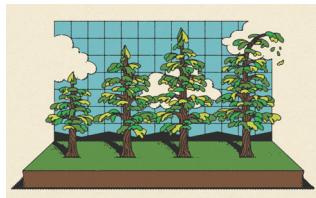
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Volume 453 Number 9420

Published since September 1843

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



Hopes of a ceasefire in Gaza after the death of **Yahya Sinwar**, the leader of Hamas, seemed to fade. Mr Sinwar was the mastermind of the attacks on October 7th 2023 which unleashed the war. He was killed in a firefight with an Israeli patrol in the south of Gaza. **Binyamin Netanyahu**, Israel's prime minister, said that the conflict was not over.

Antony Blinken made his 11th visit to the Middle East in just over a year. America's secretary of state told Mr Netanyahu that Israel needed to allow more humanitarian aid into northern Gaza. Earlier this month America warned Israel that it risked restrictions on military assistance if it did not increase food supplies and other aid to the strip.

Israel escalated its offensive on its second front, in Lebanon, targeting institutions, including banks, linked with Hizbullah, the Iran-backed militia. It called for a broad evacuation before launching air strikes in Tyre, a historic port city where many displaced people had fled, and hit the suburbs of Beirut. America asked Israel to scale down its strikes on the capital to avoid more civilian deaths. Both sides confirmed that **Hashem Safieddine** was killed three weeks ago. He was the presumed successor to Hassan Nasrallah, Hizbullah's former leader, who is also now dead.

Saudi Arabia began building the **Mukaab**, a cube-shaped skyscraper in Riyadh, that would be the world's largest building. The giga-project is meant to be finished by 2030.

Two prominent opposition figures, Elvino Dias and Paulo Guambe, were murdered in **Mozambique**. Mr Dias had been preparing a legal challenge to the results of the country's general election. Frelimo, in power since 1975, is likely to win; international observers said the vote had been plagued by irregularities.

Egypt became the most populous African country (and the world's fifth) to be declared **malaria free** by the World Health Organisation. Mummies show the illness, which jumped from great apes to people in the African rainforest and then migrated up the Nile valley, arrived there more than 5,000 years ago.

Paul Biya reappeared. Cameroon's 91-year-old president landed in Yaoundé, the capital, returning from Switzerland. He had not been seen in public for over six weeks, prompting speculation that he had died.

A little help from my friends
Donald Trump filed a legal complaint accusing Britain's ruling Labour Party of sending staff to campaign for his opponent, Kamala Harris, in swing states. Britain's prime minister, **Sir Keir Starmer**, said the volunteers were travelling on their own time, and that the dispute would not tarnish his "good relationship" with the Republican candidate.

Elon Musk, the CEO of Tesla and owner of X, was criticised for launching a lottery that awards \$1m to a registered American voter every day in an apparent effort to rally Republicans in swing states.

Maia Sandu secured a first-round victory in Moldova's presidential election, which was marred by allegations of Russian meddling. The pro-Western president is expected to prevail in a run-off against Alexandr Stoianoglo, a Russophile. In a parallel referendum, Moldovans voted to enshrine ambitions to join

the European Union in their constitution by a razor-thin majority of 50.46%. Ms Sandu called it an "unfair fight", blaming Russian dirty tricks.

At least five people were killed and many wounded in a suspected **terrorist attack** at a defence facility near Ankara, Turkey's capital. No group claimed responsibility. Turkey's interior ministry blamed the PKK. It conducted retaliatory airstrikes on targets linked with the Kurdish militia group in Syria and Iraq.

Giorgia Meloni, Italy's prime minister, fought to save her scheme to divert asylum-seekers to Albania. After the first group of 12 migrants from Bangladesh and Egypt arrived at a processing centre last week, an Italian court ordered them to be transported to Italy. To overcome the legal hurdle Ms Meloni's cabinet passed a decree that designated 19 countries as "safe" to return to.

Austria's president, Alexander Van der Bellen, asked the chancellor, Karl Nehammer, whose centre-right party came a close second in the parliamentary election in September, to form a government, after the other main parties said they would not join a coalition with the hard-right Freedom Party, which came top.

President Volodymyr Zelensky presented his "Victory Plan" for **Ukraine** to European leaders in Brussels, making the case for his country to be invited into NATO. The five-point strategy argued for sustained funding and an expanded arsenal. It also laid out what Ukraine could offer the West if it were to win the war with Russia.

America and NATO confirmed that **North Korea** is sending troops to help Russia fight in Ukraine. America's secretary of defence, Lloyd Austin, said the escalation would be a "very, very serious issue" with possible repercussions in the Indo-Pacific region. Ukraine

estimated that Russia's ally had committed 11,000 troops to the conflict. **South Korea** said that it might supply Ukraine with weapons in response.



China's leader, **Xi Jinping**, and India's prime minister, **Narendra Modi**, held their first bilateral meeting in five years on the sidelines of the annual BRICS summit, in Russia. Mr Xi urged co-operation between the two powers to promote "the multipolarisation of the world and the democratisation of international relations". Days earlier the two countries reached a truce around patrolling their disputed Himalayan border—an issue that has overshadowed their relations since 2020.

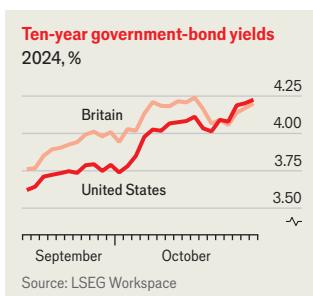
Clean government

The first stage of the trial of Singapore's opposition leader, **Pritam Singh**, for charges of lying under oath in parliament, wrapped up. Mr Singh, who heads the Workers' Party, has pleaded not guilty.

Alejandro Toledo, Peru's former president, was convicted of corruption in connection with the Lava Jato scandal that erupted in Brazil a decade ago. A court found him guilty of taking at least \$35m in bribes in a highway-construction deal. He was sentenced to 20 years and six months in prison.

Power was restored to much of **Cuba** after several days of countrywide blackouts. The island gets its electricity from unreliable Soviet-era power plants and generators on ships rented from Turkey. The government has admitted that it can no longer afford the oil.

The world this week Business



Even as many countries' stock-markets hover near all-time highs, investors are feeling jittery. The **gold price** broke a new record this week, hitting nearly \$2,750 per troy ounce. Meanwhile, government borrowing costs have been rising sharply on both sides of the Atlantic. Ten-year American **Treasury bonds** now yield 4.2%, up from 3.6% in mid-September; ten-year **British gilts** also yield 4.2%. The same period saw a slide in the value of the **Japanese yen**. One dollar now fetches ¥152, up from ¥140.

Investors in **corporate bonds** are feeling much more chipper. The spread between the yield on investment-grade debt and American Treasuries fell to 0.8 percentage points, its lowest in nearly 20 years.

The **Tokyo Stock Exchange** hosted its biggest initial public offering since 2018. **Tokyo Metro**, which runs the Japanese capital's underground railways, raised \$2.3bn and saw its share price soar by 45% on the first day of trading.

The stockmarket debut of **Hyundai Motor India**, the world's second-largest in the year to date, went less well. Retail traders spurned the offering and the share price fell a little on its opening day.

Open, sesame

America's consumer-finance regulator finalised a set of **open-banking** rules. Open banking forces lenders to share financial data, fostering competition and the development of new fintech apps. It is already in place in Britain and the

European Union. The Bank Policy Institute and the Kentucky Bankers Association, two lobbyists, responded by suing the regulator.

Deutsche Bank announced its highest-ever profit for the third quarter of a year. It made €2.3bn (\$2.1bn) before taxes, though the bank's chief financial officer also warned that its provisions for bad loans would rise to €1.8bn, from €1.5bn in 2023. Deutsche Bank's share price has had an unusually good run of late, rising by 30% since the start of the year. **Lloyds Bank** also reported strong earnings. It made a pre-tax profit of £1.8bn (\$1.4bn) in the third quarter, beating the £1.6bn expected by the market.

HSBC is restructuring its business, according to plans drawn up by Georges Elhedery, its new chief executive. The lender will soon have four distinct units: its British and Hong Kong outfits, plus international divisions for corporate banking and wealth management. **Ping An**, a Chinese insurer and one of HSBC's biggest shareholders, has long been trying to force its management to break up the banking group entirely. It

would prefer two separate companies, one operating in Asia and the other in the rest of the world.

Tesla reported an unexpectedly profitable quarter. Its net income was \$2.5bn, up 8% from a year previously and well above the \$2.1bn analysts had pencilled in. The carmaker's share price rose by 12% in after-hours trading on the day of the announcement.

The share price of **McDonald's** fell sharply after America's Centres for Disease Control and Prevention traced an outbreak of *E. coli* to the fast-food chain's restaurants. The public-health authorities found 49 people who had been infected, in ten different states, one of whom died. All reported having eaten at McDonald's before becoming sick. The chain has stopped selling "quarter-pounder" burgers, thought to be behind the outbreak, in a fifth of its American outlets.

James Gorman, the former boss of Morgan Stanley, has been appointed as the new chairman of **Disney**. Mr Gorman's biggest task is to find a replacement for Bob Iger, the chief executive whom Disney has

been trying to replace, on and off, for nearly a decade.

Boeing's woes continued. It reported a loss of \$6bn for the three months to September, its biggest since the covid-19 pandemic, and will burn through more cash next year. The same day, a labour union representing 33,000 of the firm's staff rejected a new pay deal, extending a strike that has been running for six weeks. Boeing's boss called for a "fundamental culture change" at the company. It might need a bit more than that.

Made to order

Walmart said it would expand its same-day delivery service for prescription drugs to 49 American states by January. **Amazon** is planning to offer a similar service to around half of its American customers by the end of 2025.

The new boss of **Starbucks** surprised investors by publishing preliminary results for its most recent fiscal year a week early. Store sales during the three months to September were 7% lower than a year previously, but the firm still raised its quarterly dividend, from 57 to 61 cents per share.



The everything drugs

It's not just obesity. Ozempic and its cousins will change the world

EVERY DAY seems to bring more exciting news. First the drugs tackled diabetes. Then, with just an injection a week, they took on obesity. Now they are being found to treat cardiovascular and kidney disease, and are being tested for Alzheimer's and addiction. It is early days yet, but GLP-1 receptor agonists have all the makings of one of the most successful classes of drugs in history. As they become cheaper and easier to use, they promise to dramatically improve the lives of more than a billion people—with profound consequences for industry, the economy and society.

In the three years since semaglutide was approved for treating obesity, it has taken America by storm. After decades of disappointing “miracle cures”, these drugs work. Image-conscious influencers and well-heeled financiers are not their only users. Already one in eight American adults has been on GLP-1 drugs. Novo Nordisk, maker of semaglutide, branded Ozempic for diabetes and Wegovy for weight loss, and Eli Lilly, which makes tirzepatide, a more effective alternative, have together added around \$1tn in market value since 2021.

The action is now moving beyond America. With over two-fifths of the world overweight or obese, demand for GLP-1 drugs is voracious. Pharma companies are racing to make them work as pills, which would be cheaper to produce than jabs, and to reduce their side-effects. Generic versions for older GLP-1 agonists are entering the market. Semaglutide is to come off patent in Brazil, China and India in 2026; eight such drugs are in the works in China (see Business section). That is just as well. As incomes in the developing world have risen and life has become more sedentary, people's waistlines are catching up with those in the West.

Curbing obesity would be consequential. Yet GLP-1 drugs promise to do much more. Overweight patients on semaglutide have been found to suffer fewer heart attacks and strokes; the benefits, astonishingly, seem to be largely independent of how much weight is lost. Tirzepatide improves sleep apnoea. Trials show that GLP-1 agonists reduce chronic kidney disease in diabetics; and there are signs they may lessen brain shrinkage and cognitive decline in Alzheimer's. Studies of health records suggest that they may help with addictions, too; people already on GLP-1 drugs in America were less likely to overdose on opioids or abuse cannabis or alcohol. Researchers are even talking, in hushed tones, of their anti-ageing effects.

How can one class of drug do so much? As our briefing explains this week, not only do the drugs act in the gut, but they also bind to receptors all over the body and in the brain. The drugs appear to reduce inflammation and interact with mechanisms linked to cravings and feelings of reward. With every new finding, researchers are learning more about the workings of disease and the links between the body and the brain.

Naturally, more work is needed. Although GLP-1 agonists have been used in diabetes for 20 years, some of the newer findings are based on observational studies, and will need to be supplemented by randomised trials. Patients may need to

remain on these medicines for their whole lives, and their long-term benefits have yet to be quantified.

That makes the costs uncertain, too. For now the drugs are expensive: tirzepatide is priced at over \$500 a month in America. Their immediate side-effects, which can include nausea, pancreatitis, diarrhoea and muscle loss, may be off-putting; the effects from decades of taking them are uncertain. Some worry about the medicalisation of everyday life, and whether people will binge, knowing they can fall back on a cure.

Yet with time, experimentation and innovation, the benefits will become clearer, and the costs will come down. Healthy habits and good public-health advice will still matter. But practitioners have long despaired that nothing works for many obese people. If the drugs live up to their early promise, it would be perverse and cruel to deprive patients of medicines that could dramatically improve their lives. The drugs could hold the same promise for addiction.

Stand back and the possibilities are thrilling. In 2019 heart disease, stroke, diabetes, Alzheimer's and kidney disease ranked among the top ten global causes of death. By 2050, as the world ages and developing countries' health care improves, these diseases will take a bigger toll. Last year more than 100,000 Americans were killed by opioid overdoses and 180,000 died from drink.

For patients, the new uses of GLP-1 drugs would mean not just longer, healthier and more productive lives, but happier ones, too. In a world of abundance people succumb to their impulses even if they know their behaviour is harmful in the long term. Although GLP-1 agonists may limit the pleasure of instant gratification, they promise to end intrusive cravings and improve long-term health.

The total bill for prescribing these drugs could be vast. Yet for governments they would lower some other costs: the direct medical bill for obesity alone amounts to \$260bn a year in America; substance abuse is a huge burden for the criminal-justice system. The state would raise less revenue from taxes on alcohol, but income-tax revenues would go up, as the workforce became healthier.

Less is moreish

Rather as the contraceptive pill encouraged women to stay in education and work, so GLP-1 drugs could lead to profound economic and social change by enhancing productivity and freedom. Some business models could be upended. If craving can be controlled, junk-food companies, advertisers and even drug-dealers may shift their focus from quantity to quality. Social mores could evolve. In the West thinness is prized as the ideal of beauty, because for so many it is hard-won, whereas obese people suffer discrimination and lower wages. If being thin is easier, that may change (see Finance & economics section). Obesity and addiction may less often be seen as moral failings, but as illnesses that can be treated. The GLP-1 revolution is just beginning. Its promise is tantalising. ■



America's election

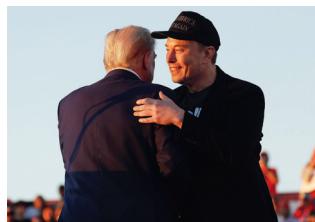
The \$1m voters

Elon Musk's scheme to boost Donald Trump is legally questionable and bad for democracy

WITH LESS than two weeks to go, America's election remains a coin-toss. If anything, though, the coin now slightly favours Donald Trump. Our election-forecast model puts him ahead, for the first time since August. When the race is this tight, the list of things that could prove decisive is long. Among them is Elon Musk's disingenuous scheme to induce Americans to vote for Mr Trump with a chance to win \$1m.

Mr Musk could have any number of motives. He runs a company that makes electric vehicles (EVs). Mr Trump wants to put huge tariffs on foreign cars and frequently discourages Detroit's carmakers from producing EVs. A Trump victory could knock out Tesla's competition, juicing its share price. Mr Musk also has eugenic views about gifted people having too few children, and he has used his ownership of X to promote—perfectly legally—objectionable opinions about the replacement of white voters with immigrants.

The scheme works as follows. Voters in the seven swing states are invited to sign a petition in support of the First Amendment (free speech) and the Second Amendment (guns). No matter that neither clause is in imminent danger from Congress, from the conservative Supreme Court or the Glock-toting Kamala Harris. In adding their names—and provided they are registered to vote—they receive what is, in effect, a lottery ticket with a chance to win a daily prize of \$1m, funded by Mr Musk. The intention seems to be to get unregistered voters to register. Voting for Mr Trump is optional (and mischievous Democrats may wish to try their luck), but paranoia about these particular amendments is associated with the right; and given that Mr Musk is one of the former president's most prominent surrogates, who has even inspired a distinct line in MAGA merchandise, it is clear who is the intended beneficiary.



This sounds sketchy, but is it illegal? The Justice Department has warned Mr Musk that it may open an investigation. Federal election law prevents people from buying votes, whether the payment is in cash, crypto or in the form of a lottery ticket. Paying someone to register to vote is also forbidden. But rewarding petition-signers in this way is a metallic-silver area, even if the intent seems clear.

America's campaign-finance law is so loose that managing to break it would be a feat. No doubt a sympathetic court could conclude that the scheme constitutes speech and is therefore protected under the First Amendment. And someone as deep-pocketed as Mr Musk could fund a team to keep that argument going long enough for the point to be moot.

Whether it is a good idea is a different matter. Vote-buying was once rife in America, often in the form of alcohol, although cash was splashed, too. "The American polling place", says one study, "was thus a kind of sorcerer's workshop in which the minions of opposing parties turned money into whiskey and whisky into votes." An achievement of democratic reformers in the late-19th and early-20th centuries was to get rid of these practices. Schemes like Mr Musk's are still alive in the 21st century, but they are more commonly found in Kinshasa than Kenosha.

The Supreme Court has deregulated campaign finance in the past few decades, but it did so when norms against vote-buying appeared irreversible. That assumption may yet prove to have been mistaken. Mr Musk's wheeze looks certain to spawn imitators in 2028. Both parties have billionaires who could fund similar lottery schemes. Lots of reforms would benefit America's democracy. Giving billionaires more influence over the outcome of elections is not one of them. ■

Gold

Status anxiety

The blistering rally in gold augurs ill for the power of the dollar

NOT LONG ago gold seemed to have lost its lustre. In the decades after President Richard Nixon abandoned the gold standard in 1971, the yellow metal fell out of favour with central banks, which hoarded their reserves in dollars instead. In the 1980s and 1990s investors and households grew weary of its miserly returns. Goldbugs were dismissed as eccentric doom-mongers. Gold was alluring when forged into a shiny bauble and useful in specialist manufacturing, but it was hardly a serious financial asset.

How it glitters now. Its price has soared by a third since the end of 2023, reaching an all-time high of almost \$2,750 per troy ounce. The rush has been fuelled by war, inflation and fiscal profligacy around the world, which have drawn in family offic-

es and Costco shoppers (see Finance & economics section).

Yet perhaps no buyers have been as voracious as the world's central banks, which have hoovered up hundreds of tonnes of the stuff over the past two years. Gold now makes up 11% of their reserves, up from 6% in 2008. This shift brings with it important consequences for America's dominance of the global financial system. Even as the dollar remains unchallenged as the world's reserve currency, its power is diminishing.

For some central banks, the interest in gold reflects anxiety about the state of the world. Others have a narrower concern: that their reliance on the dollar, always uncomfortable and annoying, has become dangerous. Buying has been enthusiastic in China, India and Turkey, and it began to ratchet up in the ►

► spring of 2022, after Russia invaded Ukraine, and America and its allies sought to cripple Russia financially, using sanctions. These included freezing some \$280bn in state assets held overseas, and kicking Russian banks off SWIFT, an interbank messaging service crucial for making cross-border payments. Visa and Mastercard, American firms which process debit- and credit-card transactions in almost every country in the world, pulled out of Russia, too.

Hence the search for sanctions-proof alternatives to the dollar. Some central banks are buying physical bars of gold and attempting to ship them to vaults at home, suggesting that they want to protect themselves from economic warfare. Countries worried about America's power are also trying to trade in their own currencies. According to the Federal Reserve, the share of Chinese goods trade invoiced in the yuan has shot up to a quarter, from a tenth in 2020.

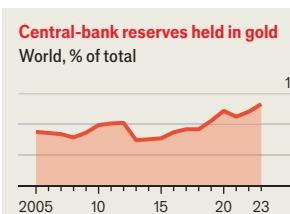
Officials in Brazil, Russia, India, China and South Africa—which met this week at a BRICS summit in Kazan, on the Volga—are working towards a new set of cross-border payment rails that would circumvent the dollar-based correspondent-banking system which dominates today (see International section). A few years ago the idea that central banks might be able to issue tokens and use these to settle cross-border transactions quickly and cheaply would have been a pipe-dream. But the Bank for International Settlements (BIS), the central bank for central banks, has been developing such a system and it is ready to enter operation. The BIS payments mech-

anism was not designed for the BRICS, but it could serve as a template for a new system.

What does all this mean for the mighty greenback? Ever since China emerged as an economic force, worries have swirled that the dollar would be displaced as a reserve currency, much as it itself supplanted sterling a century ago. But you need only look at central bankers' actions over the past few years to see that there is no reserve currency of second resort. Central banks worried about sanctions are turning to gold, not the yuan. Rather than devising a whole new payments system, the BRICS could have simply agreed to use one of their currencies for trade between them. They have not done so. Chinese manufacturers may be invoicing in yuan, but bilateral trade between Brazil and India is not going to be settled via Beijing.

The dollar will therefore not be dislodged as the world's reserve currency. The technology might be ready, but to scale up new cross-border payment rails requires a degree of co-operation and trust between the BRICS that may not yet exist. Even if it did, many of the dollar's privileges—greater purchasing power, lower yields—would remain.

Nevertheless, the power that has been conferred on the dollar by its reserve-currency status is diminishing. Central-bank reserves held in physical gold are out of Uncle Sam's reach. As more countries settle more of their transactions without passing through the American banking system, sanctions will become less effective. ■



Decarceration The key to better prisons

Britain is not the only rich country that needs a radical change in approach

“CLEARLY, OUR prisons are not working.” At one level David Gauke, a former Conservative justice secretary, who on October 22nd was appointed by Britain's Labour government to run a sentencing review, was stating the obvious. Britain's prisons are scarred by overcrowding and violence. Staff have suffered almost 10,000 assaults in the past year. Unsurprisingly, retaining them is difficult; only half have more than five years' experience. Instead, teenage officers are being deployed alone on prison wings. Most new recruits do not last even two years (see Britain section).

At another level, Mr Gauke was signalling something more open to dispute—a desire to break with an approach to criminal justice that has been dominant in Britain, and many other rich countries, for three decades. It was Michael Howard, another, more austere Tory, who distilled that approach with his declaration in 1993 that “prison works.” That mantra has prevailed ever since. The number of people behind bars has doubled in the past 30 years; Britain locks up more people than any other country in western Europe. Jails are packed to the rafters, which is why the government this week allowed more prisoners out early on an emergency-release scheme.

Britain is not alone in struggling to run its prisons well. According to the Institute for Crime and Justice Policy Research, a think-tank, Australia, Belgium, France and Italy all have pri-

son-occupancy rates above England's level of 110%. In France, where it is 127%, thousands of inmates sleep on mattresses on the floor. Such overcrowding exposes an irony: the desire to lock people up eventually overwhelms prison's purpose and the taxpayer's willingness to pay for it.

Prisons are supposed to protect the public from genuinely dangerous people; that becomes harder when they are overrun. In Britain 37 men were let out by mistake in September in an initial tranche of emergency releases; one is accused of committing a sexual offence the day he was freed. Full prisons are also a boon to crooks at large because they take police officers off the street in order to manage emergency cells. It makes sense to lock up people who commit serious crimes. But disorderly prisons are unlikely to mete out punishment in a proportionate way. They also do little for rehabilitation: 90% of those sent down in Britain are reoffenders. By making criminals worse, bad prisons add to the need for imprisonment.

In the 1990s and 2000s, governments were able to build prisons as the demand for places grew. That has become more expensive as easy ways to upgrade old sites have been exhausted and local opposition to new ones has mounted. In Britain each new prison place costs around £450,000 (\$584,000). As prisons have become grimmer, governments have found them harder to staff; Italy has a shortfall of around 7,000 prison guards. ►

► There is little prospect of the prisons budget rocketing when public finances are stretched.

Only one option leaves societies safer and richer: fewer prisoners. Bluntly, too many people are kept behind bars for too long. In Britain Mr Gauke's review is a step towards recognising that problem, but it is only a step. The real problem is not the diagnosis but what follows: winning public consent for decarceration—hard because “tough” sentencing is often popular—and managing the transition to a less crowded system. An example of what not to do comes from Italy. Rampant overcrowding led the government to release 20,000 prisoners in a couple of months in 2006, unleashing a small crime wave.

Better models are provided by the Netherlands and America. The Dutch prison population fell by 44% in the decade to 2015, helped by investment in community sentencing. Supervising offenders in the community costs around a tenth as

much as keeping them behind bars and the reoffending rate is usually lower. America still locks up far more people than other rich countries, but its prison population has fallen by a quarter in the past decade. California, New York and Texas have led the way by reforming sentencing and diverting people into drug and alcohol courts. In both countries the change was popular; in America it was sold as a way of saving money.

Rich countries can also lean more on technology. Many early offender-tagging programmes had a deservedly poor reputation, but the latest devices are much better at monitoring offenders' behaviour. People can be fitted with real-time drug or alcohol monitors, or made to stick to strict curfews when they are not at work.

Imprisonment will continue to play an essential role in the criminal-justice system. But the public will be safer and better off when cells are less full. That is how to make prison work. ■

South-East Asia

Making business roar

Cosy links between politicians and tycoons are holding back a dynamic region

IN HIS INAUGURAL address as Indonesia's new president on October 20th, Prabowo Subianto, a 73-year-old former general, vaunted his country's consensual model of politics as something to be proud of. His vice-president, Gibran Rakabuming Raka, is the son of Joko Widodo, his predecessor (see Asia section), and he has assembled a huge cabinet that incorporates a wide range of business families.

Alas, unity is not always a virtue; as far as the cosiness between business and government in Indonesia goes, it is more of a vice. Indeed, the close ties between politicians and tycoons are a problem across South-East Asia. And that is holding the region back.

South-East Asia is home to some of the world's most exciting economies. Its population of 700m is youthful; it should benefit from investment flows as multinationals seeking to serve the Western market hunt for factory sites outside China. The IMF expects South-East Asia's economy to grow at almost 5% a year in the second half of the decade. By contrast, China's growth rate is projected to sag towards 3%.

But a deadening business environment is limiting the region's potential (see Business section). Its largest companies are overwhelmingly banks, natural-resources firms or state-owned enterprises. Apart from a handful of exceptions like Grab, a ride-hailing firm, and Sea, a gaming and e-commerce company, few operate in high-tech sectors. The combined value of investible stocks across the region is nearly \$900bn, less than half that of India. In dollar terms, share prices today are a third below their levels in early 1997, before the start of the Asian financial crisis.

Monopolies are still common across the Association of Southeast Asian Nations (ASEAN). From Indonesian aviation fuel and the import of rice in Malaysia to the sale of tobacco in Thailand, governments have often granted exclusive rights over large markets to a single firm. Some of the companies are state-owned; others are the relics of colonial fiefs. The result is

the same: less competition and lower efficiency.

Even in areas without a formal monopoly, politically connected conglomerates dominate the economy, gaining all manner of preferential treatment. They influence regulations in their favour and enjoy easy access to credit from state-owned banks. As a result, innovative upstarts are starved of talent and financing. Venture-capital funds are modest in size, making small deals the norm. Both VC and private equity tend to be dominated by the politically connected few. That may be helpful for startups hoping to be gobbled up by large businesses. But it is bad news for those aspiring to disrupt them.

Some governments are breaking up uncompetitive industries. The Philippines' long-running telecoms duopoly has faced welcome competition as restrictions on foreign ownership have been loosened. Yet smashing monopolies is not easy. This month Thai lawmakers rejected a plan to liberalise the market for alcoholic drinks, which is dominated by two boozy conglomerates.

The best hope for liberalisation across the region is further economic integration. Even small steps towards a South-East Asian common market would help break the stifling nexus of business and politics. Although that would expose conglomerates to more competition, it would also offer them the prize of access to a much bigger market.

The ASEAN economic community, established in 2003, has proposed a regional market for goods, services, investments and labour by 2025. That has been achieved for some industrial supplies, but reality has fallen far short of the ambition. Beefing up the bloc's central body, the ASEAN Secretariat, so that it can foster progress, would be a start.

South-East Asia is divided by income level, culture, language and ethnicity. Integration will not yield anything as politically and economically tight-knit as the European Union in the near future. But without steps towards a regional market, the domestic rent-seekers will continue to reign. ■



Letters

Focus more on growth

The work of Daron Acemoglu, Simon Johnson and James Robinson, the winners of the Nobel prize in economics, was indeed brilliant ("Nations fail, academics succeed", October 19th). But their work does not address the questions that were compelling to Robert Lucas, another Nobel winner, who asked whether there was some action a government could take that would lead an economy to grow. He suggested that: "The consequences for human welfare involved in questions like these are simply staggering: once one starts to think about them, it is hard to think about anything else."

However compelling, those are not researchable questions for publication. In the current literature there is more micro randomisation than work on how to accelerate and sustain growth.

MARK HENSTRIDGE
Chief executive
Oxford Policy Management
Oxford

Voting reforms

Regarding electoral reform in America ("Taking the initiative", October 5th) consider that of the ten congressional Republicans who voted to impeach Donald Trump, two were from Washington state and one from California, states with top-two open primaries. Alaska has open primaries and ranked-choice voting, which allowed Senator Lisa Murkowski to vote to convict Mr Trump without having to worry about an attack from the right in a closed primary. Perhaps if we had had more open primaries and RCV, other Republicans would have found the courage to hold Mr Trump to account.

SCOTT MEYER
Alexandria, Virginia

The Chagos Islands' future

Regarding Britain's intention to hand sovereignty of the Chagos Islands to Mauritius ("Chagos theory", October 12th) no deal will be done until negotiations are completed to establish a formal treaty. That

will entail reaching a consensus between America, Britain, Mauritius and India. I find it difficult to believe that the Americans will find it harder to protect their strategic interests under such an arrangement than under the void that now looms when Britain's lease of the base on Diego Garcia to America expires in 2036.

You put great emphasis on the "resettlement rights" of the Chagossians, but I'm afraid this largely ignores the realities of their sad history. As fully examined in "Chagos: A History", a book that I co-wrote, the islands' maximum population of 1,200, was reached in 1921. By 1962, after the transfer of the coconut-plantations' ownership to an entrepreneur from the Seychelles, the proportion of Seychellois had increased sharply. But when the plantations were sold many Chagossians followed the advice of departing Mauritian managers to leave with them. Those plantations are now totally overgrown and devoid of infrastructure in a world with little need for coconut products from remote sources with poor soil.

Which brings us to rising sea levels. With the erosion of individual islands in the Chagos, soils are giving way to fresh sand from sea surges and the freshwater essential to human and vegetable life is gradually becoming more saline. On Diego Garcia itself, America is reported to be spending many millions of dollars on protecting its base from inundation.

NIGEL WENBAN-SMITH
Commissioner for the
British Indian Ocean
Territory, 1982-85
London

The next innovation in AI

The linear thinking that more chipmaking power equals more artificial intelligence won't work (*Technology Quarterly*, September 21st). Yes, advancements in AI have been remarkable and hardware advances got us here. But semiconductors will not solely unleash AI's

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full potential or produce another intelligence leap. The reality is that with each power "surge" the returns diminish. Even if you supply ten times more computational power you, most probably, will be only 10% better off, at this stage. So not only would this be a costly exercise in terms of expense and environment, there's also not a lot to gain from continuing to put faith in silicon alone.

There is a strong case for looking at alternative architectures that provide reasoning for the next AI breakthrough. And there is more to be gained from looking at the software layer for the next leap in AI innovation than from a billion more chips in production. The avenues for software innovation are multiple, be they the next evolution of transformers, baking in neurosymbolic approaches or even a rethinking of the AI stack itself.

AI is a game-changing technology. But its widespread adoption won't come from doubling down on hardware innovation or large language models. The market must take a breather. We need alternative smarter approaches to unleashing true and powerful artificial cognition. I wouldn't bet all my chips on the next AI innovation leap being in silicon alone.

DR IMAD RIACHI
Founder of Honu
London

A thriving region

Thank you for shedding light on the Turkic states, mainly Turkey, Azerbaijan, Turkmenistan, Kyrgyzstan, Uzbekistan and Kazakhstan ("Giant steppes", September 28th). It is an important bloc that receives little attention in the West. Trade is indeed booming along the Middle Corridor, which connects China with Europe, but not only because of geopolitics.

In a largely landlocked region, all member countries of the Organisation of Turkic States have long committed to harmonise digital trade and border-crossing procedures,

often based on global UN standards such as the TIR (international road transport) convention. Uzbekistan, one of just two double landlocked countries in the world (the other is Liechtenstein), issues more TIR carnets than any other, allowing trade to soar.

The region is a world leader in this respect, driving easier and faster access to global markets for its businesses, and thus prosperity for its citizens.
RADU DINESCU
President
International Road Transport Union
Geneva

Was James Buchanan gay?
"Was Abraham Lincoln gay?" (October 5th), asks the latest documentary on the subject. Americans in the 19th century understood perfectly well that men could have sexual relationships with each other and had no hesitation in saying so.

James Buchanan, the 15th president of the United States, was widely believed to have had a sexual relationship with William Rufus King, who briefly served as vice-president under Franklin Pierce. The two lived together in a boarding house in Washington and attended social functions together. Andrew Jackson referred to them as "Miss Fancy" and "Aunt Fancy". Others described King as Buchanan's "better half" and his "wife".

Such claims were never made against Lincoln by his contemporaries, despite being a frequent target of vicious political attacks. Our ancestors were no less observant than we are. Why would any of Lincoln's opponents have passed up such a cheap shot?
JOHN DURY
Port Townsend, Washington

Time has wings

Nowhere in your report on the brain of the fruit fly do you explain the saying, "Why does a fruit fly like a banana when time flies like an arrow?" ("On the fly", October 5th).

RICHARD FRIARY
Florence, Montana

Briefing GLP-1 drugs: beyond weight loss



One jab to treat them all

Diabetes, obesity, heart disease, liver and kidney problems—maybe even drug addiction and Alzheimer's. Is there anything GLP-1 drugs cannot treat?

IN THE HISTORY of medicine, a few drugs tower above all others. Humira for rheumatoid arthritis; Prozac for depression; statins to prevent heart disease and strokes. All have helped patients far beyond doctors' initial expectations and continue to benefit millions of people every day. A new class of drugs is set to join their ranks and has the potential to eclipse them all—GLP-1 receptor agonists.

These drugs mimic the action of a naturally occurring hormone, glucagon-like peptide (GLP-1), and for decades have been used to treat diabetes. More recently they have become a wildly popular way for people to lose weight. But in March semaglutide (a GLP-1 receptor agonist sold as Ozempic for diabetes and Wegovy for weight-loss) was approved in America for cardiovascular disease in overweight people. In April tirzepatide (sold as Mounjaro and Zepbound) showed positive results in late-stage trials for sleep apnoea, a breathing disorder. In other trials it seems to re-

duce chronic kidney disease.

This is just the start. GLP-1 agonists are also being tested for everything from liver disease to substance-use disorders and addiction. One firm is even considering trials for those at risk of obesity—as preventive medications. Patients taking semaglutide may have a lower risk of overdose from opioids, suggesting that it could also be used to treat opioid-use disorder. The drugs have been mooted as a treatment for long-term infections, are being investigated for use in delaying Alzheimer's, and some even talk of their anti-ageing effects and potential as a longevity drug. On X recently, Eric Topol, a cardiologist who leads Scripps Research, a non-profit research institute in San Diego, California, called GLP-1 drugs “the most important drug-class breakthrough in medical history”.

Drug companies are racing to find, test and market new versions and uses for these drugs. In the background, however, lies a question: how can GLP-1 agonists—

drugs developed to work for diabetes—have such a diverse array of beneficial effects across the body? As they look for answers, scientists are finding surprising details about the many roles of GLP-1 hormone. These drugs seem to activate basic protective mechanisms in cells, such as reducing inflammation and clearing out junk, thereby keeping organs healthier. They also have powerful effects on the brain, through which they can both further influence the health of the rest of the body, and even affect behaviour.

GLP-1 is a short-lived hormone that is usually released in a person's intestines, after a meal. Once in the blood it helps regulate glucose levels, by stimulating the pancreas to release insulin (which lowers blood-sugar levels) and suppressing glucagon (which normally increases them). It also promotes the feeling of fullness, partly by acting on the gut to slow down how fast food moves through it. But the hormone also acts on the brain: at the hypo- ➤

► thalamus, a part that controls hunger and satiety; and also on the pathways that modulate cravings. GLP-1's regulation of blood sugar explains the success of drugs that mimic it for treating diabetes; that GLP-1 agonists promote satiety and reduce the rewards associated with eating explains why they have been helpful to people wanting to lose weight.

At first glance, the wider effects seen from GLP-1 drugs might look like ancillary benefits from their effect on weight—the obese are much more prone to a range of other serious health problems, from heart disease to certain cancers, sleep apnoea and fatty liver disease, so losing weight should improve overall health. That does happen, of course, but research shows that it is not the full story. A study of more than 17,600 overweight and obese patients from 41 countries who took semaglutide found that participants lost about 10% of their body weight and had a 20% reduction in serious adverse coronary events, strokes, heart attacks and all-cause mortality. Crucially, these cardiovascular improvements long preceded any meaningful weight loss.

Multipurpose agonists

For patients living with cardiovascular diseases, GLP-1 drugs work partly by binding to their namesake receptors on heart cells and blood vessels. This contributes to better control of blood pressure and fat levels in the blood. The drugs also help heart cells use glucose more efficiently and reduce oxidative stress, in other words the damage caused by highly reactive molecules that are the by-products of metabolism in cells. Semaglutide has been shown to stimulate the production of nitric oxide, which relaxes vessels and helps improve blood flow to the heart.

This ability of GLP-1 drugs to act on different problems at once is what makes them so interesting. Many people at risk of heart disease or diabetes may be carrying extra weight, have high blood pressure, or have too much sugar or unhealthy fats in their blood. Drugs exist to tackle each of these problems individually, but GLP-1 agonists behave like a molecular Swiss Army knife. (Endocrinologists have noticed something similar in type-2 diabetes: GLP-1 agonists improve most of eight core defects of the condition—known as the “ominous octet”—which include decreased insulin secretion and its uptake in peripheral tissues such as muscle.)

Daniel Drucker, a senior scientist at the Lunenfeld-Tanenbaum Research Institute at Mount Sinai Hospital in Toronto, says that having GLP-1 receptors “seems to allow cells to be maintained in a healthier state and to be less susceptible to death”. This protective effect works across many organs whose cells have GLP-1 receptors and which the hormone (or a drug) can

reach—in the liver it may improve function and reduce fat levels; in chronic kidney disease it can reduce adverse outcomes and death, independent of the ability to control blood glucose.

GLP-1 agonists also act on certain immune-system cells around the body to reduce their production of inflammatory molecules, known as cytokines. Inflammation is part of the body's natural immune response to injury or infection. But chronic inflammation can end up damaging tissues and is a powerful driver of health problems such as cancer and cardiovascular, neurodegenerative and autoimmune diseases. So reducing it would be progress.

GLP-1 is already known to have a role in dampening inflammation in the gut, which is highly susceptible to infection after a meal. But when people have *Shigella*, *Salmonella* or any kind of infectious diarrhoea, Dr Drucker says that GLP-1 levels go up “ten- or 20-fold”. The hormone binds to immune cells that are present in the organ to keep inflammation down.

The reduction of inflammation is the common thread that explains why patients taking GLP-1 agonists for diabetes or obesity also report improvements in other conditions, such as arthritis, ulcerative colitis or post-covid brain fog. Fatima Stanford, a physician who researches obesity at Massachusetts General Hospital and Harvard Medical School, says that patients with a history of gout and other rheumatic diseases have also seen their symptoms improve after taking GLP-1 drugs for weight loss. There is also evidence that they work on inflammation in the skin, liver and kidneys, and even in the brain itself.

Not all these organs have GLP-1 receptors on the surfaces of their cells, nor do they have GLP-1-activated immune cells nearby. The answer to how they benefit even so from the anti-inflammatory effects of GLP-1 agonists lies in how these drugs work in the brain.

The brain has GLP-1 receptors in abundance and, though very little drug seems to be able to cross the blood-brain barrier (the filter that protects the brain from harmful substances), experiments have

shown that GLP-1 agonists can nevertheless activate pathways that transmit signals to these receptors deep in the brain.

It is unclear exactly how this works, but it has been shown that if GLP-1 receptors in the brains of mice are blocked, the drugs lose their ability to tamp down inflammation in the body. That finding, published in January by Dr Drucker and colleagues, points to the existence of a communication network between the gut, the brain and the immune system that can control systemic inflammation. This then influences the health of organs—such as the skin, lungs or muscles—that do not have many (or any) of their own GLP-1 receptors.

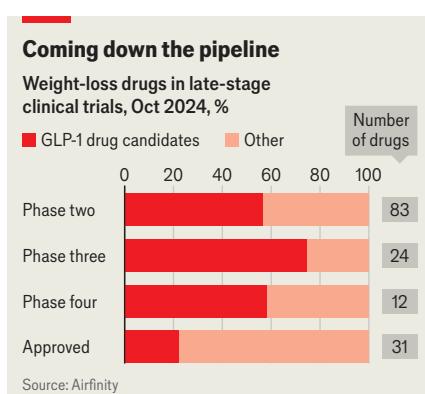
Because they reduce inflammation and improve the health of neurons in the brain, GLP-1 drugs have also attracted interest as treatments of neurodegenerative conditions such as Alzheimer's. So far, research shows that GLP-1 drugs can improve learning and memory and reduce the build-up of proteins called amyloids in the brains of rodents. The drugs also reduce inflammatory responses and oxidative stress—two contributory factors to Alzheimer's disease. A recent (small and preliminary) study from Imperial College London, involving more than 200 patients with mild Alzheimer's disease treated with liraglutide, a GLP-1 drug, found that, after a year, brain shrinkage had reduced by almost 50%, and cognitive decline by up to 18%.

Brain gain

Data like these have made endocrinologists such as Caroline Messer, founder of the Well by Messer, a metabolic and weight-loss clinic in New York, bullish about GLP-1 drugs. She feels the onus to use them to treat patients where she thinks appropriate, and is happy to offer semaglutide and tirzepatide to those with mild cognitive impairment or early Alzheimer's.

That is ahead of evidence on efficacy from the sorts of clinical trials that regulators consider as proof. But Dr Messer argues that patients who are actively declining have no time to wait, and GLP-1 drugs already have a good safety profile. Even if these drugs are ultimately proved to be ineffective for memory loss, she says they are already known to reduce the risk of cardiovascular disease and stroke. She says there are many connections between diabetes and Alzheimer's, which makes this class of drug promising, such as an increase in insulin resistance and an increase in oxidative stress. Some have even termed Alzheimer's “type 3 diabetes”, as it seems to involve insulin resistance in the brain.

Another promising avenue for GLP-1 agonists stems from the core reason for their astonishing success as weight-loss treatments—their ability to interact with mechanisms in the brain related to cravings and feelings of reward. Analysis of electronic ➤



► health records suggests lower rates of new or recurrent cannabinoid-use disorder in those taking semaglutide for other reasons. And a recent study found that patients who abused opioids or alcohol, given GLP-1 medications for other reasons, had lower rates of opioid overdoses and got drunk less often. Research on monkeys has shown that liraglutide can reduce alcohol consumption, though trials involving human drinking have been inconclusive.

As more and more patients go onto GLP-1 drugs, anecdotal reports of their benefits (as well as side-effects) have spread. A very common one is that they work wonders in improving dependence-related behaviour, such as drug and alcohol addiction. Dr Messer says she has lost count of how many people have told her that the drug has saved their marriage.

If these drugs are indeed shown to attenuate addictive behaviours, they would find widespread use in treating the abuse of alcohol, tobacco and many other drugs. Last year Leandro Vendruscolo, a neuropharmacologist at America's National Institute on Drug Abuse, described semaglutide to *Science* as the "most exciting drug for the last few decades". Kyle Simmons, a pharmacologist at the Oklahoma State University Centre for Health Science, wondered if positive trials would bring addiction science its own "Prozac moment"—a reference to the arrival of selective serotonin reuptake inhibitors (SSRIs) to treat depression, and its expansion into many other areas of psychiatry.

There is yet one more emerging field of medicine in which GLP-1 agonists are generating buzz—ageing. The refrain is now familiar: scientists know that these drugs keep cells healthy, reduce inflammation, oxidative stress and cell death. These are

exactly the problems that have been identified as the biggest risk factors of ageing and its associated diseases. In February Michael Leone and Nir Barzilai at the Albert Einstein College of Medicine in New York reviewed drugs that had been approved by regulators and which were thought likely to extend lifespans. They ranked each according to its ability to target the hallmarks of ageing. Out of 12 drugs or drug classes, GLP-1 drugs came fourth. Two of those that rated higher—metformin and SGLT2 inhibitors—are also drugs for diabetes.

More, cheaper, better

Cost looms large in any discussion about these drugs, as well as the need to take them for a lifetime. Both concerns are likely to prove temporary. In years to come the growing level of competition and the arrival of generic copies will lower prices and broaden access. Countries will negotiate discounts. Indian and Chinese companies are already racing to make copycat versions of GLP-1 drugs when patents expire in their countries (see Business section).

It is also hoped that new formulations will improve the efficacy of current drugs, and that ways will be found to reduce their shortcomings, whether this is in the loss of muscle mass and unpleasant gastro-intestinal side-effects—or even the need to inject medicines. Several firms are exploring the production of pills, which would be a big step forward and, being cheaper to produce and distribute, would probably greatly expand the numbers using them.

As GLP-1 drugs are shown to work on a wider range of conditions, so the demand for them from both clinicians and patients will grow. When supply shortages are overcome, governments will have to grapple

with complex calculations to work out which conditions they are cost-effective for treating, and the overall impact the prescription of the new drugs will have on stretched health budgets.

It is still unknown if patients will need to remain on these medicines for the long term, and at what cost and benefit. (The risks of long-term use in patients who are not diabetic, for example, are not fully understood.) So estimates of how much they will be used remain guesswork. Moreover, their prophylactic uses could save money years into the future from the prevention or amelioration of long-term conditions. But that benefit is hard to quantify, and existing budgets for prevention are a tiny fraction of what is available for the treatment of existing conditions. Public-health systems are likely to be very slow to adopt the drugs as preventive treatments.

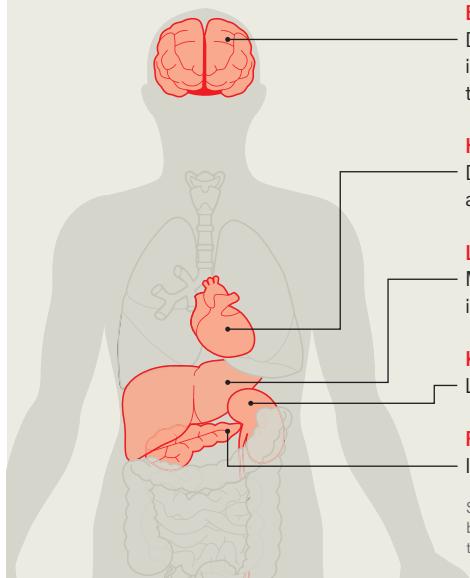
GLP-1 drugs are already having a huge impact in the pharma industry, with a large number of new drugs in the pipeline (see chart on previous page). But many other sorts of business are also feeling the effect. Some are obvious: the food industry, for example, is looking on nervously, fearing that the drugs' success may lead to thinner profits, as well as slimmer waistlines. Last year Morgan Stanley published a survey of 300 patients, entitled "Could obesity drugs take a bite out of the food industry?" It found that they lead to a reduction in calorie intake per patient of between 20% and 30%, and that this could have long-term implications for food-related businesses, particularly those selling unhealthy foods such as high-fat, sweet and salty products. But eating habits will not change overnight. The food and hospitality industry has time to adapt by offering smaller portions and healthier options.

Other analysts have projected a rise in interest in physical fitness and sportswear by those who were once overweight who wish to maintain fitness and muscle mass. Some also speculate that the psychological impact of weight loss could extend to an increase in interest in cosmetics.

The commercial implications for other businesses are only just beginning to be recognised. Take a less than obvious one: aviation. Analysts at Jefferies, an investment bank, calculated in 2023 that if the average United Airlines passenger were to lose 10lbs (4.5kg), it would save the airline \$80m a year in fuel costs.

The arrival of GLP-1 drugs has also shifted the way in which obesity is viewed (see Finance and economics section): no longer as a disease of failing willpower but as a lifelong chronic condition from which the body never truly escapes. But diabetes and obesity have been just the start. Few drugs, if any, have promised to have such a revolutionary impact on human health, longevity and happiness. ■

Access all areas



The impact of GLP-1 drugs on the brain and body

Brain

Decreases appetite; increases satiety; reduces inflammation in the brain; being investigated to treat Alzheimer's and addiction

Heart

Decreases the risk of heart attacks, strokes and deaths from cardiovascular causes

Liver

May lower the risk of metabolic liver disease; increases the storage of glucose

Kidney

Lowers risk of diabetic kidney disease

Pancreas

Increases insulin synthesis and secretion

Sources: "The benefits of GLP-1 drugs beyond obesity", by D. Drucker, 2024; "GLP-1a: Going beyond traditional use", by L. Laurindo et al., 2022

Britain



Prisons

It's worse than you think

Britain's prison service is caught in a doom loop

WHEN ANDY LAIDLAW began working as a prison officer in 1998 it was "an enjoyable job". There were "low lows" as well as "high highs", but it was mostly safe and you "could feel like you were making a difference". Mr Laidlaw, a straight-talking Scouser, climbed the ranks, eventually becoming a deputy governor. He describes the work—which demanded the skills to handle the most troubled people and the dexterity to "get assaulted safely"—with pride. The best officers were a "mixture of Kofi Annan and an MMA champion".

Mr Laidlaw reckons the rot set in about a decade ago. A cost-cutting drive meant that thousands of experienced officers were paid to leave. Overcrowding started to become less manageable, violence more routine. Rather than run towards a problem, fearful officers would retreat behind locked doors. In March Mr Laidlaw left the service, aged 57, stripped of hope.

The roots of the mess in Britain's prisons lie even further back, in a set of punitive policies adopted over several decades. The Labour government seems to recognise there is a problem. On October 22nd it announced a sentencing review; promisingly, it will be chaired by David Gauke, a former Tory justice secretary with a reformist bent. But to grasp how entrenched the problems are, they must be seen as a

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cycle that affects both inmates and officers. Call it the prison doom loop.

Stage one is obvious: a relentless rise in the prison population. Britain incarcerates far more people than the rest of western Europe (see chart one on next page). In England and Wales the number of inmates has doubled in the past three decades, to 87,500, driven by a shift to much longer sentences. As courts work through a backlog of cases, the population is set to reach 100,000 next year, and to keep rising. New prisons are expensive: spending on buildings and staff has lagged behind demand.

Inside prison walls, the effect has been like gradually turning a vice. Cells designed for one are shared between two or three. Officers struggle to let a whole wing, often comprising several hundred inmates, out for work, education or "association time". Emergency-release programmes have become an unavoidable pressure valve: the latest batch of releases took place this week. But there are still thousands more prisoners in England and Wales than can be held in "safety and decency", according to official data.

Crowding squeezes a prison's ability to maintain control. That leads to the second stage of the cycle: a surge in violence. Brutality has always lurked within British prisons. Read a prison memoir from the 1970s ➤

or 1980s and you will find stories of inmates being "turned over" by the "screws". That became much rarer when the prison service modernised in the 1990s, including by recruiting female officers. But in the past decade every other type of violence—inmates harming staff, one another and themselves—has soared (see chart two).

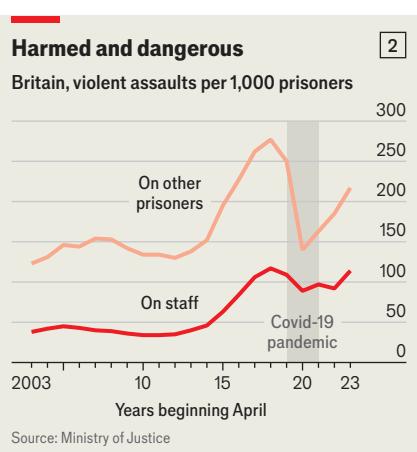
If you become a prison officer in Britain today, you are, bluntly, likely to get hurt. In the past year there were almost 10,000 assaults on staff. Around 3,200 of those led to serious injuries, a tally that would be enough to leave one in eight officers badly hurt. Several interviewees for this piece say, unprompted, that it is only a matter of time until an officer is killed.

The ever-present threat of violence worsens stage three of the cycle: a staffing crisis. Between 2010 and 2015 the prison budget was cut by 16%. Desperate to find savings, ministers removed a senior officer grade and offered experienced, better-paid staff early retirement. Ever since, the service has been running to stand still. Only half of officers today have more than five years' experience, down from 80% in 2010.

Recent governments have tried to fill the gap in two ways. The first has been to raise the starting wage for a prison officer to £32,000 (\$42,000). That is not always enough. "I can get the same on trains or as a lorry driver and not be attacked," says Mark Fairhurst of the Prison Officers' Association, a union.

The second is, in effect, lowering standards. Since 2022 officers have been recruited through a centralised process carried out by private firms like SSCL (which did not reply to our request for comment). These firms are paid for the number of trainees they sign up and push through the prison gates; they lack incentives to screen rigorously for quality or suitability. The main part of the training lasts six weeks, and is all online. One officer says a colleague bragged about getting their 15-year-old niece to click through it for them.

New officers arrive utterly unprepared for prison life, says David Wilson, a former



governor who worked on recruitment in the 1990s. Even then, when the training lasted 20 weeks, he felt that was too short; in Norway it takes two years. Many recruits are teenagers in their first job.

A less robust recruitment process is vulnerable to malign actors. Criminal gangs need not bother corrupting existing officers to get drugs into prisons when they can put their own members through training. In July a female prison officer was fired after she was filmed having sex with an inmate at HMP Wandsworth; she had previously told a reality TV show that her types were "bandits", "outlaws" and "criminals".

The bigger concern is for prison officers with good intentions. The number of staff days lost to illness has soared in the past five years. Shortages mean recruits are soon out on the wings alone. "You have terrified 18-year-olds on night shifts responsible for a wing of 200 very troubled people," says Liz Bridge, until recently a chaplain at HMP Wandsworth.

As prisons become more wretched and less able to attract good staff, they are also less likely to prepare inmates for life outside. Britain has a high recidivism rate, which exacerbates the problem of overcrowding. The doom loop is complete.

One thing did interrupt this grim cycle: the covid-19 pandemic. With inmates confined to their cells to stop the spread of disease, violence dropped. Staff felt they had regained control—even if it was with bolts and keys rather than what older officers call "jailcraft". But even though the pandemic ended, some of its practices did not. Before covid, "22-hour bang-up", as prisoners call it, was vanishingly rare. Now more than two-thirds of inmates spend at least 18 hours a day in the cells. In reception prisons, where new prisoners are taken first, only half of inmates get out for more than two hours a day.

Staff know that isolating prisoners is only likely to spur mental ill-health and drug use (a study last year of a high-security prison found that 47% of prisoners had used spice, a synthetic drug that can en-

courage violence). Still, there is debate within the prison service about whether it is desirable, or even feasible, to get back to the old routines. In many category A and B prisons, for more serious offenders, there are few officers left with any experience of opening a whole wing.

The best way to break the prison doom loop is to have fewer prisoners. Building support for such a shift will be hard. It is a political axiom, backed up by polling, that the public likes "tough" sentences. But the public also likes the idea of rehabilitation, and shows little obvious appetite to pay for incarcerating ever more people.

Mr Gauke's review, which will report in the spring, has the task of squaring this circle. Its scope is wide; as well as sentencing and the use of mandatory minimum tariffs that have extended the length of prison terms, there is talk of using new technologies for home detention. But reviews do not always turn into policies, and the government's messaging remains cautious.

Other countries do at least offer promising examples. America's prison population has fallen by over a quarter in the past decade. The Netherlands cut its prison population by 44% in the decade to 2015 while investing in community supervision. Neither country has seen a public backlash. "It has been done in places not dissimilar to us," says Mr Laidlaw. "I think we can get there." ■

Policing

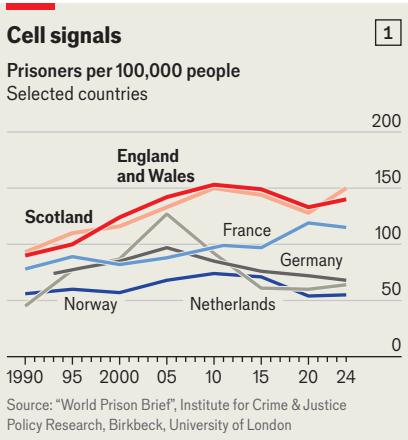
Accountability and arms

The Chris Kaba case raises hard questions

THE VIDEO CLIPS from body-worn cameras will have been seen by millions of Britons. Armed police jump out of their cars and swarm around a black Audi, yelling "show me your hands!" The driver briefly ducks, before lurching his car forward, ramming a police car in front. He then reverses, hitting another police car. After 15 seconds, a single shot is fired.

The trial of Martyn Blake, the police sergeant who fired the shot and killed Chris Kaba, the driver, in September 2022, has sparked a storm of controversy. On October 21st it took a jury just three hours to find Mr Blake not guilty of murder. Critics argue that the verdict will further erode public confidence in policing. Many police officers are furious that Mr Blake faced the charge in the first place. Yvette Cooper, the home secretary, has already announced some reforms; more may follow.

The trial hinged on whether Mr Blake's



Source: "World Prison Brief", Institute for Crime & Justice Policy Research, Birkbeck, University of London

use of force—he shot Mr Kaba once in the forehead through the car windscreen—was necessary, proportionate and reasonable. On the night in question armed police did not know the identity of the driver (it has since been revealed that Mr Kaba was a member of a south London gang with a string of serious convictions). But they did know that the car had been associated with a firearms offence the previous evening.

In court, Mr Blake argued that he did not intend to kill Mr Kaba but that Mr Kaba's use of his car as a battering-ram had posed a lethal threat to himself and his colleagues. The prosecution argued that, hemmed in by a police roadblock, Mr Kaba posed no such threat. In such events, armed officers have to make rapid judgments on the basis of limited information. The jury decided that the bar for murder—proving that Mr Blake did not honestly believe there was such a threat and had used force unreasonably—was not met.

Cases of this sort are very rare in Britain. Armed police attend around 18,000 incidents each year; there have been only 65 in the past decade in which they have fired at people. This is the first police shooting in which video footage from body-worn cameras, which have become commonplace in the past decade, has been made public. That has focused attention as never before on the split-second judgments that armed officers make.

In retrospect, it seems wrong that Mr Blake was named. That does not usually happen but media organisations argued for it on public-interest grounds. There have since been reports that the gang Mr Kaba was part of has placed a bounty on Mr Blake. On October 23rd Ms Cooper said there will be a presumption of anonymity in cases involving police shootings unless there is a conviction.

She also promised to speed up the process for deciding whether such cases should be brought to court, which involves both the Independent Office for Police Conduct (IOPC), a watchdog, and the Crown Prosecution Service (CPS). Politicians from both main parties argue that it takes far too long, creating painful uncertainty for officers and victims.

Senior police officers question why the IOPC decided to pass the case onto the CPS and why the CPS then brought a murder charge against Mr Blake (the IOPC may yet hold a hearing for gross misconduct after reviewing evidence from the trial). Sir Mark Rowley, the commissioner of London's Metropolitan Police Service, has called for exemption from criminal convictions unless prosecutors can show that officers "deliberately departed" from their training. Ms Cooper is unlikely to agree to that, but she will raise the threshold at which cases are handed from the IOPC to the CPS. Fine judgments everywhere. ■

Podcasts

The most sensible show on earth

The appeal of "The Rest Is Politics", a relentlessly centrist podcast

THE VOLUME is thundering, the lighting dazzling. Some in the crowd who fill the O2 arena in east London on October 15th are downing burgers and beer; others wear T-shirts bearing their heroes' faces. And on a small stage in the centre of the venue, Rory Stewart, a 51-year-old former Tory MP in a Nehru jacket, is talking about the tax policies of the new Labour government. "They've ruled out income tax, which is the blue; VAT, which is the silver," he sighs. Around the arena 15,000 pairs of eyes study a colourful graph that fills the screens suspended over his head. "All the other stuff is rounding errors!" There is applause, and a shout of: "More!"

Welcome to the most sensible show on earth, a surreal mixture of the wonkishness of the Institute for Fiscal Studies, a think-tank, and the razzmatazz of World Wrestling Entertainment. The O2 event was the last night of a live tour of "The Rest Is Politics" ("TRIP"), a podcast that Mr Stewart presents with Alastair Campbell, who made his name as the communications guru for the New Labour government of Sir Tony Blair. TRIP, launched in March 2022, is Britain's most popular politics podcast.

TRIP's format is hardly revolutionary. In hour-long shows the pair talk about the state of their respective parties, the war in the Middle East and more. But its success reveals two things about British politics.

The first is that the public has an appetite for a less cynical and less combative

approach to political journalism. TRIP self-consciously harks back to an earlier age. The pair studied films of John Freeman, an interviewer of the 1960s, who would ask guests questions such as: "Are you on the whole more interested in ideas or in people?" Bickering is a faux pas; so is excessive partisanship. At one point in the O2 show Mr Stewart jokingly ticks off Mr Campbell for being too pro-Labour by pressing an emergency stop button; the arena is bathed in red light, a siren sounds and the word "tribal" flashes on the screens.

The appeal of a quieter form of broadcasting points to TRIP's second ingredient—the transformation of centrism into a political identity, in response both to Brexit and to Jeremy Corbyn, a hard-left former Labour leader. "We have a degree of nostalgia for a kind of Fukuyama 'end of history' 90s era," says Mr Stewart. "We share a sense that there was a time when the UK and its allies were part of a world that seemed to be getting more peaceful, more prosperous, more stable, and that something's gone badly awry." Only a smattering of those at the O2 say they would pick Kemi Badenoch or Robert Jenrick, the two remaining right-leaning contenders, for the Tory leadership. Asked whether Brexit is going well, a solitary arm goes up.

Trippers, says Mr Campbell, "feel that they're not taken seriously because they don't have extreme views". That may seem unlikely. To judge by the ticket price at the event (£91.25, or \$118, for a mid-tier seat) and the conversations about house prices in the queue, the podcast's listeners might be counted among life's winners. But to be overlooked is a state of mind rather than an economic predicament. And although the victory of Sir Keir Starmer, a cautious anti-populist, ought to please centrists, his is what Mr Stewart calls an "anxious triumph"; if Sir Keir fails, the door may open to more dangerous forces.

It is not all doom and gloom. Mr Stewart ends the show on a soaring oration. "These ideas, which as British people, we're very embarrassed by, are foundational to our democracy: hope, truth, equality, justice, dignity," he says. Then Mr Campbell's bagpipes are produced, the audience links hands and 15,000 voices join in a chorus of "Auld Lang Syne". "They are showmen," says John Wilson, a 90-year-old audience member, with a touch of disapproval. "But enjoyable, nevertheless." ■



Stadium fillers

Pet health care

Don't let sleeping dogs lie

HATFIELD

Give them a mitral-valve replacement instead

AN ONCOLOGY PATIENT lies face down, surrounded by an expert team, as they edge him into a state-of-the-art CT scanner. In the intensive-care unit a ventilated patient lies under an inflatable warming blanket, receiving one-to-one care from a specialist nurse; watching on is an anaemia sufferer wearing an unseasonal Christmas jumper. There is an emergency room but this afternoon it is empty, says Vicky Lipscomb, a soft-tissue surgeon and the hospital's clinical director. Welcome to the Queen Mother Hospital for Animals (QMHA) in Hertfordshire.

Britain is a country that is mad about animals. Sweden aside, no other nation has a higher uptake of pet insurance. According to Co-op Legal Services, one in every eight people who inquire about a will want to leave something to their animals. As pets become more like family members, it follows that owners want to give them the best health care possible. With humans waiting longer for treatment on the National Health Service and the quality of pet care advancing in leaps and bounds, the gap between species is closing.

The QMHA, whose 100 vets and 300 nurses saw around 19,000 cases last year, is at the luxury end of the scale. Its dedicated cat ward plays relaxing classical music; its underwater treadmill allows for timely post-surgical rehab. Around half of the patients who are admitted for the hospital's pioneering mitral-valve replacements, a form of open-heart surgery, fly in from America, says Professor Lipscomb. The Royal Veterinary College (RVC), which runs the hospital, tops the global rankings for veterinary schools; a fifth of its students are American, too.

None of this comes cheap. The QMHA was a pioneer in hypophysectomies, a procedure to remove the pituitary gland, particularly in cats with diabetes. Once the diagnostics and a lengthy stay in hospital are factored in, the cost of a hypophysectomy can easily reach £10,000 (\$13,000). But veterinary procedures in Britain do not have to be cutting-edge to be costly. At a vet's practice in London, one owner pays £900 to have her dachshund's stomach pumped after he swallowed chewing gum but shudders to think how much more she would have paid had she agreed to the "hourly blood tests". Concerns about rising prices, transparency over fees, and potential lack of competition have prompted the



Needs a dogtor

Competition and Markets Authority, a regulator, to launch an investigation into the veterinary market.

If costs are one concern, ethical dilemmas are another. Much as clinicians must think about the risks of over-treating a human at the end of life, "there's always a question about whether or not we should do things", says Lynne James of the Peo-

ple's Dispensary for Sick Animals, a veterinary charity.

Staff at the QMHA agree. "We don't do chemotherapy to the point where their hair falls out, since they can't consent," says Andy Yale, an oncologist at the hospital. In the blood-transfusion centre, pets are rewarded with tins of premium food and an "I'm a life saver" bandanna if they donate, though consent is considered to be withdrawn if a dog or cat does not lie still (you're not allowed to sedate a blood donor and "quite rightly", says Professor Lipscomb). This is far removed from practices in America, notes David Church, the RVC's deputy principal, where some hospitals will perform feline renal transplants on the condition that the owner agrees to adopt a stray cat as a kidney donor.

For people who find pet-pampering baffling, one argument for state-of-the-art veterinary medicine is that it complements human health care. Studying the pituitary tumours of diabetic cats may help to understand why a similar syndrome happens in people, says Professor Church. At the University of Glasgow researchers are trying an epilepsy medication in dogs that may help humans in the future. But the simpler argument is that it makes owners happy. "They gave our fur baby girl's sight back," gushes one review after successful cataract surgery at the QMHA. ■

Housing

Scotland isn't building

EDINBURGH

A sharp decline in construction is mostly the government's fault

STUDENTS IN EDINBURGH are in for a treat. If its plans are approved, Ediston, a developer, will soon build hundreds of student rooms on the northern edge of the New Town, the most elegant part of a fine city. Or perhaps you would prefer to study in Glasgow? If so, you might be able to live in a new tower, the Ard, which will be Scotland's tallest residential building. The surge of high-quality accommodation is a boon for students. But it is also a sign that something has gone badly wrong in Scotland's housing market. Developers are putting up student housing because it makes little sense to build anything else. For that, thank the Scottish government.

In the second quarter builders started work on 3,344 homes—the lowest quarterly number for a decade, excepting the spring of 2020 when covid-19 rampaged. Construction of private homes is down sharply; social house building has fallen by more (see chart on next page). Builders

have been idle in England, Northern Ireland and Wales too, but the slowdown in Scotland has been exceptionally abrupt.

Market turmoil is one reason. In 2021 the price of construction materials in Scotland jumped; the next year, mortgage rates went the same way. Many small builders have folded under the pressure. Homes for Scotland, a trade group, estimates that in the late 2000s at least 40% of homes were built by firms that put up fewer than 50 homes per year. Small outfits now build less than 20% of a smaller total.

The planning system is irksomely slow, as it is elsewhere. Scotland has some new rules known as NPF4, which are gumming things up while local authorities get used to them, says John Boyle of Rettie, a property firm. Over the past five years the length of time taken to decide a local planning application has crept up from nine weeks on average to 11 weeks; major developments take more than a year. In May a ➤



▶ court ruling over a proposed development known as Mossend, between Edinburgh and Glasgow, made it easier to block the bulldozers.

Worse still is the meddling in the private rental market. In 2022 the ruling Scottish National Party (SNP) and its then ally, the Green Party, temporarily capped rent increases at 3% a year. A new housing bill will allow ministers to control rents for longer. In a panic some developers cancelled “build to rent” projects. Others switched from rental flats to student rooms, which are not covered by the bill. Hence the fancy digs in Edinburgh and Glasgow.

As if the troubles in the private market were not enough, the Scottish government has cut funding for affordable homes, including rented ones. At the same time it is pressing for dramatic improvements in energy efficiency in those homes, which ought to have a welcome effect on bills but will have an unwelcome effect on construction costs. Private and social house-building are linked, because developers are often required to build mixed estates with a proportion of affordable homes.

Scotland’s housing minister, Paul McLennan, played the old nationalist tunes in a statement about the housing market in early October. He blamed the government in Westminster for the rise in construction costs and mortgage rates, and for the cut in funding for affordable homes. It did not go down well. “Those in need of a new home deserve better than that,” sniffed Homes for Scotland.

The blame-shifting in Scotland contrasts with the situation in Westminster, where the new Labour government has loudly promised to build more homes (whether it will succeed is another matter). It also creates an opportunity for Scottish Labour. On September 18th, as the leader of the SNP marked the ten-year anniversary of the independence referendum, Anas Sarwar, the head of Scottish Labour, spoke at a housing conference to lament the Scottish government’s record. He will not run short of things to complain about. ■

Adoption

Match postponed

The cost-of-living crisis has hurt children and prospective parents

IF “OLIVER TWIST” were written today, it would be different in many ways. One of them might be the ending. In Charles Dickens’s novel, Oliver is adopted by Mr Brownlow, a benefactor, without any trouble. Today Mr Brownlow would go through a fine-grained background check. His mansion would be inspected for safety and he’d be strongly advised to volunteer with children. If he liked a pipe after dinner, he could end up being rejected for smoking.

Many children eligible for adoption today are not finding families. The number of children in England who are waiting to be matched with families has increased by 22% over the past year. In the past decade the number of families approved as prospective parents has decreased by 60%.

Some argue that a well-intentioned screening process has become too stringent. The only statutory requirements to be able to adopt a child in England and Wales are legal residency and being over 21, but local councils implement their own policies on top. “Many local authorities see the adoption process as a way to test parents’ resolve,” says Erik Ferm, co-founder of Jigsaw Adoption, a non-profit organisation that provides adoption services. “This means you lose some good adopters along the way, but it is not given that those with the best stamina will be the best parents.”

Although the approval process is daunting, it has not changed greatly since

2015, when there was an all-time high in the number of adoptions. One thing that has changed in that time is the pressure on household budgets. According to Carol Homden, the boss of Coram, a children’s charity, the primary cause of the falling number of adoptions is the cost-of-living crisis, which makes it prohibitively expensive for some to start a family.

Some local authorities require that each child has their own bedroom—not always easy in a country with a well-documented housing shortfall—and strongly recommend that at least one parent takes a full year off work. In theory, this is a good idea: most adopted children have experienced tremendous trauma and need time to bond with their new families. In reality, statutory adoption pay covers six weeks on a near-full salary, and only £180 (\$234) per week for another eight months.

A post-pandemic backlog in family courts has exacerbated the problem. In 2019 a child in care was already waiting 719 days on average before an adoption was made legal; that figure now stands at 864 days. Because of prospective parents’ preferences to adopt young children, a wait of this length can significantly lower a child’s chance of finding a family: according to Coram, a six-year-old is 25% less likely to be adopted than a five-year-old.

As well as the emotional costs for children of not finding a permanent home, keeping a child in care is expensive for the taxpayer. Each child placed in an adopted home is reckoned to save local authorities an average of £1m. More funding for adopting parents, including access to therapy, would help; a change in statutory adoption leave to cover the self-employed might encourage new applicants, too. One thing that would still work in Mr Brownlow’s favour today is his wealth. ■



BAGEHOT

The miracle of King's Cross

If Britain has a future, it's there



TO GAUGE WHETHER Britain is going to make it, go to the central London district of King's Cross. Exit the station to the west and then head north to Regent's Canal. Stride past the solitary but well-used children's swing inside the technicolour birdcage. To your right is Google's sidescraper—a flat, 300-metre-long slug of wood, concrete and glass, which is due to open next year. To your left is the new headquarters of AstraZeneca, a pharma giant, which moved here in 2022. Cut through a snicket and past Universal Music Group, which in 2018 ditched plush Kensington for an area that has gone from industrial wasteland to the best hope for the British economy in barely a decade.

On the three-minute stroll, consider what came before. Until the 19th century the story of King's Cross was a mixture of myth (Boudicca probably did not fight the Romans here) and trivia (the remains of a mammoth were discovered here in 1690). History really began only in 1852, when Lewis Cubitt finished the austere yellow-brick railway station of King's Cross, sparking a development flurry to rival the one that has just occurred.

By the late 19th century the area was the most important transport node in the world's most important city. By the late 20th century, it was a ruin. Squatters hewed gigantic sculptures in its abandoned factories; Sir Antony Gormley, the artist behind the Angel of the North statue, lived in a nearby squat. Drugdealers dealt; sex workers serviced clients in stairwells. A concerned local resident called Tony Blair, then the leader of the opposition, spoke for many when he said in 1997: "It's actually quite a frightening place."

Stroll onto Granary Square, a vast public square in a city that lacks them, today, and it is anything but. In summer children skip through a giant set of fountains; on unseasonably warm autumn days, people sun themselves on Cornish granite benches. Central Saint Martins, an art school, moved here in 2011, which was a coup for Argent, the developer behind the regeneration of King's Cross. A public-sector body like a university is a good tenant: they rarely move and rarely go bust. Central Saint Martins had an added bonus: 5,000 art students and staff create a vibe.

For waymarkers, use the skinny boys in baggy clothes smoking outside their workshops and head north to Handyside Street. If ar-

tificial general intelligence does spring to life, one of the most likely spots for its birth is a ten-storey terracotta building next door to a Gail's, a bougie bakery. Numbers 14-18 Handyside Street are the headquarters of DeepMind, a British AI company bought by Google in 2014. DeepMind's co-founder, Sir Demis Hassabis, won a Nobel prize for chemistry at the start of October for work predicting the shape of proteins.

In the 19th century transport companies were pulled to King's Cross "like iron shavings attracted to a powerful magnet", in the words of Allies and Morrison, one of the area's main architects. A similar force is now at play with AI. The Alan Turing Institute, which researches AI, has based itself here. OpenAI, DeepMind's main rival, is setting up on nearby Pentonville Road. Aria, a government research agency that backs high-risk, high-reward ideas, joined in, too. XTX, a market maker that relies on AI and is perhaps Britain's most successful private company, has the top three floors of DeepMind's building.

Everyone is here because everyone is here. And everyone is here, in part, because it is lovely. It is also expensive. A two-bed flat in a lovingly restored gasholder overlooking the canal will cost a smidge under £2m (\$2.6m). The annual service charge is £14,768, about the annual cost of a mortgage for a large family home in most of the country. Sir Antony, the former squatter, lives in one. (This time he paid.) In 2010 corporate rents in King's Cross were about half the central London average. Now they are about a fifth more, says Centre for Cities, a think-tank. If engineers are being paid grotesque sums to try to build God, it makes no sense to skimp on location.

Walking back along Regent's Canal, a 200-year-old waterway, it is reasonable to wonder how much of the redevelopment is replicable. Some elements are: other places can be made car-free and mixed-use. But 27-hectare (67-acre) plots of land in the middle of a capital city are rare—never mind ones near leading institutions such as the Francis Crick Institute, University College London and King's College London. So are sites that have had roughly £30bn spent on infrastructure that stops or passes through the area. The recipe is simple. But few can follow it.

At this point, some hand-wringing is obligatory. Next door is Somers Town, a district literally on the wrong side of the tracks. Four in ten children in Somers Town are in poverty; on almost every metric it does terribly. But a path does run from the outstanding primary school in its heart to the world-class universities that lie across Euston Road and, perhaps, into a well-paid job next door. It is at least easier to imagine that journey for a poor child living in subsidised housing in London than for a child in a former pit village in the north-east of England. Poverty is spread out; opportunity is concentrated. The inequality may gall, but there is no better place in Britain to be poor.

N1, anyone?

Some complain that this sleek King's Cross is a betrayal of its grotty past. Far better to see the district as a sign of a city building its future. If a resurgent Britain finds itself at a technological frontier, it will be thanks to the likes of DeepMind plying their trade in the place where prostitutes once did theirs. If Britain is only to maintain its current trajectory of relative decline, then the success of King's Cross is still necessary: selling off Victorian gasworks and charging foreign students £28,570 per year in tuition fees is a good living. If even that model fails? Lord knows. ■

Europe



Germany's rising populist

The world according to Sahra Wagenknecht

BERLIN

She trashes the consensus on Ukraine—and much else. But is Germany's great polemicist finally ready to govern?

FEW GERMAN politicians divide opinion like Sahra Wagenknecht. A Putin-loving demagogue to her detractors, simply “Sahra” to her legions of adoring fans, Ms Wagenknecht has injected a high-octane blast of populism into a country that prefers its politics staid and consensual. Invariably decked out in her trademark high-necked jackets, Ms Wagenknecht rules the airwaves with her brainy but pointed polemics on Ukraine, immigration and other prickly subjects. Her political formula is unorthodox, yet the success of her Sahra Wagenknecht Alliance (BSW), a party she launched only in January, proves a talent for political entrepreneurship. And she has developed an uncanny knack for forcing other politicians to dance to her tune.

In an interview in her parliamentary office in Berlin, Ms Wagenknecht outlines her political philosophy and her aims. “Without a prominent face, no one knows

what young parties stand for,” she says, explaining why she launched a party with her image and under her name (the BSW will eventually be renamed, she says). “It is simply a programme that corresponds to what many people want. On the one hand, social justice. On the other, a conservative politics based on cultural traditions and reduction of migration, and which addresses the question of war and peace.”

What Ms Wagenknecht calls her “left-conservative” politics blends a traditional left-wing menu—higher taxes on the rich,

more generous pensions and minimum wage, scepticism towards big business—with a nationalist concern for cultural identity and a healthy dose of woke-bashing. The holder of a doctorate in micro-economics, she strongly backs Germany’s industrial model and its backbone of the *Mittelstand*, small and medium-sized business she credits with providing ordinary Germans with decent wages and careers. She says Germany’s government, which she has called the “stupidest in Europe”, has hobbled firms by putting sanctions on Russian gas, and she laments the “foolishness” of, for example, climate activists who wish to kill off the combustion engine, the source of so much of Germany’s past prosperity. And she is vocal about the “major problems” of irregular migration, which she says is “overwhelming Germany”.

Front and centre of her offer is Ukraine, or what she calls “peace”. Long steeped in the NATO- and America-bashing of the German hard left where she served her political apprenticeship, Ms Wagenknecht has found in the war an issue that clearly sets her aside from Germany’s pro-Ukraine mainstream. She condemns Vladimir Putin’s invasion, but says it sprang from Russia’s legitimate concerns over NATO expansion. In June, together with the hard-right Alternative for Germany (AfD), BSW MPs ➤

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▶ boycotted a Bundestag address by Volodymyr Zelensky, whose “uncompromising attitude” she blames in part for the ongoing fighting. There is a market for these views, especially in Germany’s east.

Ms Wagenknecht says she accepts Ukraine’s need for security guarantees in the event of the peace settlement she demands. But her preference would be for them to come from countries like China and Turkey; Ukraine must certainly be denied NATO membership, since Russian concerns over the alliance inspired the war in the first place. As for Germany, “it would have been wiser if we had held on to the old policy” of “mediating between Russia, eastern Europe and the US” rather than sending Ukraine arms and tanks. She has dismissed Olaf Scholz, the chancellor, as a “vassal” of America, which sums up her worldview and helps explain why the German establishment finds her so toxic. (Ms Wagenknecht’s repetition of Putinesque talking-points also earns her frequent appearances in Kremlin propaganda.)

She grew up in communist East Germany, and remained a true believer well after the wall came down. Her political journey took her into The Left (Die Linke), a hard-left outfit in part descended from East Germany’s ruling Communists. As co-leader of the party’s parliamentary group in the 2010s, she became a fixture on the talk-show scene and a well-known author. But her tensions with The Left over immigration and lifestyle issues—she thought the party had been captured by tofumunching metropolitans—and the growing strength of her personal brand made a break inevitable. Taking nine Left MPs with her, Ms Wagenknecht declared her intention to change “German politics, not for years, but for decades”.

Hers might be the most impressive political debut in German history. The BSW took over 6% of the vote at its first test, elections to the European Parliament in June. Then came votes in Saxony, Thuringia and Brandenburg, three states in Germany’s east, where her brand of politics has always been most popular. The BSW’s double-digit results in all three obliged the mainstream Christian Democrats (CDU) and Social Democrats to consider forming coalitions with it, given the need to retain a “firewall” around the AfD, which also outperforms in the east. One year ago the BSW did not exist. It is now preparing to take office in three of Germany’s 16 states.

Or is it? Her party’s success forces an unfamiliar question on Ms Wagenknecht: is she ready to accept the compromises of governing? There are reasons to doubt it. For although Ms Wagenknecht counsels compromise on Ukraine, in eastern Germany she plays hardball. She has paused coalition talks in Thuringia because a position paper by the three would-be partners

does not formally reject a recent German agreement to host long-range American missiles from 2026—even though states have next to no say in foreign policy. And she has upped the ante by insisting that CDU politicians with whom her colleagues are negotiating in the eastern states distance themselves from Friedrich Merz, their national leader, who wants Germany to deliver more weapons to Ukraine.

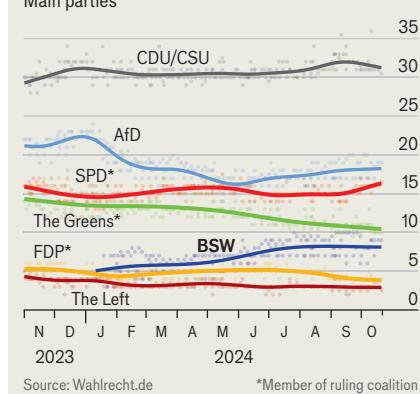
For many observers, making outrageous demands over symbolic issues looks like a prelude to blowing up the talks entirely, or forcing others to bow out: some in the Saxony CDU are already getting cold feet about the woman they dismiss as a “neo-Bolshevik”. “The coalition talks are primarily about achieving better living conditions,” says Ms Wagenknecht, mentioning Germany’s “desolate” education system. “Yet the question of war and peace is elementary, because if war comes to Germany, there is no point in thinking about education.” This attitude troubles those of Ms Wagenknecht’s BSW colleagues conducting the coalition talks, which seemed to be going well until head office got involved. But “we won’t join governments in which we would disappoint our voters,” says Ms Wagenknecht. “That would lead to a quick end to our party’s success.”

Sarah Wagner, a BSW-watcher at Queen’s University Belfast, believes that Ms Wagenknecht does not want compromises over state governments to jeopardise her campaign for next year’s federal election, her real priority. “The basis of this party is opposition, and that isn’t going to work if they’re in government,” she says. One insider says the party would be delighted to retain its current polling level of around 9% at that election. That would be enough to turn the BSW into a spoiler, making the business of forming coalitions yet more complicated than it already is, but not enough to move Ms Wagenknecht’s party out of her oppositional comfort zone. Perhaps that is fine with her. ■

The Wagenknecht effect

Germany, voting intention in federal election, %

Main parties



North Koreans in Ukraine

Russia’s latest allies at the front

KYIV

A partnership that illustrates Russia’s fall as a strategic power

UKRAINE’S PRESIDENT, Volodymyr Zelensky, declared last week that North Korea is sending troops to Russia, in effect joining the invasion as a co-combatant. The appearance of one of the world’s most erratic and heavily-armed nations in the fight might test the best-resourced and well-rested defences. After 32 months of grinding war against a much larger enemy, Ukraine is neither.

The Ukrainian claims were later backed up by South Korea and on October 23rd by America’s defence secretary, Lloyd Austin. Ukraine maintains that North Korea’s dictator, Kim Jong-un, has decided to commit at least 11,000 troops to the war. General Kyrylo Budanov, head of Ukraine’s military intelligence, says they are training at four ranges in and around the Khabarovsk region in Russia’s far east. He says they include at least 500 officers and three generals. A contingent of 2,600, he says, is due to be transferred to battle in Russia’s Kursk region by the end of October. A senior NATO official told *The Economist* that the alliance has yet to see signs of “large-scale” movements towards the front.

If the Ukrainian claims are true, it would not be the first time North Korea has come to Russia’s assistance in the war. It is already a big supplier of arms. Mr Budanov says shipments that began in late 2022 have reached 2.8m shells a year, just 100,000 short of Russia’s own annual production at 2.9m. Since late 2023 North Korea has also sent ballistic missiles, with launch systems serviced by North Korean crews. Pulled mostly from old stock, the battlefield performance of these missiles has been erratic. They regularly overshoot military targets to wreak havoc on Ukrainian towns and cities.

North Korea is not donating its men or weapons out of charity. The enhanced co-operation stems from a mutual assistance treaty, signed by Vladimir Putin and Kim Jong-un during a fawning dictators’ ceremony in Pyongyang in June 2024. Mr Budanov describes the secret provisions of the agreement as a quid pro quo: Russian hard cash and know-how in return for North Korean men and missiles. Russia is helping North Korea circumvent sanctions and “strengthen” its nuclear capabilities. In particular, he says, it is transferring some technologies for low-yield tactical nuclear weapons and submarine missile-launch systems. However, there is no independent



corroboration of this alarming claim.

John Foreman, who paid close attention to North Korea in his role as British defence attaché to Russia during 2019–22, says Russian attempts to strengthen the military relationship predates the invasion. But he interprets the latest developments as a sign of Russian desperation, a reflection about just how far the self-appointed “world’s second army” has fallen as a strategic power. “Russia used to look down on North Korea as a pygmy state,” he says. It was the great power “with Tchaikovsky and Chekhov and ballet...not some bloke with ill-fitting suits in love with artillery and killing people.”

But if the partnership is indeed a sign of Russian weakness, it isn’t yet pronounced or immediate enough for Ukraine. On the battlefield, things are still looking grim. Russia is making significant progress pressing simultaneously at several points along the 1,000km front line, despite staggeringly high casualties that have now surpassed 600,000 dead and wounded, by American estimates. Russia is in the process of encircling Pokrovsk, an important logistical hub in eastern Ukraine, and advancing further south, after taking control of the heights around Vuhledar.

A Ukrainian official says Russia’s next objective may be an advance on the city of Zaporizhia, a major industrial centre in Ukraine’s south close to a Russian-occupied nuclear-power plant. The same source suggests Russia may already have taken back as much as half of the territory Ukraine seized in the Kursk region in August 2024, Ukraine’s only serious advance since the failed 2023 counter-offensive.

Ukraine’s worries go beyond the shaky front lines. Western support, already stretched thin, is looking more precarious than before. This week the G7 further fleshed out the details of a loan of \$50bn, to be paid for by interest on seized Russian

assets; final agreement should be reached in the next few days. But a win by Donald Trump in the American election, now two weeks away, could choke off much of the direct military assistance. A victory by Kamala Harris offers no promises either. Germany, Ukraine’s second-biggest backer, has already signalled that aid will fall. France has done likewise.

Meanwhile Russia is busy internationalising the war in other ways as well. Last week Andrei Belousov, its defence minister, met officials in China for talks on strengthening military co-operation. Iran continues to supply Russia with drones, though its long-promised ballistic missiles have not so far appeared. The North Korean relationship is growing in strength. “We have partners, they have allies,” grumbles General Budanov. Ukraine is already neck-deep in a world war, he warns. “Just like the early days of the second world war, not everyone sees it yet.”

Ukraine is keen to use North Korean involvement to boost its own diplomatic efforts. “In such circumstances, our relations with partners need further development,” Mr Zelensky said on October 13th. Three days later, the Ukrainian president published his five-point “Victory Plan,” previously presented in private to American officials. The key points are proposals that Ukraine receives an invitation to join NATO; a bigger arsenal of weapons; and something described as “non-nuclear deterrence”—essentially a large number of long-range missiles that could take out key logistical and military targets in Russia.

A Ukrainian official, who asked to remain anonymous, says the package should be interpreted as “coercive diplomacy”, or a way to get Russia to negotiate peace on more favourable terms. But the same official was also frank: its potential for escalation had not been well received in Washington. “They say it’s a non-starter, though

part of the problem is they don’t tell the [Ukrainian] president that to his face.”

Russia, in contrast, is not overly concerned about its own escalation plans. How untested North Korean troops will fare on the European battlefield is still an open question. They have not yet been exposed to the realities of a modern war, now dominated by cheap, deadly tactical strike drones. It will take them a few weeks to adjust—if they last that long. But for General Budanov, the development is an “unwelcome experiment”. Russian soldiers are one thing, the spy chief says, with the vast bulk of them unmotivated and resigned to their fate. The North Koreans, on the other hand, come with a pre-programmed ideology. They have families back home that could be executed if things do not go well. “They fix some problems for the Russians. There is reason to be concerned.” ■

Giorgia Meloni

The tightrope walker

ROME

Two years in, Italy’s prime minister is still remarkably popular

THE POLITICS of Italy have long been trapped in a cycle of rancid interaction between judges and prosecutors on the one hand and conservative politicians on the other. It dates from at least 1994, when the then prime minister, Silvio Berlusconi, was served with a subpoena while hosting a conference in Naples on organised crime. Berlusconi and his supporters claimed he was a victim of politically motivated jurists—and repeated that claim *ad nauseam* over the years that followed.

On October 21st similar accusations were heard as Giorgia Meloni’s right-wing cabinet met to discuss its response to another dramatic judicial intervention. A court in Rome had ruled that 12 migrants, shipped to Albania, should be taken back forthwith to Italy. The ruling came just days after two Italian-built centres for receiving and holding asylum-seekers had been proudly unveiled at the launch of a €670m (\$730m) scheme for outsourcing Italy’s immigration problems. The government’s response was to pass a decree that aims to get round the ruling by designating a list of countries as “safe” for the return of people who are not assessed as genuine refugees; but there is no guarantee that the courts will not overturn it.

Ms Meloni now risks a protracted wrangle with the courts like that in Britain over the previous Conservative government’s plans to send migrants to Rwanda. Whether it erodes her support remains to be seen. ►



Next stop Donetsk

► But reducing the flow of migrants across the Mediterranean is crucial to her mission. And if the centres stand empty for long, they will become the butt of comedians' jokes and taxpayers' criticism.

The abrupt suspension of the scheme is the most embarrassing rebuff that Ms Meloni has suffered since taking office two years ago. Until last week, indeed, she and her Brothers of Italy (FdI) party had enjoyed a remarkably smooth ride. Partly that is a matter of luck. The opposition to her government is rancorously split between the centre-left Democratic Party and the maverick Five Star Movement. The Brothers' coalition partners, the more moderate Forza Italia party led by Antonio Tajani and the more radical League headed by Matteo Salvini, bicker incessantly but show no sign of defecting. Italy's economy has grown, albeit modestly.

But her good luck should not detract from a recognition of Ms Meloni's skills as a political and diplomatic tightrope walker. Take the manoeuvring that followed the European Parliament elections in June. Miffed at being shut out of the talks that crafted a renewed appointment for Ursula von der Leyen as president of the European Commission, Ms Meloni abstained from approving her reappointment in the European Council and the Brothers gave Mrs von der Leyen the thumbs-down in the European Parliament. That aligned them with the EU's most Eurosceptic and pugnaciously rightist elements.

Italian opposition MPs were appalled. Commentators warned that the prime minister had scuppered any chance of Italy obtaining a heavyweight economic portfolio. In the event, nothing of the sort happened. Ms Meloni's candidate, Raffaele Fitto, is set fair to become a commission vice-president. And, once his appointment has been approved by the European Parliament, his responsibilities will include the pandemic recovery fund of which Italy is by far the largest beneficiary.

At home, Ms Meloni has played a similarly deft, ambiguous game. A potentially controversial constitutional reform has been delayed and will probably not be put to a referendum before the end of the current legislature in 2027. Her government's management of the economy has been sensible enough, though free of any real effort to tackle its structural weaknesses. Next year's draft budget, which imposes cuts to rebalance the public accounts, might have been written in Brussels.

More radical action has been reserved for social issues. The most recent example is a law, approved by parliament on October 16th, criminalising people who travel abroad to arrange a surrogate pregnancy. But, as with previous such initiatives, it targets a limited section of the population, made up of people who would anyway

Azerbaijan's new export

The antidote to urban life

Slow cooking in the Caucasus

THIS IS A balm for the soul, this is real relaxation," reads a comment on YouTube under Country Life Vlog. But can cooking pilaf with beef and pumpkin or baking bread on a barrel really have a transforming effect? With nearly 7m subscribers and 2bn views, to say it is boring is to miss the point. Those tuning in from London, Sydney, Yekaterinburg and Kyiv do so for a glimpse of a tiny arcadia on the southern flanks of the Caucasus Mountains. Five years in, there are no special effects, plot twists or suspense. What the almost 500 episodes (around 25 minutes each) unapologetically provide is a dollop of tranquillity and harmony with nature. The echo is of a bygone era where summer fruit was canned for the winter



Sure beats commuting

probably never vote for the Brothers.

Three questions hang over the remainder of Ms Meloni's term. One is whether the cumulative effect of such "culture war" incursions could turn Italy into a much less liberal country, aligning it more with central than western Europe. Another is whether, in the absence of reform, a slow-growing economy could cause the government problems in the financial markets. Public debt, which had fallen, is expected to rise to almost 140% of GDP by the end of 2026. But tax revenues this year have been higher than forecast and analysts seem untroubled. On October 18th Fitch, a ratings agency, revised its outlook for Italy's long-

months and simple agricultural chores were part of food preparation.

The Azerbaijani matron, in house-dress and apron, works outdoors quietly chopping vegetables and seasoning meat surrounded by foliage, flower pots and running water. There is an economy of motion—only cats and puppies frolicking nearby, mountain ridges covered in fog. Her son chops wood for the stove and harvests almonds from the trees. The ancient recipe of "duck in the mud" is followed by quince and dogwood preserve, pickled cabbage and other traditional dishes, most cooked in cauldrons before being transferred into big metallic vats. The setting is bucolic; there is no sound except birdsong, the pouring of tea (freshly brewed from rose petals and wild flowers) and the occasional fragment of dialogue, which is never translated.

Bounded by Russia and Georgia to the north, the Caspian Sea on the east, Armenia on the west and Iran to the south, Azerbaijan seems an unlikely place to find a pocket of calm. Yet the pristine life it evokes somewhere on the slopes of Mount Shahdag rings true. The filming of un hurried preparation and cooking, unaided by modern kitchen gadgets, has struck a chord; what emerges is a feeling of relaxation vicariously absorbed through Azerbaijani cuisine and the outdoors. Similar niche shows have sprung up in Turkey and Uzbekistan. Although they are not to be underestimated, this Azerbaijani channel is the best. Long on turmeric, saffron and onions; short on stress.

term debt from "stable" to "positive".

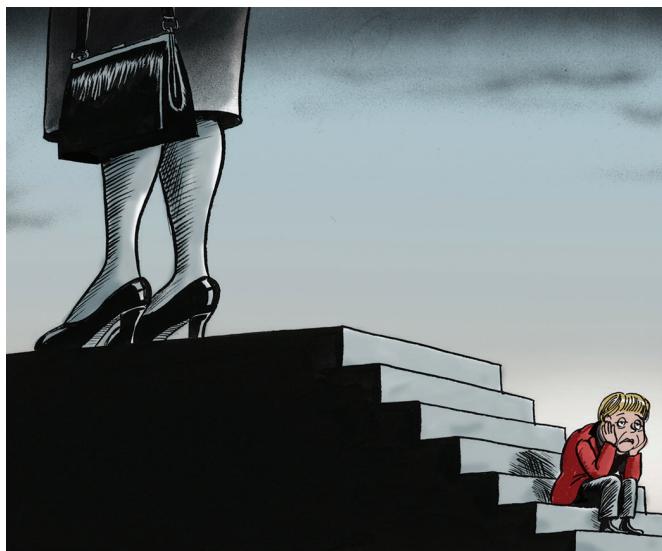
A less quantifiable risk concerns Ms Meloni's micro-managerial style. "She wants to control everything," says Giovanni Orsina, professor of contemporary history at the LUISS university in Rome. "And she doesn't trust anyone. She could overload herself—or lose touch with reality."

But for the moment the reality is that Ms Meloni enjoys an approval rating of more than 40%—twice as high as those of President Emmanuel Macron of France and Chancellor Olaf Scholz of Germany. Not bad for a prime minister approaching the mid-term point at which leaders' popularity often crashes. ■

CHARLEMAGNE

Angela who?

With every passing month Angela Merkel's legacy looks worse and worse



TWO WOMEN have thoroughly dominated the politics of their respective northern European countries in living memory. Beyond their gender, Angela Merkel and Margaret Thatcher are often lumped together as centre-right stalwarts with a knack for political survival. They governed very differently—one menacingly wielding her handbag, the other patiently cajoling coalition partners—but for so long that by the time they stepped down even teenagers could not recall anyone else having been in charge. But their legacies look more different still. Though Thatcher was forced out by her own party in 1990 as her poll numbers slid, she has since topped a poll of Britain's best post-war leaders; Sir Keir Starmer, the current prime minister, last month faced brickbats for merely moving the portrait of his predecessor-but-eight to a different part of Downing Street. Mrs Merkel opted to retire after four terms, still so popular that both her party's candidate and the opposition fellow (now in office) tried to claim her mantle. Yet every month that goes by brings a reminder of how her reign propelled Germany into the mire.

The Iron Frau's legacy will come into focus on November 26th as she releases her 736-page memoirs. What would once have been a lap of honour (along with a few obligatory digs at former political foes) will need to adopt a rather more defensive tone instead. Just about every big decision taken by Mrs Merkel now seems to have resulted in Germany—and often the entire European Union—ending up worse off. Geopolitically she left the country with a now-famous trifecta of dangerous dependencies: unable to defend itself without America, struggling to grow without exporting to China, relying on Russian gas to keep its industry going. The report card on the economy is if anything more damning: 16 years of muddling through with no reforms has left Germany once again the economic sick man of Europe.

What went wrong? “Vladimir Putin” is one pithy answer. The Russian president's decision to launch a full-scale invasion of Ukraine in 2022 showed that Germany's ill-preparedness was not just a theoretical pitfall. Mrs Merkel had cultivated Mr Putin, speaking to him regularly (that they spoke each other's languages helped). She will no doubt repeat in her memoirs that she never *really* trust-

ed him, then remind the world of how she led the movement to impose sanctions on Russia after its invasion of Ukraine in 2014.

Even the sleepiest reviewer, however, will wonder why German defence spending stayed at a measly 1.3% or so of GDP throughout her time in office. Worse, why did she allow Russian gas to make up an ever-bigger slice of German consumption—even allowing a new pipeline from Russia to be built *after* 2014? Beyond being iffy for the planet, Mrs Merkel's impetuous call to turn off Germany's remaining nuclear power plants after the Fukushima meltdown in 2011 left the country even more hooked on Russia. But why question German ways when the place seemed to be running like a well-oiled machine? China soaked up its exports, glad to face few questions over human rights, while Germany failed to worry about getting hooked on another autocratic regime.

Much of the book will doubtless deal with her time attending—in practice all but running—EU summits. By Charlemagne's calculations she sat through over 100 of them, spending as many hours in windowless Brussels meeting rooms as the average German works in an entire year. And for what? It was here that the cruel-but-deserved new verb *Merkeln* (to put off big decisions for as long as possible) really came into its own. Whatever immediate crisis was handled was for the most part dealt with sensibly, if not always from Greece's perspective, though often only after having been made worse by months of inaction. Yet the focus on putting out fires meant nobody focused enough on the future. Yes, the EU was kept in one piece (minus Britain). But in what shape?

Three big pitfalls have become obvious. The EU has been made more fragile by the democratic backsliding of some of its members, most notably Hungary. Mrs Merkel deserves lots of blame here, as she shielded its budding autocrat Viktor Orbán from criticism for reasons of lazy convenience (Hungary is tied in to German industrial supply chains). The second is how Europe turned out to be on the economic slow track. A recent report by Mario Draghi, a former prime minister of Italy, excoriated European economic policymaking, pointing out how far the continent had fallen behind America. Finally, her kindness towards migrants, all but inviting over a million Syrians and others to Germany in 2015, while laudable, led to a political backlash that has helped fuel the rise of the hard right in Germany and elsewhere.

This lady's not for reforms

There is an irony in how things turned out. Germany nagged southern Europeans into austerity, but now its own *pfennig*-pinching ways look misguided. A constitutional amendment limiting budget deficits, dating from Mrs Merkel's time in 2009, has resulted in chronic underinvestment in public services. Spending that could have been done at 0% interest might have made Germany fit for the 21st century. Instead, bridges are literally collapsing and the train system is *kaput* due to previous neglect.

Those wondering how Europe ended up in its current pickle will rightly look to Mrs Merkel's stint in charge. But Germans might use the launch of her memoirs to do their own soul-searching. They are the ones who voted time and again to put off reforms of the sort undertaken in the early 2000s by Mrs Merkel's predecessor, Gerhard Schröder (though the less said about his legacy after leaving office, as a well-paid pal of Mr Putin's, the better). For Mrs Merkel's part, she led Germany as if in a make-believe world, letting it enjoy an extended geopolitical and economic nap from which it still needs to wake up. ■

United States



Early returns

As voting begins, Democrats fret

MOUNT PLEASANT, MICHIGAN

Initial turnout in early voting has been high, but Republicans have made gains

FOR THE first time since August, Donald Trump has overtaken Kamala Harris in *The Economist's* statistical model of America's presidential election. Our latest forecast gives Mr Trump a 53% chance of returning to the White House, up seven percentage points in the past week (see chart on next page). Although the race remains more or less a coin toss, it is now weighted slightly in Mr Trump's direction. The shift in our model reflects a steady narrowing of Ms Harris's lead in national polls during the past month. State-specific polls published in the past week confirm that Mr Trump's position has strengthened slightly in the plausibly decisive states.

Clues to what will happen on November 5th are not only to be found in polls. Millions of Americans have already voted. Nobody knows whom they voted for, but it is possible to compare turnout with previous cycles and draw inferences from that.

Both parties are putting their energy into turning out their bases. Elon Musk's legally murky scheme to give away \$1m a day to registered voters in swing states—apparently to spur voting by supporters of Mr Trump—has lately drawn a spotlight. Yet many other less profligate attempts to lift turnout are shaping the final, frenzied days of the race between Mr Trump and Ms Harris. One group is distributing 100,000 copies of a "Liberty Knights" com-

ic book in Philadelphia, to inspire young adults to turn out. Central Votes, which targets students at Central Michigan University, has offered inducements such as "walking tacos" (smashed-up bags of crisps mixed with ground meat), pickles on a stick ("voting is a big dill") and even a petting zoo with goats.

Turnout in 2020 was the highest in an American election since 1900. Mr Trump's polarising presidency was one big factor. Covid was another, as it led to emergency measures to make voting by mail easier. This time, covid restrictions have vanished but Mr Trump decidedly has not. One critical question is whether voter participation in 2024 will remain so elevated, and if not, who might benefit. Analysts are also scouring early-vote numbers for clues about who might ultimately win; some detect warning signs for the Harris campaign.

Provisional evidence suggests that voter enthusiasm remains high. Early in-person voters in Georgia have shattered records, with 1.5m turning up in the first eight days, compared with just 1m in 2020. North Carolina, another swing state, has also exceeded 2020's comparable figures, but more modestly (see next story). Officials in Maricopa County, Arizona, the most populous jurisdiction in that swing state, project turnout similar to 2020.

→ ALSO IN THIS SECTION

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36 Campaign calculus: Kamala's camp

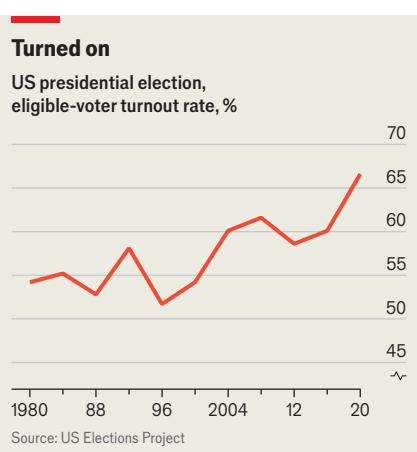
37 Maricopa counting

38 Lexington: Harris's closing argument

Turnout may yet falter. If so, would this favour Mr Trump or Ms Harris? For decades, political-science research found that Republicans benefited from lower turnout caused by factors such as bad weather, while Democrats benefited from higher turnout. But Mr Trump's takeover of the Republican Party has changed the equation. His Republican coalition now draws more from working-class voters, whereas the Democratic coalition has shifted to draw heavily on those with college degrees. This means old beliefs about turnout and partisan advantage must be reconsidered. "We can no longer make the assumption that high-turnout elections are universally good for Democrats," says Elliot Fullmer, a political scientist at Randolph-Macon College. Mr Trump's victory in 2016, amid relatively high turnout, offers evidence for this view.

America's higher voting rates may not endure beyond the Trump era, but the stunning rise of early voting almost certainly will. Between mail ballots and early in-person voting, 64% of Americans cast their ballots before election day in 2020, up from 42% in 2016. Covid accelerated this, but early voting had grown steadily since the 1990s, as "convenience voting" spread to the great majority of states. The total early vote may fall back this year in the absence of covid, but for campaign managers, "Tuesday's Gone", as the title of a book about early voting by Mr Fullmer puts it.

This year, more than 26m voters have already returned mail-in ballots or cast in-person early votes. Divining insights from these about how the election will ultimately turn out is difficult. Yet some of the early numbers are feeding Democratic anxieties. The Republican share of early returned mail ballots has risen from 27% last time to 32% so far in 2024, while the share enjoyed by Democrats has held at just under 48%. Mr Trump's supporters find this encouraging, but "there's still debate as to whether early voting is just cannibalising election-day vote, or if you actually get new voters in the mix," notes Jacob Neihei-



sel of the University at Buffalo.

Early voting has given rise to a new sub-tribe of statistics geeks and scholars who interrogate the initial returns for insights. John Ralston, a veteran journalist in Nevada, has attracted a devoted following in his swing state. Our model has the state as a toss-up. Mr Ralston sees "serious danger" for the Harris campaign in early-vote figures showing that Republicans had returned more ballots than Democrats. Yet the margins remain tight in polls and in other early-vote figures. In North Carolina, by October 23rd, Democrats had lodged just 10,000 more votes than Republicans out of more than 1m early votes cast.

As in Nevada, *The Economist's* forecast shows a dead heat in Michigan. High participation among working-class voters in western Michigan, a key Trump constituency, could tip the election towards Republicans. A surge of voting among young, black and Hispanic voters could benefit Ms Harris. The polling could be wrong, but neither campaign wants to take that chance. Both are aggressively working to encourage their likely voters.

Team Harris has 52 campaign offices and more than 375 staff in Michigan and has signed up 100,000 volunteers since Ms Harris's late entry into the race. Republicans heavily rely on a constellation of efforts between outside groups, down-ballot campaigns and the Trump operation itself. Victoria LaCivita, communications director for the Trump campaign in Michigan, says the former president is seeing growing "support from people and states that Democrats have taken for granted".

Elissa Slotkin, a Democratic Senate candidate, recently made a campaign stop at Central Michigan University. She closed her expertly delivered stump speech by joking that those who had come to hear her were either "deep political nerds" or "engaged citizens". She implored them to "please bother your friends" and make sure they vote. One student said he was certainly going to vote early: at least, then, "the text messages [will] stop." ■

North Carolina

After the flood, an election

ASHEVILLE

Will Hurricane Helene tip the vote in a swing state?

ROUND A MAP spread out on a table, Buncombe County election organisers survey the terrain like generals plotting an assault. "The bridge is out here, but there's another road," points out Corrine Duncan, the director of elections. They are trying to relocate polling places damaged by Hurricane Helene last month. A red arrow shows where an emergency tent in a café car park will house polling booths.

There are nearly 1.3m registered voters in the 25 storm-ravaged counties adopting special voting rules following the disaster. Whether or not these voters turn out in large numbers may be a factor in the battle between Donald Trump and Kamala Harris. In 2020, when Mr Trump won North Carolina and its 16 electoral-college votes by just over 1%, he won 23 of the 25 affected counties and outpolled Joe Biden there by more than 200,000 votes. Depressed turnout this autumn could hurt either candidate, but Mr Trump looks more vulnerable. He received 21% of his statewide vote in the region last time, compared with 13% for Mr Biden.

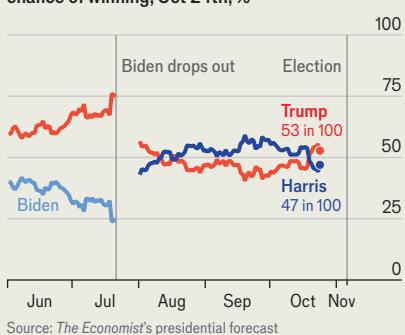
Participation will also be an indicator of the recovery of towns staggered by the confirmed deaths of nearly 100 people, with more than 20 missing. Four weeks on, flooding has receded and trees and mudslides have been cleared from roads. Yet reliable access to drinking water may be months away, and in some areas the storm demolished roads and buildings. Democrats have largely paused campaigning, citing concerns about the well-being of residents and staff, in addition to damaged offices. Canvassing is resuming in areas with reliable water and electricity. "We have to face the fact that the election is going on, and this is the most important election of our lifetime," says Sam Edney, the Democratic party chair in Transylvania County.

North Carolinians years ago discarded election day and embraced election month. Nearly two-thirds of voters cast early in-person ballots in 2020. (The next-most-common method was by mail; only 16% turned out on election day.) Early voting began this year on October 17th. Administrators here are regularly putting in 16-hour days to open new polling sites and communicate with voters.

Initial turnout was impressive. In McDowell County, on the first early-voting day, police were forced to direct traffic at the jammed car park near a polling site. ►

He's ahead

US presidential election 2024, chance of winning, Oct 24th, %



▶ “Nothing’s going to stop me from voting,” declared a 68-year-old in Asheville, wrapped in a warm jumper to wait in a long queue. Yet there were signs of reduced participation, overall. During the first two days, the early in-person vote in all the storm-hit counties was one percentage point lower than in 2020, compared with a higher turnout in other counties.

In Buncombe County, which includes Asheville, the region’s largest city, a fifth of election-day precincts have been changed because they were damaged or are being used for emergency response. Administrators themselves have been displaced: the number of early-vote workers available has fallen by a third. With television still out and internet patchy, telling people about polling-place changes is “the single biggest challenge that we have today”, says Jake Quinn, chair of Buncombe’s Board of Elections. Rural McDowell County is posting letters to every voter; there are contingency plans for destroyed mailboxes.

Mr Quinn acknowledges that meeting his original turnout target of 80% of registered voters will probably no longer be possible as people concentrate on rebuilding their lives. One 80-year-old in Asheville said she “never found it so hard to vote” as “everywhere seemed closed”. (Your correspondent met her at the election office, which straightened out most of her problems.) “What will be a big issue for us is the confusion,” says Mr Edney.

Campaigns have had to reset too. Among other things, they are rolling out new messages and replacing innumerable water-sodden lawn signs. A recent canvass by the Harris campaign in the relatively unscathed town of Brevard found no one at home, since voters had evacuated after the storm. Without television, persuading occasional voters will be just as hard for the

campaigns as it is for election officials trying to explain where to vote.

Republican leaders say they are doing “anything that we can do”, as Michael Whatley, the chairman of the Republican National Committee, put it during a campaign stop. Yet he acknowledges that “it’s going to be hard” for some people affected by Helene “to focus on voting”. It is not unusual for victims of an unexpected disaster to lose faith in their government, even when it delivers speedy relief. “A lot of people are saying they haven’t seen FEMA,” says Chad Wolf, a former acting secretary of homeland security, referring to the Federal Emergency Management Agency. This, he reckons, could change some minds and energise voters.

Mr Trump, as ever, goes much further. On October 21st the former president campaigned in Swannanoa, one of the worst-hit towns. Standing before a pile of debris, Mr Trump falsely claimed that FEMA had squandered disaster-relief funds on housing for illegal migrants. “A lot of the money is gone,” he declared. This calumny has emerged as a MAGA attack line. This and other misinformation is rife in the region. Voters in line in the town of Rutherfordton cited conspiracy theories about covered-up deaths in nearby Lake Lure and FEMA confiscating charitable donations.

The atmosphere is redolent of 2020, when the covid-19 pandemic and the government’s response infuriated a polarised electorate. Rumours online hold that the new voting rules, passed unanimously in the state assembly, are designed to encourage election fraud. With a sigh, local officials express confidence in their procedures. Distributing ballots to precinct captains, a Buncombe County election worker detects “a pattern here—covid in 2020, now this”. She pauses. “Asteroid [in] 2028.” ■

Immigration

Fear and voting

AURORA

What Donald Trump’s fixation on a Venezuelan gang reveals

IT HAS BEEN nearly a decade since Donald Trump announced his first run for president in 2015. It is sometimes hard to recall the details of each of his own campaigns, and those he presided over. They all smush together—a constellation of red MAGA hats and promises to save America. But look hard and a pattern emerges. The central tenet of Trumpism, the throughline between 2016 and 2024 and the foundation for his political cult, is that Democrats are to blame for “American carnage”, and he alone can fix it.

Consider three of the four election cycles since Mr Trump first took office: the 2018 midterms, the 2020 presidential campaign and the 2024 race for the White House. In October of each of these years, just weeks before the poll, Mr Trump has portrayed himself, and his party, as the only defence against a dire threat from illegal immigrants or a diversifying society. In 2018 the Republican Party would protect Americans from a migrant caravan, thousands strong, heading towards the US-Mexico border. In 2020, on the heels of national protests against racism, Democrats were planning to “destroy our suburbs”, in part, by building low-income housing for minorities. This year the message is the same but the details are different. A Venezuelan gang, Tren de Aragua (Tda), has infiltrated Aurora, Colorado—and is coming to a city near you.

Mr Trump mentioned Aurora during his debate with Kamala Harris, the Democratic nominee, in the midst of a riff against immigrants. “You look at Springfield, Ohio. You look at Aurora in Colorado. They are taking over the towns.” He has since used alleged Tda activity in Aurora to campaign against the Biden administration’s immigration policies. “Kamala has imported an army of illegal-alien gang members and migrant criminals from the dungeons of the third world,” he told a crowd in Aurora on October 11th. “To everyone here in Colorado and all across our nation I make this pledge...November 5th 2024 will be liberation day in America. I will rescue Aurora and every town that has been invaded and conquered.”

The true story is foggier. Tren de Aragua is a real gang, originally formed in the Tocorón prison in the Venezuelan state of Aragua, according to InSight Crime, a think-tank. In recent years its influence has expanded throughout South America. As ►►



Undeterred

ordinary Venezuelans fled to America to escape the ruin wrought by Nicolás Maduro, their country's despotic leader, police have noted the gang's presence in several American cities.

Since December 2022 some 43,000 migrants have shown up in Denver, Colorado's capital, which borders Aurora. Denver saw a larger influx of migrants, per capita, than both Chicago and New York City. They were "almost universally Venezuelans, and so many of them with the same story", says Mike Johnston, the mayor of Denver. He recalls watching from the window of his office as buses of migrants arrived from Texas.

Many Venezuelans who made it to Denver will have settled in neighbouring Aurora, a city of nearly 400,000 which is roughly 30% Hispanic. Mr Trump claims the gang will kill people willy-nilly while they walk down the street. Aurora officials insist that its activity is limited to a few run-down apartment buildings reviled among tenants for poor living conditions. Gigi Hagopian, a tenant and housing organiser, says the fly traps are always buzzing and the roaches threaten to crawl into sleeping residents' ears.

Ten members of the gang have been arrested thus far. Yet in a letter to the landlord last year, police said crime at one building increased by 30% between 2019 and 2023, before allegations were made of TDA's presence. The building has since been condemned. "It was really dramatic to say that the entire city is being overrun by Venezuelan gangs and they're 'occupying the city,'" says Mike Coffman, Aurora's Republican mayor. "It's not accurate." He worries that Mr Trump's exaggerated rhetoric will hurt the city's economy by keeping firms from holding conventions in Aurora, or people from moving there.

A recent study from the Justice Department's research arm looked at arrests in Texas between 2012 and 2018, and found that illegal immigrants committed crimes at a lower rate than legal immigrants and American-born citizens. Crime in Aurora has fallen over the past year. This has not deterred Mr Trump from showing videos of alleged gang members in Aurora at rallies around the country.

Each of these three examples—a migrant caravan, changing suburbs, a Venezuelan gang—begins with a kernel of truth, but in Mr Trump's retelling becomes an existential threat: TDA is not just a gang police have to watch out for, like so many others, it is a threat from which Colorado must be liberated. "I will give you back your freedom and your life," he says. But listen closely, and he gives the game away. TDA are "stone-cold killers", he told the crowd in Aurora, but "they are really great if you happen to be running against the politician that allowed this to happen." ■

Campaign calculus

Kamala's camp

Gay voters are smitten with Kamala Harris

IN THE DAYS after President Joe Biden announced his withdrawal from the election, a short clip from 2013 went viral on Twitter. It showed the then attorney-general of California speaking to the County Clerk of Los Angeles on the phone: "This is Kamala Harris—you must start marriages immediately." The Supreme Court had just dismissed a case brought by opponents of same-sex marriage and Ms Harris was instructing the clerk to get to work.

The video struck a chord with Twitter users celebrating that the now-vice-president would assume the Democratic nomination. Polls suggest lesbian, gay and bisexual voters swung behind Ms Harris in the following weeks, helping put her within reach of the presidency (data were not available for trans voters). But despite the hype, neither of the major-party nominees has spent much time courting gay voters. LGB people seem to like Ms Harris anyway. Her opponents in the Republican Party are either not interested in, or hostile to, wooing voters from the growing bloc.

In *The Economist*'s large-sample analysis of voting behaviour, we find that being gay or lesbian had the third-largest effect on a voter's support for Ms Harris—all else held equal—after being black or an atheist. Their attachment to the Democrats is long-standing, reflecting the party's historical connection to queer activism, but that does not mean support for the Democratic nominee is assured. Over the course of 2024, as his candidacy withered, polling by YouGov

showed support for Mr Biden fell from around 71% to 64% of lesbian, gay and bisexual voters (see chart).

Ms Harris's entry into the election galvanised this group. In the first weeks of her candidacy, her vote share leapt by 14 percentage points with LGB voters, while increasing by only three points among straight ones. In YouGov's data, it was gay voters who delivered Ms Harris's polling surge over the summer. This gap has closed slightly since, but she still holds a solid lead among LGB voters. Though the group makes up less than 9% of YouGov's respondents, Ms Harris's 61-point lead among them is enough to outweigh her four-point deficit among straight voters.

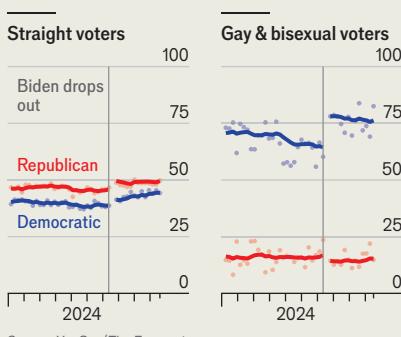
LGB voters' support for Ms Harris is overwhelming despite her campaign being relatively quiet on gay issues. The Democratic Party platform includes a commitment to outlaw discrimination, as it did in 2020, but she does not often refer to gay people in her stump speech. Nor does she routinely trumpet achievements of the Biden administration, such as delivering federal protections for same-sex marriage.

Part of Ms Harris's appeal, compared with Mr Biden, is that, coming from San Francisco, a gay capital, she is more adept at the language of young LGB people. She has associated herself with queer cultural moments, meeting the cast of "Queer Eye", a reality-TV show, and embracing Charli XCX's "brat summer". And in her personality she exhibits what Susan Sontag, an intellectual, once described as "a sensibility that revels in artifice, stylisation, theatricalisation, irony, playfulness, and exaggeration"—in a word, Ms Harris is a trifle camp.

Ironically, that definition could apply to her opponent too. But the Republican Party Mr Trump leads is toxic to many gay voters. Although Mr Trump appears uninterested in opposing gay rights—he softened the party's opposition to same-sex marriage, for example—he has not challenged some other Republicans' homophobia nor made any substantive appeal to LGB voters. He also trumpets a conservative line in the trans debate, placing himself at odds with many gay voters. If Ms Harris wins the election, she could have the gays to thank.

Gay gulf

US presidential election 2024, voting intention, %



Source: YouGov/The Economist

Election administration

Valley fever

PHOENIX

A culture of conspiracy haunts Arizona's elections

“YOU'RE ON live streaming right now,” says Jennifer Liewer, a deputy elections director for Maricopa County, Arizona. “You can wave to your friends.” She takes your correspondent round the vote-tabulation centre, known as MCTEC, in downtown Phoenix. She points to cameras attached to the ceiling. They record everything that happens here. The county began broadcasting every hour of every day after the 2020 elections, when Maricopa's results were audited several times over.

Arizona is one of seven swing states that will, in effect, decide America's presidential election. And Arizona's results will largely be decided in Maricopa County, which sprawls across the saguaro-covered desert with Phoenix at its heart. Nearly 60% of Arizona's 4.1m registered voters live there. It is now America's largest swing county. In 2020 Joe Biden became the first Democratic presidential nominee to carry Maricopa since Harry Truman in 1948.

Yet with close elections comes attention. Since 2020 Arizona has been embroiled in controversy over the fairness of its elections. When Donald Trump lost the state that year, he called Rusty Bowers, the Republican speaker of the state's House of Representatives, and asked him to overturn Arizona's results. Mr Bowers declined, and in 2022 lost his primary to a candidate endorsed by the former president. A partisan audit conducted by Cyber Ninjas, an obscure company with no election-audit experience, could not refute Mr Biden's victory. But many Republicans cried wolf nonetheless. In 2022 Kari Lake, a MAGA warrior and former news presenter, refused to accept that she lost the governor's race.

As conspiracies swirled, election officials came under attack. Bill Gates, not the one of Microsoft fame but on the county's Board of Supervisors, which oversees elections, received death threats. “It really started to affect me,” he recalls. “I became withdrawn. I became angry in a way that I had never been before.” Shelby Busch, the vice-chair of the local Republican Party, said she would “lynch” Stephen Richer, a fellow Republican and county recorder (a position that oversees voter rolls and mail voting) who has defended the fairness of Maricopa's elections. She later admitted that was “probably a poor choice of words”.

A sense of unease now permeates the valley. Officials are hoping for the best and preparing for the worst. MCTEC will soon

become a fortress. Two layers of fencing surround the building. On election night a SWAT team will be stationed on the roof and officers will patrol the perimeter on horseback. “This will be the safest place in Arizona,” says Ms Liewer.

Officials point to three threats to an orderly process. This year Maricopa County's ballots will be two pages long. Twice the paper means longer queues and processing times. Mr Gates reckons the counting will be “95% done by the end of election week”. But he worries that conspiracies will spread in the time between when polls close and results are released. Ms Liewer is alert to an insider threat. The county will hire some 600 people to work at MCTEC. There is a chance that not all will be trustworthy, despite vetting. This year a clerk stole a key needed to access computers with sensitive information. He was caught and arrested. Finally, the threat of political violence looms large. Poll workers are trained in de-escalation tactics in case voters, or protesters, get heated.

Maricopa counting

Further risks loom. A study by Andrew Hall and Janet Malzahn at Stanford University suggests that, in 2022, election deniers running in statewide and federal races underperformed other Republicans by an average of 3.2 percentage points. Candidates who have cast doubt on the results of

elections, without proof, are running for office despite this penalty. They want to take charge of Maricopa's elections.

One closely watched county race is for recorder. Mr Richer lost the Republican primary to Justin Heap, a state representative who has called local elections “a laughing stock”. He will face Tim Stringham, a Democrat who wants to make the job boring again. He jokes that running for recorder was never a dream of his. “You assume you'll take a stance on something that's of real importance to you—the environment or the economy or education,” he says. “You're not like: I'd like to just keep the system from entirely collapsing.”

Ms Lake is running for the Senate. She is pushing people to vote early. “Take it to a drop box, even though I hate those damn things,” she tells a crowd in Anthem, on the valley's northern edge. But she is trailing Ruben Gallego, a Democratic congressman, in the polls.

Arizona has a tradition of scepticism of government. When Barry Goldwater, a Republican senator for the state, accepted his party's nomination for president in 1964, he declared that “extremism in the defence of liberty is no vice.” Arizona's Never-Trump Republicans point to the impeachment of a right-wing governor, Evan Meacham, in 1988 as a moment that radicalised the fringes of their party. “Those folks were just offended, and thought they were on a holy crusade,” says John Giles, the Republican mayor of Mesa. “It's Evan Meacham 2.0 with Donald Trump.” A poll from Samara Klar of the University of Arizona suggests that 27% of Arizonans, and 42% of Arizona Republicans, are not convinced their elections are conducted fairly.

Maricopa County's Republican Party has adopted a new slogan. It hopes Mr Trump's victory will be “too big to rig”. ■



Stick-up

LEXINGTON

Back to the future

Kamala Harris's vision is nostalgic in its own way. Do enough Americans still believe in it?



SENATOR BARACK OBAMA was well ahead of the country in 2007, or so believed some of Hillary Clinton's campaign advisers. "Obama is unelectable except perhaps against Attila the Hun," Mark Penn, her top strategist, wrote in an internal campaign memo in March that year. Mr Obama was trying to celebrate his background as "diverse" and "multicultural", but Americans were not ready for that message. "Save it for 2050," Mr Penn wrote.

The future arrived much sooner than Mr Penn expected. But then it went on to prove stranger than anyone could have imagined. To attend Kamala Harris's rallies in the closing days of this year's presidential campaign is to be reminded what the future once looked like, before the rise of Donald Trump and his destabilising synthesis of atavistic and innovative politicking, of old dog whistles and new media methods, of nostalgia and revolution.

Many recent news reports have noted that Ms Harris has shifted from her politics of "joy" to a more solemn message about the menace of Mr Trump. That is partly true—she has honed her case against him—but her rallies are still exuberant. On October 19th in Atlanta, Georgia, about 11,000 people, a pageant of diversity, filled the lawn spreading uphill from the stage of the Lakewood Amphitheatre. They all seemed happy. Young or old, singly and in synchronised groups, they danced in the late-afternoon sunshine as a DJ played hip-hop and pop tunes.

Ms Harris's soundtrack tends to be more contemporary, and blacker, than the pop ballads, classic rock and country tunes at Trump rallies. Yet in Atlanta the crowd belted out the chorus of Neil Diamond's "Sweet Caroline" as lustily they did the chorus of Whitney Houston's "I'm Every Woman". The seating section reserved for pink-and-green-clad members of Ms Harris's black sorority, Alpha Kappa Alpha, was among the signs the Harris campaign is different from that of any nominee who came before.

But when the candidate appeared onstage, to ear-splitting cheers, the rally turned into a throwback to a more conventional time. Ms Harris is a strong stump speaker. She improvises confidently—"You guys are at the wrong rally," she responded to some hecklers recently in Wisconsin, "I think you meant to go to the smaller one down the street"—but she delivers only slight varia-

tions of a standard speech. This can be a strength. In Atlanta the crowd rapturously chanted "We are not going back!" as she reached that signature line. When she mocked how Mr Trump described his proposal for health care, she spread her arms wide and made air quotes with her fingers that the crowd filled in by roaring his limp assurance he had "concepts of a plan". Unlike Mr Trump, Ms Harris smiles and laughs, warmly and often.

Mr Trump connects to his audiences in a different way, through the free-form speechmaking he calls "the weave". In execution the weave can conjure less an image of disparate threads forming a beautiful tapestry than of a drunk lurching down a pavement. But though Mr Trump's digressions may be baffling or squalid, as when he recently rhapsodised about the penis of Arnold Palmer, a golfer, his storytelling creates a sense of intimacy. Whereas Ms Harris might be on and off the stage in half an hour, Mr Trump can meander about himself and his relationships for nearly two hours. To critics this seems like self-indulgence, but to his audiences it seems like generosity and authenticity, the candidate's real thoughts rather than the speechwriter's epigrams that signpost Ms Harris's remarks. Whereas her rallies succeed in the conventional aim of commanding local publicity, his often make national news that crowds her out of the spotlight and excites the disaffected voters he is trying to prod to the polls.

Ms Harris reels off policy objectives and criticisms of Mr Trump, but she is not given at rallies to telling stories about herself. The closest she came in Atlanta was to say "I took care of my mother when she was sick", in explaining her proposal to have Medicare cover home health care. But she couched even that experience in generic terms. "It's about trying to help them put on clothes that won't irritate their skin," she said. Her supporters hear in such universalising an authentic generosity, a signal Ms Harris is more interested in their experiences and needs than her own.

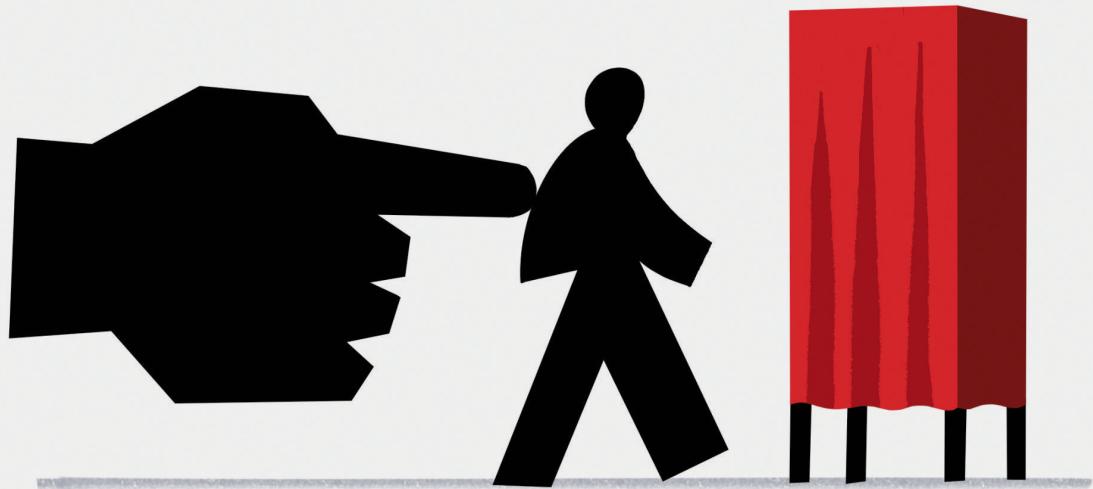
This approach seems true to Ms Harris's guarded persona, and it also seems intended to supply a soothing, grown-up counterpoint to the melodrama of Mr Trump's unending perils-of-Pauline act. And unlike Mr Trump's messages it seems meant as much for swing voters, particularly female ones, as for her core audience.

Woman's work

This was underscored by Ms Harris's choice to campaign with Liz Cheney, a former Republican congresswoman. Together the two made a case against Mr Trump that was not just bipartisan but decidedly female. In Malvern, Pennsylvania, on October 21st Ms Cheney spoke "as a mother" who wanted her children to grow up without worrying about the peaceful transfer of power. She condemned "the misogyny that we've seen from Donald Trump and J.D. Vance", the Republican nominee for vice-president. Describing herself as pro-life, she nevertheless decried "what has happened to women" since the Supreme Court struck down the right to abortion. It was a glimpse back at what the future looked like when Mrs Clinton was the nominee.

By clinging to the presidency, President Joe Biden put his party in a deep hole. Ms Harris has had less than three months to establish her claim to the office while trying to shuck the burdens of the dismal public opinion of his presidency and of her own former leftist positions. She has made considerable progress because of Mr Trump's own enduring unpopularity and because, unlike Mr Biden, she has promised to give Americans back their old idea of the future. The question is how many still have faith in it. ■

The Americas



Compulsory voting

Much obliged

MONTEVIDEO

Voting is mandatory across South America. That yields higher turnout, but evidence for wider benefits is thin

IN THE WORLD'S most consequential election—for the next president of the United States on November 5th—just three in five voting-age citizens are expected to bother casting a ballot. Voters have become similarly passive in many democracies, from Britain to Japan. Low turnout saps government legitimacy and stokes fears of democratic decline. One group of democracies bucks the trend. When Uruguayans go to the polls on October 27th, turnout will be massive; it was above 90% in the country's previous election, among the highest anywhere in the world. Overall, South America boasts the highest turnout of any region. That is because of the 530m people round the world who are compelled to vote, and for whom the compulsion is enforced, 343m live in South America.

Other parts of the democratic world are intrigued. Majorities in Germany, Britain and France say voting should be mandatory. People are less keen on the idea in the

United States, but Barack Obama and Donald Trump are both proponents (Mr Trump appeared to call for it at a rally on October 6th). South America shows what it yields for democracies. Turnout is higher, and often more representative of the electorate. The benefits for democracy are less clear, and there are surprising downsides.

Start with turnout. It regularly breaks 90% in Uruguay and Bolivia. In Argentina, Brazil, Ecuador and Peru it hovers around 80%. Globally, enforced compulsory voting boosts turnout by an average of 15 percentage points. When Chile ended its long history of compulsory voting in 2012, turnout plummeted, only to soar again when it reintroduced it in 2022 (see chart on next

page). Chileans will vote in once-again-compulsory municipal elections on October 26th and 27th.

Compulsory voting boosts turnout among young and poor voters in particular. In Argentina, for example, it is estimated to have twice as big an effect on the turnout of less educated voters as it has of highly educated ones. Yet the rules matter. In Brazil compulsory voting turns out more rich people; fines are small but punishments for repeated failures include the inability to get a new passport. That worries jet-setters more than favela-dwellers.

The use of compulsory voting changes the behaviour of political parties too. In the freewheeling United States parties spend billions on glitzy ads to motivate their supporters to go out and vote; many would prefer a greater focus on policy programmes. Work by Shane Singh of the University of Georgia suggests that is exactly what happens when voting is mandatory. He also shows that compulsory voting in Argentina decreases the practice of "vote-buying", whereby voters are paid cash to plump for a specific candidate.

Compulsory voting appears to have effects beyond the campaign. When Venezuela in effect abolished it in the early 1990s, inequality, which had been declining, rose sharply. John Carey and Yusaku Horiuchi of Dartmouth College sugg-

→ ALSO IN THIS SECTION

40 Blackouts in Cuba

41 Return of a parasite

est the rise occurred because Venezuela's poor lost political representation, which compulsory voting had previously helped ensure. (There is evidence from beyond South America, too. In Australia, after compulsory voting was introduced in the early 20th century and turnout leapt, the share of the vote going to the Labor Party increased by almost ten percentage points, and pension spending jumped.)

Yet many other hoped-for benefits of compulsory voting are elusive. One of those is the notion that, when compelled to vote, citizens will become better informed about the issues. In Brazil mandatory voting does push people to watch the television news, but there is little evidence that it increases knowledge of issues there or anywhere else. The evidence that voters perceive governments to be more legitimate owing to high turnouts from compulsory voting is underwhelming.

There are outright problems, too. Many votes are blank or spoiled. These are so often cast by the politically disgruntled that in Argentina they are called the *voto bronca*, angry votes. Others in effect close their eyes and jab at the ballot paper. In Brazil some 8% of voters admit to casting valid but random votes for presidential elections. Worryingly, random voting may reduce the chances that the preferred candidate of the majority is selected.

Not only is evidence of increased legitimacy hard to find, researchers are divided on whether compulsory voting boosts satisfaction with democracy at all. Mr Singh has found that reluctant voters in Argentina, who already tend to be unhappy with democracy, become even less happy after being forced to vote. Nonetheless, compulsory voting is popular in much of the region. Some 70% of Uruguayans support it. Chileans were less keen in 2012 but, having tried voluntary voting and seen turnout plummet, they are now very enthusiastic. A majority of Argentines support it, too. Brazilians, who have a dim view of politics, are

marginally against it.

Even in Uruguay compulsory voting is not uniformly imposed. The congressional and presidential races are compulsory—and tight. The latter will probably go to a run-off between Alvaro Delgado, the centre-right candidate, and Yamandú Orsi of the left-wing coalition. But voters will also consider two constitutional referendums on October 27th. One of them, blithely dismissing demographic trends, would lower the pension age by five years and boost payouts. Markets, fearing fiscal disaster, have been selling the peso.

Yet Uruguayans are not obliged to vote in the referendums; anyone who does not vote (but who votes in the compulsory races) will be counted as a no. That makes a plunge in the pension age much less likely. If it fails, expect none of the leading candidates, who all back compulsory voting but oppose the pension change, to question the legitimacy of the vote. ■

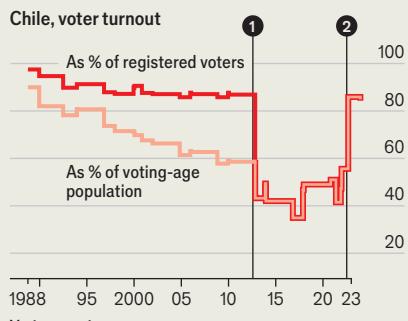
90% of the electricity supply had been restored in Havana, according to state-run media. But many places outside the capital remain without power.

The blackout adds to the drudgery of life in Cuba's socialist dictatorship. Food, scarce anyhow, has rotted in fridges. Neighbourhoods have resorted to cooking what they can salvage on improvised stoves in the street. Internet traffic dropped sharply as many were unable to charge their phones. Those whose water supply relies on electric pumps had to go without. The economic backdrop is also bleak: inflation is running at 30% a year. Of late, Cubans compare their plight to the 1990s, when the collapse of the Soviet Union prompted economic hardship and regular power cuts.

The country's superannuated power system is one part of the problem. The island relies on a handful of Soviet-era, oil-fired plants, most of which are half a century old and break down frequently. None has received proper maintenance for almost two decades. The Cuban government blames American sanctions for choking off the import of spare parts. The government has leased eight "powerships" from Turkey to use as offshore generating plants, a costly and dirty workaround.

But Cuba must still supply the fuel. This has become a problem. Cuba produces around 40,000 barrels of oil per day, but needs about 120,000 to cover its energy needs. For years discounted oil from its socialist ally Venezuela made up much of the shortfall. But Venezuela slashed its exports to Cuba this year, racked by an economic crisis and looking to capitalise on the lifting of American sanctions. Other providers, such as Russia and Mexico, have not made up the deficit (see chart). Puny foreign-currency reserves and a weak peso make it too costly to source oil on the spot market. The prime minister, Manuel Marrero, admitted last week that the country could no longer afford to buy fuel on inter-

The old ways are best



Source: "Unravelling May 7th: An analysis of the Constitutional Council election", by A. Chuaqui, C. Le Foulon and B. Oteiza, 2023

Blackouts in Cuba

Blues by the barrel

Cubans suffer from dwindling oil imports and a decrepit power system

MIGUEL DÍAZ-CANEL, Cuba's president, usually wears boxy suits with a revolutionary-red tie. But on October 20th, after days of power blackouts across the country, he went on television sporting military fatigues reminiscent of Fidel Castro, the island's longtime dictator. The get-up conveyed two messages: first, that martial-like efforts had been made to restore power, and second, a warning to protesters. Cubans should act with "discipline" and "civility", said Mr Díaz-Canel. Anyone disturbing public order, he warned, would be "severely" punished.

Nearly 10m Cubans had been managing without power since the island's electricity grid collapsed. Authorities were quick to place the blame on technical snafus. Small outages began a day earlier, they said, due to an unexpected surge in electricity demand from air conditioners fitted in homes and small businesses. An engineering failure at the island's largest source of electricity, the oil-burning Antonio Guiteras power plant, prompted a "total disconnection" of the national grid, said Cuba's energy ministry in a post on X.

To make matters worse, attempts to bring in more fuel for the island's oil-powered plants failed after a category-one hurricane made landfall on the night of October 20th; the storm has killed six people so far. By the next afternoon, around

A crude collapse

Cuba, crude-oil imports, '000 barrels per day
Top five countries



► national markets.

The government is rationing what little oil it has, throttling demand for electricity by forcing factories, nightclubs and schools to close. It is anxious to avoid a wave of social unrest. In 2021 tens of thousands of people throughout the country took to the streets after a similar outage. Smaller protests have broken out since, in 2022 and earlier this year, evidence of either a lack of fear or increased desperation.

Others voted with their feet: at least one million Cubans have fled the country since 2022, around a tenth of the total population and the largest wave of migration recorded in the island's history. The latest blackouts mean more are likely to leave. Only a small number of protests have been reported, mostly confined to the banging of pots and pans.

Even if Cuba's ancient fleet of oil-burning generators can be kept running, the problems will get worse. But replacing the

power plants would take decades and be painfully expensive. Belatedly, the government is turning to solar panels, which offer a far cheaper method of generating electricity than burning oil (something it has promised to do for years). Vicente de la O Levy, the energy minister, has said the government plans to install some two gigawatts of solar capacity by 2028, enough to cover about a fifth of the island's electricity needs. It is also encouraging Cubans to buy their own panels; a tough ask when average monthly take-home pay is a measly \$166, enough to buy one panel that could perhaps power a fridge.

How the government will scrounge up the hard cash needed to import fuel in the meantime is another question. China or Russia might see the benefit in propping up an irritant on the doorstep of the United States. Absent that, radical reform is needed. The best Mr Díaz-Canel can do is a costume change. ■

Since then, a factory outside Panama City has mass-produced male screwworms. They are reared on cellulose and powdered blood, then rendered infertile with a zap of X-rays. Every week two small aeroplanes dump 15m sterile flies over the rainforest of the Darién Gap.

But as the forest has degraded, the screwworm has spread. The factory must now produce flies to cover all of Central America. So says Carlos Moreno, the boss of the Commission for the Eradication and Prevention of the Cattle Borer Worm (COPEG), an organisation run jointly by the Panamanian and United States governments which is charged with controlling the screwworm population. It owns and operates the factory for sterile male flies.

Higher temperatures caused by climate change helped the screwworm. Trees are often cleared for cattle grazing, so hundreds of thousands of potential screwworm hosts have been put into a strip of forest that had been acting as a barrier. The paths and staging posts that facilitate human migration through the Darién Gap also help the flies to spread north. All this has created the "perfect storm" for the screwworm's spread, says Mr Moreno.

To arrest this year's outbreak, COPEG has increased weekly fly production from 15m to 89m, just short of the factory's capacity of 100m per week. Most of these flies are dispersed outside the Darién Gap. Three additional aircraft have been procured. Pilots now make 1,600km round trips to drop the barren insects over northern Nicaragua.

The screwworm still has the upper hand. A generation of ranchers who grew up in a screwworm-free world is learning to identify and treat infections. Border checks of animals have been ratcheted up. The farther north the fly spreads, the harder it will be to bring under control, says Abelardo de Gracia, a director of OIRSA, a regional agricultural health organisation. Stopping it entering Mexico is key.

It may take several years to control the outbreak, says Mr de Gracia. The ongoing degradation of the Darién Gap means that investments in prevention and surveillance will have to keep rising in future if further outbreaks are to be avoided. But the incentives to curb its spread are high. The USDA estimates that the absence of screwworm saves the livestock industry in the United States some \$900m annually.

Indeed, the response to its comeback may well spell the end for the screwworm. The tight supply at COPEG last week prompted an agreement between the governments of Uruguay and Argentina to begin local production of sterile screwworms. Uruguay aims to be free of the parasite by 2030. That may be the first step towards the rancher's dream: a screwworm-free Americas. ■

The Darién Gap

The worm turns

PANAMA CITY

Deforestation, migration and climate change are helping a nasty parasite to mount a comeback

A SCREWWORM infestation is gruesome. The female fly lays hundreds of eggs on the exposed flesh of warm-blooded animals. The eggs hatch into larvae which gorge themselves on the living tissue, creating a pulsating mess. Ladislao Miranda's cattle herd in western Panama had been free of the parasite for nearly 30 years, but in May the 60-year-old rancher spotted white eggs on his animals. He now spends his days digging worms out of haunches and treating wounds with powder. "This plague is back and it's stronger than ever," he says.

Central America is suffering its worst outbreak of *Cochliomyia hominivorax* in decades. In a normal year Panama records fewer than a hundred cases of the parasite. So far in 2024 there have been over 19,700. Infections have spread north to Costa Rica, Nicaragua and Honduras. The Darién Gap, a 100km (60-mile) stretch of rainforest which separates Panama from South America, where the screwworm is endemic, used to serve as a barrier to the spread of the fly. But deforestation and migration have degraded the forest, making it more permeable to the screwworm and helping the parasite to make a comeback.

The screwworm used to be the scourge of Texan cowboys. In the 1950s, following the discovery that the female fly mates just once in her lifetime, the US Department of

Agriculture (USDA) began releasing sterile male flies over the southern United States. Copulation with the barren males rendered the females infertile, and screwworm populations plummeted. After the United States was declared free of the pest in 1966, the technique was rolled out southwards down the Central American isthmus. Panama, the southernmost country, was declared screwworm-free in 2006.



Back in the crosshairs

Middle East & Africa



Hamas and Hizbullah

Killing an idea

DUBAI

The conventional wisdom about assassinations may be wrong this time

IT HAS BECOME almost an article of faith: assassinations don't matter. For more than a year Israel has been killing leaders of Hamas, a Palestinian Islamist group, and Hizbullah, a Lebanese Shia militia. Each time it does, a chorus of officials and analysts insist that Hamas and Hizbullah will simply regroup and regain their previous strength. Maybe so: Israel's history offers ample reason for such scepticism. But there is also good reason to believe that this time may be different.

Three arguments support the belief that targeted killings do not work. One is historical. Audrey Kurth Cronin, a professor at Carnegie Mellon University, studied how more than 450 terrorist groups met their end. She found that so-called "decapitation" strikes tend to work against small, newly formed groups that lack a process for picking new leaders.

Neither Hamas nor Hizbullah fits that description. When Israel killed Abbas Musawi, the leader of Hizbullah, in 1992, the group did not die with him. On the con-

trary: his successor, Hassan Nasrallah, proved to be a far more capable leader. Similarly, Hamas survived the assassination of Ahmed Yassin, its founder, in 2004. "If Hamas were vulnerable to a decapitation strategy, it would probably have been defeated already," Ms Cronin wrote in *Foreign Affairs* after Israel killed Yahya Sinwar, the leader of Hamas, earlier this month.

The problem with this historical argument is that the past year has few historical parallels. When Israel killed Musawi in 1992, it was a one-off event: another 16 years would pass before it succeeded in as-

sassinating someone else of his stature.

Contrast that with its current campaign against Hizbullah. By the time Israel killed Mr Nasrallah on September 27th, it had already wiped out most of the group's military commanders. Since then it has killed Hashem Safieddine, Mr Nasrallah's heir-apparent, and perhaps Wafiq Safa, a feared enforcer who used threats and violence to cow Lebanese officials. Even the most resilient group would struggle after losing the top four or five levels on its org chart.

The same goes for Hamas, which in the past year has lost two leaders; its military chief and his deputy; and scores of lower-ranking commanders. Both groups have also had thousands of cadres killed and wounded in Israeli attacks.

Add to that the unique stature of both Mr Nasrallah and Mr Sinwar. The former was the most powerful man in Iran's "axis of resistance" and a trusted confidant of its supreme leader. The latter, unlike his predecessors, dominated all Hamas's disparate branches: he controlled both the military and political wings and bent the diaspora leadership to his will. Neither will be easily replaced, and their successors may not enjoy as much support from Iran.

A second argument is structural. Before October 7th Hamas was the de facto government in Gaza, with tens of thousands of civil servants on its payroll. Hizbullah is a state within a state: it hands out patronage jobs, operates a chain of discount groceries ➤

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▶ and runs a bank. These are not just militant groups, in other words, but political and economic entities with deep roots.

Yet some of those roots have been ripped out over the past year by Israel's actions. For Hamas to re-emerge as Gaza's ruler, it will need money to pay its fighters and bureaucrats. But Gaza's economy is in ruins: the merchants who once paid Hamas \$360m a year in taxes have been killed or lost their businesses. Hamas no longer has a monopoly on violence and extortion, as increasingly powerful gangs steal aid shipments and run protection rackets.

In Lebanon's clientelist system, a party is as strong as the benefits it provides. Long the richest party in Lebanon, Hezbollah is now under strain. Some fighters grumble that their salaries are late; displaced civilians complain they are not receiving help for housing and other needs.

The final argument is philosophical. "Hamas is an idea, and you don't kill an idea," Josep Borrell, the European Union's foreign-policy chief, said in February. The head of the Arab League said the same of Hezbollah earlier this month. It is a pithy statement. It is also wrong.

Analysts made similar claims about Islamic State (IS) a decade ago, as the jihadist group declared a caliphate and seized a swathe of territory across Syria and Iraq. The caliphate lasted less than four years: it crumbled in the face of an international coalition that killed tens of thousands of IS fighters in a ferocious campaign.

Or consider the Muslim Brotherhood, the world's oldest Islamist movement. It thrived for almost a century in its native Egypt, even though it was officially banned. But in 2013 Abdel-Fattah al-Sisi overthrew Egypt's elected president, a Brotherhood member, in a coup. He massacred hundreds of the group's supporters and jailed tens of thousands more. The group's assets were seized, its schools and charities closed.

To be fair, neither group was eliminated. IS endures as a rural insurgency in Syria and Iraq; the Brotherhood, as squabbling factions of exiles in London and Istanbul. But it will be years before either can wield power again. Perhaps you cannot kill such groups—but if you are willing to apply an enormous level of violence and repression, you can marginalise them for a long time.

Hamas and Hezbollah are institutions, not ideas. It is not a given that Hamas will be the leading Palestinian militant group, or that Hezbollah will be Lebanese Shias' chief representative. The question is what might emerge to replace them. Many in Lebanon fear that a weakened Hezbollah could mean a fight within the Shia community. And though it may not be under the banner of Hamas, as long as Israel denies the Palestinians a state, there will be Palestinians willing to fight Israel. ■

Yahya Sinwar

Hamas's leader is dead

BEIRUT

Will his successor embrace more violence or look for compromise?

After the Israel-Hamas war in Gaza in 2021, Yahya Sinwar appeared sitting in an armchair in the open air, surrounded by rubble and smiling. It became a defining image of defiance for many Hamas supporters. This time the story ended differently. Mr Sinwar died in the ruins of Gaza, like tens of thousands of victims of the war he unleashed a year ago. In a firefight with an Israeli patrol in southern Gaza, the leader of Hamas, the Palestinian Islamist group, was killed on October 16th. His death leaves Hamas shattered and divided.

To his supporters, the architect of the October 7th atrocities punctured Israel's sense of invincibility and catapulted a waning cause into the world's headlines. To his opponents, he brought hellfire down on Gaza. His rise was the culmination of decades of planning and outmanoeuvring of opponents, turning a movement into the Sinwar show. In prison the man became systematic in his thinking. "He had this military mindset," said Khaled Zawawi, who was incarcerated with Mr Sinwar. According to Yuval Bitton, an Israeli intelligence agent, "He studied us through enemy eyes...he looked for weakness, for a point at which he could say, this is the time to attack."

Released in 2011, Mr Sinwar was appointed to Hamas's Gaza bureau. By 2017 he led it. His lieutenants from pri-

son rose with him. He strengthened the military wing—the al-Qassam brigades. Hamas's less extreme leaders were marginalised, including Khaled Meshal, who headed the group until 2017 and drafted a new charter for the organisation that appeared to nod towards a two-state solution. By 2021 Gaza had become Mr Sinwar's fief. He ignored the group's Shura Council, and kept exiled leaders in Doha in the dark. In July he formally assumed leadership of the whole of Hamas, breaching its succession rules. Hamas's resilience over the decades is in part due to its institutionalisation of authority. But now its formal structures have been pushed aside.

One potential successor is Khalil al-Haya, who was closest to Mr Sinwar and supports close relations with Iran. Another is Mr Meshal, who might want Hamas to come under the Palestine Liberation Organisation, in effect accepting a two-state solution. In 2012 he cut the group's ties with Syria in response to the Hezbollah-backed regime's fierce suppression of the uprising there.

If Hamas survives Israel's onslaught, whoever wins may determine where the group goes next. It may embrace more violence and extremism. Another path leads to moderation and compromise. Power politics at the top of Hamas will decide which route is taken.



Exit Sinwar

War in the Middle East

Israel's waiting game

JERUSALEM

Israel's leaders are watching America's election closely

SHORTLY BEFORE taking off from Tel Aviv on October 23rd, after a one-day visit to Israel, Antony Blinken, the American secretary of state, along with the other guests in his hotel, was forced to rush into a bomb-shelter. The rockets fired that morning from Lebanon by Hezbollah, the Iran-backed Shia militia, towards central Israel failed to cause much damage or any casualties. But it was yet another frustrating reminder for America's senior diplomat how little he had achieved on his 11th visit to Israel in over a year.

Mr Blinken (pictured) hoped to make some progress towards ceasefires in Gaza and Lebanon and to limit the ferocity of Israel's expected strike on Iran. He urged Binyamin Netanyahu, Israel's prime minister, to turn Israel's recent successes on the battlefield "into an enduring strategic success". But, as one Israeli official described the conversations: "We listened politely."

The exhausted efforts of Mr Blinken highlight how limited America's efforts to shape Israel's policy have become. But its political schedule is increasingly shaping the decisions of Israel's leaders in prosecuting their three conflicts: in Gaza, in Lebanon and with Iran. Israel is unlikely to make any big policy changes before the American presidential election. If Kamala Harris wins, Mr Netanyahu knows he will face greater pressure to scale back Israel's wars. If Donald Trump is elected, the Israeli prime minister believes he will have more latitude. He does not want to make concessions today that might turn out to be unnecessary after November 5th.

Regarding Iran, America has been trying to convince Israel to aim at less strategically sensitive targets, such as its missile and drone factories, rather than its nuclear sites or oil terminals. On October 18th President Joe Biden answered in the affirmative when asked if he had "a good understanding" of Israel's plans. But two events since then may have caused Israel to re-evaluate them.

First, a leak of what appear to be top-secret American intelligence documents has been published on pro-Iran channels on Telegram, a social-media platform. These include details of the Israeli air force's preparations for a long-range strike mission—which have now been revised. Second was the detonation on October 19th of an explosives-laden drone next to Mr Netanyahu's weekend villa in the coastal town

of Caesarea. It was launched from Lebanon by Hezbollah. Iran has officially denied any involvement in a direct attempt on the life of Israel's prime minister. Israel sees things otherwise and could use this as justification for targeting the most valuable Iranian targets, including its leaders.

Meanwhile in Lebanon the assessment by America's envoy on October 21st that the war there had "escalated out of control" has fallen on deaf ears. Israel is methodically working through Hezbollah's capabilities and keeping open the option of expanding its war. On October 20th it launched a series of air strikes against branches of al-Qard al-Hassan, Hezbollah's financial network (see Finance & economics section). Israel's ground forces now almost completely control the area of southern Lebanon by its border.

While your correspondent was embedded with Israeli troops in Lebanon, one of the generals directing the fighting on the ground said: "Our mission here is clear: to locate Hezbollah infrastructure and destroy it." His troops were combing through tunnels apparently prepared by Hezbollah for launching an attack on Israel, similar to Hamas's on October 7th last year.

Previously, Israel and America had been pushing Hezbollah for a truce. Now Israel is insisting that a deal in Lebanon is possible only with an internationally guaranteed agreement that would stop Hezbollah rearming on the border. Israel is also demanding the right to send in its forces in the future if needed to enforce such a deal.

And in Gaza, despite America's pleas, a ceasefire remains as elusive as ever. The Israeli army has launched a series of ground and air attacks around Gaza City, notably on the Jabalia refugee camp, and drastically reduced the number of supply convoys going into northern Gaza. Officially the Is-

rael Defence Forces say they are operating against Hamas fighters seeking to re-establish their presence there. But some officers say there are efforts to force the remaining civilians in the north (thought to number between 250,000 and 400,000) to flee south. The dire humanitarian situation has led to open warnings from the Biden administration that America could reconsider its arms supplies to Israel.

But any such decision would be made only after the presidential election. Mr Biden's time to try and bring peace to the Middle East has all but run out. The two candidates to replace him are already getting involved. Ms Harris, as vice-president, has been on Mr Biden's recent calls with Mr Netanyahu. Mr Trump has spoken to Mr Netanyahu as well. Once a new president has been chosen, Israel will have to start making its own decisions. ■

Mozambique

The wages of truth

MAPUTO

Two opposition figures are murdered days before a dodgy election result

HE FEARED HE was a marked man. In April Elvino Dias wrote on Facebook that death squads were plotting to kill him. But as a lawyer for an opposition leader, in an election year, he felt it was his duty to speak out. "In a country as upside down as ours, truth and justice have their price," he wrote, "and the biggest price is the death of the one who says it."

Those words echoed like bullets on October 19th, when Mr Dias was shot dead in his car in Maputo, the capital of Mozambique. Paulo Guambe, an opposition party official, was killed in the seat beside him. Police have not found the gunmen. But the timing of the murders suggests a motive: Mr Dias was preparing a legal challenge to the outcome of this month's general election. His client, the independent candidate Venâncio Mondlane, has pointed the finger at state security forces and called on his supporters to "paralyse the country". State officials have warned against spreading "disinformation".

The results of the vote were due to be announced on October 24th. To nobody's surprise, preliminary figures showed a big majority for Frelimo, the ruling party, and Daniel Chopo, its presidential candidate. Podemos, a new party which backs Mr Mondlane, was placed a distant second. The traditional opposition, Renamo, had slumped to third. It once fought a civil war against Frelimo, but the old foes have learned to get along. ■



A thankless job

Few think the numbers are credible. In some provinces the electoral commission registered more voters than there are adults. An EU observer mission found that results from some polling districts were altered. Frelimo, which has ruled Mozambique since independence in 1975, has used state resources to tilt the playing field ever since it first allowed elections in 1994. Edson Cortez of Mais Integridade, a civil-society coalition, says the party has chosen to get better at fraud rather than improve its running of the country.

Mozambique's economy grew quickly for two decades after the civil war ended in 1992. But Mozambicans are poorer today than they were in 2016, when more than \$1bn of secret state-backed borrowing was exposed. The scandal sank the economy and convulsed politics. Investigations revealed that officials had pocketed millions of dollars in bribes, leading to court cases on three continents.

Politicians and their cronies are involved in businesses of varying legality, from cement production to the heroin trade. Their economic stranglehold has fuelled resentment in the north, where a jihadist insurgency has thrown a huge natural-gas project into limbo. The government was relying on gas revenues to pull the country out of its funk.

That sorry record compounds the frustrations of young people, who struggle to find decent work. They want change, and will follow anyone who promises it. Right now that is Mr Mondlane, a charismatic engineer with a knack for social media. "What he brings is the idea of freedom," says Xicanekiço Mate, a Podemos party organiser. "What he is doing is historic."

Opposition leaders in Africa's authoritarian states know that the real battle begins after polling day. Mr Mondlane has a familiar menu of options. Protests have already erupted, and he is calling for more after the result is announced. But street activism is hard to sustain in a country where many people live hand-to-mouth and the state has no qualms about shooting them. The opposition will probably mount a court challenge, too. The murders of Messrs Dias and Guambe do not augur well for success.

Assassinations have been a recurring motif of Frelimo rule. Carlos Cardoso, a journalist, was shot dead in 2000 after investigating corruption. In 2019 an activist named Anastacio Matavel was killed after training election observers.

Mr Chapo has condemned the latest killings and says that he will fight corruption when (as seems likely) he takes office in January. But he is a relative unknown, beholden to party factions who have little interest in genuine change. On the streets, young Mozambicans have had enough of empty promises. ■



Africa's new gold rush

Not so mellow yellow

ACCRA

Record gold prices are upending rural economies and encouraging smuggling

"IT KEEPS getting worse and worse," sighs Camry Tagoe, an activist in Accra, the capital. "If you look at Google maps, Ghana has turned from green to brown." Over the past month Mr Tagoe has helped organise protests across the city that call for an end to "galamsey", or wildcat gold mining. Long a way of getting by in the west African country, it has exploded in recent years, damaging forests and polluting water. The protesters blame politicians, many of whom own mining firms, for letting the practice get out of control. Galamsey is a crucial issue ahead of elections on December 7th.

Nothing to declare

Africa, exports of gold through smuggling*, 2022 estimate, tonnes



*Excludes South Africa

Ghana, the largest gold producer on the continent, exemplifies Africa's new gold rush. The gold price has doubled since 2019, to a record high of more than \$2,700 per troy ounce (see Finance & economics section), promising higher margins for industrial miners but also encouraging more artisanal and small-scale mining (ASM). Nearly half of the roughly 1,000 tonnes of gold produced in Africa every year is mined in this way. It is the largest source of jobs in rural Africa, save for farming, so a sustained gold boom could mean higher incomes for some very poor people. At the same time it could damage ecosystems and people's health. Much ASM is legal, but a lot is untaxed and unregulated. In a report in May Swissaid, an NGO, estimated that the amount of smuggled gold more than doubled from 2012 to 2022. Once again, African states are missing out on the full benefits of a commodity boom.

The latest rush has several new elements. The first is the breadth of the irregularity: there are 12 countries, including Ghana, that each account for at least 20 tonnes of smuggled gold every year (see chart). The second is that, despite the artisanal label, a lot of ASM is fairly industrial, partly because of Chinese miners and their bulldozers and excavators. In Ghana some are infamous. Last year Aisha Huang, dubbed the "galamsey queen", was sentenced to prison for mining without a licence, among other offences. ■

Another feature is the growth of Dubai as a refining hub. Gold exports from the United Arab Emirates (UAE) went up more than 60-fold between 2002 and 2022; gold is now the most valuable export from the UAE after hydrocarbon products. The Global Initiative Against Transnational Organised Crime, an NGO based in Geneva, argues that Dubai's "no questions asked" approach to African gold encourages illicit trade. In 2022 around two-thirds of the African gold imported into the UAE was smuggled from African countries, according to Swissaid. (The UAE says it is not accountable for other countries' records and that it is adopting policies to curb money-laundering using gold.)

Thousands of miles from the souks of Dubai, the gold rush is shaking up rural economies. Malian gold mines are sucking in workers from across the Sahel and, increasingly, northern Nigeria. In South Africa one industrial miner recorded 241% more incidents of illegal mining on its sites in the first quarter of 2024 compared with the same period the previous year. Some 10m people in sub-Saharan Africa work directly in ASM, several times more than two decades ago. Gavin Hilson, an expert on ASM based at the University of Surrey, argues that it is a lifeline for those in poverty. "A mine is often the only place in Africa where you will find someone with a master's degree from Europe and an illiterate farmer." He adds: "They all know the market price for gold. And even if you get 50% of that, you can pay school fees."

Gold-mining and farming have long been complementary, with farmers topping up incomes in a lean season at mines or raising cash by leasing land. Yet, in Ghana as elsewhere, there is concern that the balance has been lost. Gold is often found in soils conducive to cocoa, the country's third-largest export after gold and oil. The Ghana Cocoa Board, the country's state-run buyer, says that galamsey is one reason why thousands of hectares of forests with cocoa have disappeared in recent years.

The failure of successive governments to formalise ASM has encouraged unsound mining practices. The Ghana Water Company, a local utility, has warned that around 60% of Ghana's water bodies are polluted because of galamsey. Paul Ossei Sampene, a pathologist, says that the heavy metals used by miners are linked to miscarriages, stillbirths and birth defects.

Gold also funds wars. Jihadists control mines across the Sahel. In eastern Congo gold is fought over by militias and exported via Uganda or Rwanda. The Rapid Support Forces (RSF), one of two main belligerents in Sudan's civil war, are partly funded by gold. Wagner, the Russian mercenary group that fought with the RSF, controls mines in the Central African Republic.

Politicians have little incentive to curb

mining. Members of Ghana's ruling party have financial interests in the sector. Officials benefit from charging vast sums for licences. Last year "Gold Mafia", a TV documentary by Al-Jazeera, a Qatari channel, scared Zimbabwe's ruling party enough for a bigwig to threaten to disconnect the satellite dishes of locals watching it. In Lesotho the political parties have links with gangs that control access to abandoned mines in neighbouring South Africa.

There have been various international efforts to make supply chains more transparent and encourage due diligence by buyers. Plenty of laws ostensibly regulate ASM. But in practice the mix of a light, meltable metal with a record price, willing buyers and weak African states means it has been hard to stop smuggling. While there is money to be made, there will be grey markets in the yellow metal. ■

African churches

A home in the world

LONDON

How Pentecostal churches appeal to young Africans abroad

THE SERVICE is off to a chaotic start, in true Nigerian fashion. The band is missing a member. The head pastor is nowhere to be found. With some delay the lead vocalist, wearing a pink sequinned turban, begins to sing: "*Iwo l'oye, Baba iwo l'oye*" ("You are worthy, Father you are worthy" in Yoruba, which is spoken in southwest Nigeria). She could be in Lagos, Nigeria's commercial capital. But the church is in Croydon, on London's southern fringe.



Taking her to church

It is one of over 50,000 global branches of the Redeemed Christian Church of God (RCCG), a Nigerian Pentecostal church. With more than 870 parishes, RCCG is perhaps the fastest-growing church in Britain, bucking the broader trend of secularisation in the West. The contributions from its foreign branches are an important source of hard currency for the church. Yet for the congregants in Croydon, it mainly serves as a slice of home.

More than 95% of Africans have a religious affiliation, compared with just over half of Britons. More than half of the Africans say they are Christian. The influx to Britain of Nigerian and other West African immigrants since the 1980s has thus been lucrative for the RCCG. Until recently Enoch Adeboye, its leader, preached an aggressive version of the prosperity gospel, telling his followers that "anyone who is not paying his tithe is not going to heaven".

The church has since turned things down a notch: this month Mr Adeboye apologised and admitted the Bible said no such thing. The branch in Croydon is still aligned with RCCG's teachings. But like other Nigerian churches abroad it has found ways to appeal to its young congregation. Services feature grand testimonies about resolved immigration woes and celebrations of visa-sponsoring job offers.

The church also helps keep alive Yoruba. For many the monthly services it has held for a decade are the most of the language that they will hear, or speak, for weeks. It can be tough to keep up: at one point the preacher giggles as she struggles to find the Yoruba word for "Bible". Yet, "people believe that the type of prayer that they pray in Yoruba is more powerful than when they do it in English" says Femi Adebajo, who pioneered the Yoruba services. The sound of talking drums and *shekere*, a percussion instrument made of dried gourd, adds to the feeling of home.

Digital evangelising has made that feeling more accessible: two-thirds of the congregants in Croydon dialled in online. It has also made it easier to attract new members. RCCG has a "digital missionary" bot to answer scriptural questions one might ask a minister. Live prayer sessions on Instagram and sermon clips on TikTok can bring in new flocks. Pastors often ask worshippers mid-service to "like" the YouTube livestreams so that the algorithm boosts their messages. QR codes let congregants pay their tithes from wherever they are, without a velvetine offering basket.

For all the outreach, RCCG does not try particularly hard to attract members without African heritage. For now, appealing to devout and increasingly mobile young Africans is enough to sustain it. "I pray it continues like that", chuckles Mr Adebajo, "before people all start speaking the Queen's English." ■

Asia



Indonesia (1)

Getting to know Prabowo

SINGAPORE

Indonesia's macho new leader is no "cuddly grandpa"

WEARING A BLUE tunic, Prabowo Subianto waved from a gleaming white jeep on his way to the presidential palace after becoming Indonesia's eighth president on October 20th. Sun-baked crowds waved back. For the retired general, it was the triumphant final leg of a quarter-century journey back to the centre of power from disgrace and exile. It is also the first time in a decade that there has been a major shift in Indonesian politics.

Mr Prabowo won the presidency in February's general election on his third attempt. The first two times, in elections in 2014 and 2019, Joko Widodo defeated Mr Prabowo in close contests. On the third, the pair teamed up. Mr Prabowo drafted Gibran Rakabuming Raka, the elder son of Jokowi, as the outgoing president is known, to join his ticket as vice-president. And having long played the part of a blood-and-guts military man, Mr Prabowo rebranded himself as a cuddly grandfather.

Now, one big question looms: how dif-

ferent will the former general be from his predecessor? Mr Prabowo's first cabinet includes many Jokowi loyalists in important roles. He also promised to continue Jokowi's "down-streaming" agenda, by which Indonesia has sought to move from being a producer of raw minerals like nickel to an exporter of intermediate goods needed for the green transition, like lithium-ion batteries (see next story). But for all the notes of continuity, Mr Prabowo's presidency will look different from Jokowi's in several serious ways. To understand why, it helps to take a look at Prabowo's long history in the national spotlight.

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By any measure, he will be Indonesia's most worldly president. Hailing from a legendary political family, his grandfather founded Indonesia's first national bank. When his father backed the wrong side in a rebellion in the 1950s, the family moved overseas, where Mr Prabowo learned to speak English, French and German. Returning to Indonesia after Suharto, the strongman dictator who ruled from 1967 to 1998, came to power, his father became a minister, while Mr Prabowo chose a military career and married Suharto's daughter. In the army he rose rapidly through the ranks. In 1995 he was named commander of Indonesia's special forces.

By 1998, however, Suharto's rule had come unstuck amid the Asian financial crisis and resulting protests. Then Mr Prabowo ordered a special-forces team to kidnap pro-democracy activists. He says that he returned nine victims unharmed. But around a dozen were never heard from again. The day after his father-in-law stepped down in May 1998, his successor relieved Mr Prabowo of his command. He spent the months and years that followed in the wilderness. An army board dismissed him. America banned him from entering the country. He spent three years in self-exile in Jordan.

When he returned to Indonesia several years later, his brother Hashim Djojohadi-kusumo bankrolled a new political party, ➤

▶ the Greater Indonesia Movement (Gerindra). In speeches delivered to uniformed cadres across the archipelago, Mr Prabowo argued that democracy had not delivered for Indonesians, that foreign investors were merely exploiting the country's natural resources, and that Gerindra would give them a more disciplined politics. Many of Mr Prabowo's relatives are Christian, but in his campaigns in 2014 and 2019 he attracted the support of Islamist parties as Jokowi ran on a more tolerant platform.

The undertones of sectarianism had polarised the country. So Indonesians were surprised when Jokowi asked Mr Prabowo to join his administration as defence minister in 2019. Jokowi and Mr Prabowo had come to share at least one belief about politics: that it works better when all parties split the spoils of victory, rather than compete in winner-takes-all contests. In his second term, Jokowi built a broad coalition, including in his administration not only Gerindra but all but one of the parties with seats in the legislature.

Let the boy run

Jokowi also adopted some of Mr Prabowo's authoritarian tendencies. Under Jokowi, the police and other previously impartial state institutions, such as the General Elections Commission and the Corruption Eradication Commission, increasingly ruled in favour of Jokowi and his allies. In an example that critics cite as particularly egregious, the constitutional court in October 2023 reinterpreted the constitution to allow Jokowi's son to join Mr Prabowo's ticket as his running-mate. This was despite the fact that he had not yet reached the minimum age for the job.

Mr Prabowo's coalition looks even broader than his predecessor's. There are few ideological differences among Indonesian parties, so most party leaders are happy to sign up to join the government if given a cabinet role. Mr Prabowo realises this; his will be Indonesia's largest cabinet since democracy returned in 1998 (see chart). All but one party, the Indonesian Democratic Party of Struggle (PDI-P), led by a former president, Megawati Sukarnoputri, have joined his coalition. But there is something even for her. In the cabinet line-up that Mr Prabowo announced on October 20th, he appointed her former aide-de-camp to be the co-ordinating minister for politics and security, and the brother of another former aide-de-camp to be the attorney-general. These appointments look as if they are intended to keep PDI-P, the largest party in the legislature, on side.

Co-opting his coalition partners and Ms Megawati through these appointments should help Mr Prabowo to achieve what he called in his inaugural address "a democracy appropriate to our nation, based upon our history and culture". In August

Mr Prabowo implied that having a political opposition was disruptive, saying that "the West loves opposition, fighting, refusing to co-operate". (It did not seem to be something that he regarded as a problem when in opposition from 2009 to 2019.)

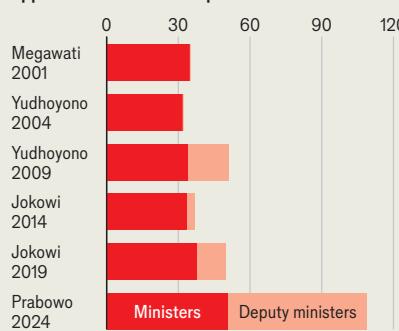
The risk of such a large cabinet is that it has devalued the currency of a ministerial appointment. If that is the case, then Mr Prabowo has other means of distributing patronage at his disposal. Jokowi preferred to offer seats on the boards of state-owned enterprises (SOEs) to loyalists. Mr Prabowo, who has retained Erick Thohir as the minister for SOEs, will surely do the same.

While Jokowi sought to build a new \$32bn capital city in the jungles of Borneo, Mr Prabowo told guests at his inauguration that he plans to quietly abandon the project. Instead his signature policy is a free-school-lunch programme that would cost \$28bn per year. He has billed it as a response to childhood stunting. But it is just as likely to be used to deliver contracts to favoured supporters. It is expected to add debt equivalent to 2.3% of GDP annually, raising concerns about macroeconomic governance. In an effort to assuage such concerns, Mr Prabowo has reappointed Sri Mulyani Indrawati, the long-serving finance minister. She will act as a tripwire; if she resigns, investors will worry that spending is out of control.

Mr Prabowo will also exercise great influence on foreign and defence policy. He has appointed a close aide as Indonesia's foreign minister, a post usually reserved for a career diplomat. While Mr Prabowo is unlikely to depart from Indonesia's long-standing policy of non-alignment between America and China, he has strong views on many international issues and may episodically pursue them. Last year, as defence minister, he proposed a peace plan for Ukraine which would have involved holding referendums in occupied territories. His Ukrainian counterpart responded that it looked "like a Russian plan". Such gadfly antics look likely to continue. ■

Keep your friends close

Indonesia, number of ministerial-level appointments at start of presidential term



Source: Cabinet Secretariat

Indonesia (2)

Smelting

SINGAPORE

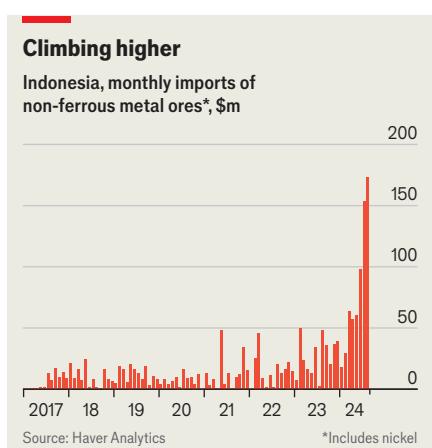
Prabowo Subianto doubles down on resource nationalism

A SKIM OF this year's nickel-market commentary reveals a "Darwinian" "existential moment" of "carnage". Benchmark prices tumbled by as much as 72% from all-time highs in 2022. From Australia to Brazil, nickel mines and furnaces are being shut down or sold off. Most agree on who is responsible for the destruction: Indonesia. The country's vast nickel reserves, lax environmental rules and cheap coal-fuelled power let its producers undercut competitors. Since Indonesia introduced a ban on raw nickel-ore exports in 2020, as part of a policy of "downstreaming", or moving towards higher value-added activity, Chinese investment has poured in. It now makes nearly half the world's refined nickel and two-thirds of its mined nickel. Both shares have doubled since 2020.

The speed of change has astonished even close nickel-watchers. Just a few years ago, the dominant belief was that the move to electric vehicles would sustain roaring demand for high-purity battery-grade nickel, notes Bernard Dahdah of Natixis, a French bank. Even as Indonesian supply increased, hitting the market for lower-grade nickel used in stainless steel, few thought the high-end nickel market was exposed. This is because while traditional nickel producers like Australia have easily-processed "sulphide" ore deposits, Indonesia's are "laterite" deposits, wherein nickel is finely sprinkled throughout the sediment. These are harder to refine and, many thought, would be too expensive for mass-producing nickel fit for batteries.

But more recently firms in Indonesia, led by Tsingshan, a Chinese metals giant, have worked out how to efficiently turn nickel laterites into the purer stuff. Their techniques have been innovative. One popular method dissolves ore in hot, pressurised acid to produce "mixed hydroxide precipitate" (MHP), an intermediate ingredient that is then made into battery-grade nickel. Likewise "nickel matte", another intermediate, is alchemised from low-grade nickel. These have transformed the high-end nickel market. Nearly three-quarters of battery-grade nickel is now derived from matte and MHP, up from 40% four years ago. The shift is almost wholly attributable to Indonesia, says Andrew Mitchell of Wood Mackenzie, a consultancy.

However, Indonesia is reeling from its own success. Having nabbed market share with cut-price nickel, it must now turn a



Crime

Suck up to your fake CEO

SINGAPORE

An explosion in deepfake scams has only just begun

IT SEEMED LIKE just another video call. Earlier this year, a finance worker based in Hong Kong for Arup, a British engineering firm, logged in for what he thought was a routine team meeting. On the screen, he saw several colleagues, including the firm's chief financial officer, who instructed him to transfer \$26m to five different bank accounts. He complied. But the man on the call was not Arup's CFO: it was a deepfake.

It was one of the costliest deepfake scams reported globally. Such scams are increasingly common. Deepfake technology, which manipulates images and video using artificial intelligence (AI), has become increasingly realistic. It is rapidly being adopted by transnational criminals mostly based in South-East Asia, now the epicentre of online scams targeting people around the world. Victims in East and South-East Asia lost up to \$37bn from online scams of all sorts in 2023, according to a new report from the United Nations Office on Drugs and Crime, the first time that it has come up with an estimate. According to the United States Institute for Peace, a think-tank in Washington, Cambodia's online scam industry makes more than \$12.5bn each year, equivalent to around half the country's formal GDP.

Technologies such as generative AI and machine learning are making scams even more effective. Meanwhile the rise of cryptocurrencies and spread of social media have decentralised and democratised



A deepfake of Lee Hsien Loong

transnational crime. The growing popularity of digital payments and e-commerce have made it easier for large sums of money to move rapidly outside the traditional banking system. Criminals now conduct their business over apps such as Telegram, WhatsApp and Facebook. An individual or small team can specialise in one part of the supply chain: registering foreign SIM cards, selling stolen phone numbers or identifying targets on social media.

This new type of criminal economy has particularly flourished in the Philippines. In 2016 the government legalised online gambling hubs known as Philippine Offshore Gambling Operators (POGOs), which provide criminals with a convenient front to launder money. Criminals, often from China, relocated there and began to dabble in cyber-enabled fraud, human-trafficking, kidnapping, extortion and money-laundering. In July Ferdinand Marcos, the president, banned POGOs during his annual state of the nation address. Hours before his speech, a deepfake circulated of him snorting cocaine. Philippine law enforcement debunked the clip as a "fabricated and malicious hoax".

Wealthier countries in the region are also big targets. Scams have surpassed more traditional crimes, such as burglary, to become the most common felony in Singapore. Several deepfake videos have been released of prominent Singaporeans, including the current and former prime ministers, promoting investment scams. Both politicians released statements warning the public about the falsehoods.

Increasingly sophisticated malware is another challenge. In September last year at least 43 Singaporean victims lost almost \$1m to malware-enabled scams on social media, according to Singapore's police force. When one woman inquired about a Facebook post advertising a one-day trip to a durian fruit farm in Malaysia, the seller contacted her over WhatsApp with instructions to download a smartphone app to browse tour offers. This app infected her Android phone with malware that enabled scammers to steal more than \$80,000 from her online bank accounts.

Governments in Asia are beginning to try to combat the growing threat of scams. China and Singapore have some of the most sophisticated responses, with widespread campaigns to raise awareness and by making it slower and harder for people to make instant, online payments of large sums. Several countries have set up national anti-scam centres to report crimes. But the distributed international structure of this criminal ecosystem is difficult to fight. Widespread corruption in many parts of South-East Asia undermines international co-operation, especially since law enforcement often has less money to deploy than the criminals. ■

► profit. The government is trying to rein in its nickel smelters. "The state must be present to maintain supply and demand," Bahnil Lahadalia, the energy and mineral resources minister, said on October 18th. Indonesia has tightened nickel-ore quotas and cracked down on illegal mining. There is a domestic ore shortage. Ore shipments have fallen by more than a third this year, according to Jim Lennon of Macquarie, a bank. Imports of nickel ore, mainly from the Philippines, have hit records. The combination of high ore prices and low processed-nickel prices is pinching smelters. Some foreign firms are scaling back or pulling out. Tsingshan has cut back production. In June Eramet and BASF, two European mining giants, cancelled a \$2.6bn investment in North Maluku.

But while Indonesia may see sense in market management, the broader policy of downstreaming is unlikely to change. It is credited for recent high-profile investments. In July Joko Widodo, the outgoing president known as Jokowi, attended the opening of a \$1bn EV battery-cell factory built in West Java by Hyundai and LG, two South Korean firms. Prabowo Subianto, the new president, has retained many of the personnel responsible for downstreaming, notes Siwage Dharma Negara, an Indonesia-watcher. Chief among them is Luhut Pandjaitan, a retired general who, as a minister under Jokowi, was instrumental in coordinating Indonesia's bureaucracy. (Mr Prabowo has kept Mr Luhut on in an advisory role.) The investment minister has been renamed the minister of investment and downstreaming.

There also exist plans to expand export bans to new commodities, such as seaweed. Bauxite exports were banned in 2023 and palm-oil ones in 2022. Mr Bahnil, re-appointed by Mr Prabowo, has praised the policy as one key strategy "to transform [Indonesia] from a developing into a developed country". Speaking at his inaugural address, Mr Prabowo did not mince his words: "All our commodities must be enjoyed by all Indonesians." ■



Sino-Indian relations

Himalayan handshake

DELHI

Narendra Modi and Xi Jinping meet and resolve a border row

A FATAL BORDER clash between India and China in 2020 did not just open a four-year fissure in bilateral ties: it triggered a tectonic shift in Asia's geopolitics. In its aftermath, the two countries each sent tens of thousands of troops to their disputed Himalayan frontier, backed by artillery, missiles and fighter jets. China expanded military aid to Pakistan, India's rival to the west. India, meanwhile, restricted Chinese investment and deepened defence ties with America and its allies. They, in turn, came to see India as a key partner in containing China.

A détente which could shake up regional geopolitics again is now under way. On October 21st Indian authorities said they had reached an agreement with China on patrolling rights that resolved the border standoff. The next day, China's foreign ministry confirmed that a deal had been reached. Then, on October 23rd, India's prime minister, Narendra Modi, met China's president, Xi Jinping, on the sidelines of the BRICS summit in Russia. It was their first official bilateral meeting since 2019.

Details of the border deal have yet to be made public. Much will depend on how it is implemented in the coming weeks. Even so, the diplomatic breakthrough heralds a new phase of bilateral ties that prioritises economic co-operation. That is partly because Mr Xi, concerned by a slowing Chinese economy and trade barriers abroad, wants better access to India's market. But Mr Modi also needs more Chinese tech-

nology, investment and expertise to achieve his manufacturing goals and repair the damage from a surprise setback in this year's general election. Despite the border crisis, China edged past America to reclaim its position as India's top trading partner in the 2023-24 financial year.

The timing is opportune for the Indian and Chinese leaders as well, coming just a fortnight before America's presidential election. For Mr Xi, it signals to the next American president that efforts to isolate China economically, and to build a coalition of like-minded democracies, are not working. And though Mr Modi is likely to deepen ties with America whoever wins the White House, a simultaneous rapprochement with China underlines India's



commitment to a "multi-aligned" foreign policy that encompasses close ties with Russia too. Mr Modi made this clear when he met Vladimir Putin on October 22nd.

It is also a useful hedge for Mr Modi. If Kamala Harris wins, it could help offset American pressure on India over issues including human rights, exports of restricted technology to Russia and Indian officials' alleged involvement in an assassination attempt on a Sikh activist in America. If Donald Trump prevails, it might mitigate the impact of potential trade tariffs on India or an American pivot towards China.

The border agreement between India and China does not resolve their underlying dispute, which stems from the blurry boundaries sketched by the British when they ruled the Indian subcontinent. China still claims the Indian state of Arunachal Pradesh. India claims Aksai Chin, an area controlled by China. But the deal could help avert the kind of military encounters that grew more frequent and violent as each side piled up frontier infrastructure in the years preceding the clash in 2020. That skirmish, in which 20 Indian soldiers and at least four Chinese ones died, was the first fatal one on the border in more than four decades.

The two sides' military commanders and civilian officials have since held regular talks to avoid further violence. By September 2022, they had reduced tensions by establishing "buffer zones", within which neither side patrols, at five of seven major flashpoints. But over the past two years they have struggled to find a solution at the last two flashpoints, Demchok and Depsang Plains, which both consider to be more strategically significant.

Easing off

Indian officials suggest the new agreement will allow India and China to patrol as they did before, rather than extending the buffer zones to the two remaining areas. "We have gone back to where the situation was in 2020," India's foreign minister, Subrahmanyam Jaishankar, told a conference on October 21st. He added that the "disengagement process with China" was complete, suggesting that troops who had been blocking each other's patrols in Demchok and Depsang were no longer doing so.

General Upendra Dwivedi, India's army chief, was more cautious. He said the goal was to "restore trust", including by checking that neither side was creeping into the buffer zones. India would then look at "disengagement, de-escalation and normal management" of the border. The Chinese foreign ministry spokesman who confirmed the deal did not provide more details, adding only that China would work with India to implement the agreement.

Some Indian media reports said that the two sides had each agreed to patrol ➤

► twice a month at different times, according to an agreed schedule and with a maximum of 15 troops per patrol. Previously, there was no agreed schedule or size for patrols. Other reports suggested that the agreement would apply only to Demchok and Depsang, while buffer zones would remain in place at the other flashpoints.

Deependra Singh Hooda, a former chief of the Indian Army's Northern Command, which oversees part of the Chinese border, suspects that the latter is true. He

thinks that India would have insisted on patrolling at Depsang in particular because the area, which is largely flat, is too big to monitor remotely and too important as a conduit for a large-scale offensive. "My own sense is we're not getting back exactly to the status quo pre-2020," he says. "But I think this is the closest we can get to it."

Neither side is likely to withdraw all the firepower they recently moved to the wider border area. Nor will they stop modernising their armed forces to prepare for future

clashes. For India, that means sticking to a path of closer military ties with Western partners. China and India will also still compete for influence in South Asia. And a fresh border flare-up could easily trigger another crisis.

The big question now is whether diplomatic reconciliation could turn into a prolonged period of economic integration between Asia's giants. If that were to occur, it would indeed be a landmark of Himalayan significance. ■

BANYAN

Generative fears

Japan is remarkably open to AI, but slow to make use of it

WHICH CULTURAL icons come to mind when an American thinks of artificial intelligence (AI)? The cyborgs of the "Terminator" film series, or Hal of Stanley Kubrick's "2001: A Space Odyssey"—rogue computer systems that rise up to destroy their human creators. What does a Japanese person recall? Doraemon, the friendly robot helper of an enormously popular eponymous anime series. So goes an anecdote making the rounds in Japanese tech circles. It suggests that Japan is a land of opportunity when it comes to AI.

The tale is instructive. Japanese do feel relatively little angst about AI. Only 25% of Japanese say that products and services using it make them nervous, the lowest share among 32 countries surveyed this year by Ipsos, a market research firm. On average, 50% of global respondents feel nervous, and the share rises to 64% in America. Few Japanese reckon AI will hasten the apocalypse: just 12% of Japanese think that it will make the future worse, the second-lowest share in a study of 21 countries conducted last year by the University of Toronto. Fully 36% of Americans fear the AI future. As Sam Altman, the boss of OpenAI, the maker of ChatGPT, put it last year while visiting Tokyo, the site of his firm's first office in Asia: "There's a long history of humans and machines working together here to embrace automation technology."

Japanese leaders have positioned the country as open for AI business. With a shrinking, greying population, Japan has little to fear in terms of job losses and lots to gain in terms of potential productivity improvements. So far Japan has no comprehensive legal regulations on AI, and it has allowed tech companies to train their models on copyrighted con-

tent. The ruling Liberal Democratic Party (LDP) has called for Japan to become "the world's most AI-friendly country". This spring the LDP even turned to AI to generate a new catchphrase for a political poster backing then-prime minister Kishida Fumio: "Economic revitalisation: providing tangible results". (The results of the slogan, alas, left much to be desired: Mr Kishida was replaced this month and the party is battling to maintain its majority in lower-house elections on October 27th.)

Intriguing applications of AI can be found across different sectors in Japan. Construction companies have used it to improve efficiency on job sites; tech investors are keen on more such innovations at the intersection of AI and hardware, where Japanese firms have traditionally been strong. The city government in Yokosuka, south of Tokyo, has reported big productivity gains since implementing ChatGPT to help with administrative tasks; the Tokyo metropolitan government is using AI to detect fires and improve disaster-response times. Qudan Rie, last year's winner of the Akutagawa Prize, a

prestigious award for the best work of fiction by an up-and-coming author, used ChatGPT to generate sections of her novel where an AI speaks. Though her revelation generated some controversy, she was allowed to keep the award.

Yet for all of Japan's openness towards AI, it is failing to capitalise on the opportunity. Masayoshi Son, the boss of SoftBank and Japan's most famous tech investor, has been warning for years that his home country has been behind the curve. Earlier this month he chastised Japanese firms for focusing on small-scale systems, rather than building ambitious AI giants. None of the "foundation models"—the algorithms that power generative AI—released between 2019 and 2023 originated from Japan, according to Stanford University. (America accounted for the most, with 182.) Tellingly, the hottest Japan-based AI startup is Sakana AI, which is led by two non-Japanese alumni of Google's AI division.

Japanese institutions remain strikingly risk-averse and slow to adopt new technology. Using AI on an individual basis is easy, but "doing something deeper—transforming systems or how companies work—that's a different story", says Matsuo Yutaka, who chairs the government's AI council. A government survey released this summer shows that less than half of Japanese firms are using generative AI tools, compared with over 80% in America or China. Among the small and medium-sized enterprises that make up the vast majority of Japanese companies, the situation may be even worse: less than 20% of Japanese SMEs are utilising generative AI, according to a recent survey by Teikoku DataBank, a research firm in Tokyo. When it comes to AI, Japan does have something to fear: being left behind.



China



Decoding America's election

Ambiguity or madness?

WASHINGTON

When it comes to China, Kamala Harris seems less hawkish than Joe Biden—and less crazy than Donald Trump

THROUGHOUT HER campaign, Kamala Harris has hewed to the foreign policy of President Joe Biden. But there is a little daylight between the two in at least one important area: America's relations with China. To judge by her limited remarks on the topic, Ms Harris seems less hawkish than her boss. She is reluctant to treat China as an actual or potential enemy and, if elected, hopes to maintain a dialogue with its leader, Xi Jinping. Unlike her rival, Donald Trump, she is not interested in a trade war. This impression was reinforced by a senior adviser who told *The Economist*: "Conflict is not imminent. Our job is to ensure that it is not imminent."

The clearest evidence of this posture is over Taiwan, a democratic, self-governing island with which China has vowed to "reunify", by force if necessary. Mr Biden said four times during his presidency that America would defend Taiwan if China tried to invade it. But when Ms Harris was

asked a question about this in an interview with CBS News this month, she did not repeat her boss's pledge: "I'm not going to get into hypotheticals."

Ms Harris is deliberately reverting to the pre-Biden policy of "strategic ambiguity", in which America will not say whether it might intervene in a conflict between the mainland and Taiwan. At a time of growing military tension across the Taiwan Strait, when every utterance is parsed for meaning, this is a striking change. It also stands in contrast to comments by Mr Trump, who has gone for an entirely different sort of ambiguity—at times implying that Taiwan is not worth defending, at others suggesting he would threaten Mr Xi with puni-

tive tariffs to deter an invasion. Would he threaten to use military force? "I wouldn't have to, because he respects me and he knows I'm fucking crazy," Mr Trump told the *Wall Street Journal*.

In the non-crazy world, strategic ambiguity is woven into the Taiwan Relations Act, a law passed in 1979 after America switched diplomatic recognition from the Nationalists in Taiwan to the Communists on the mainland. It commits America to supply weapons for Taiwan to defend itself, which Ms Harris has vowed to do; and to maintain its own power "to resist any resort to force or other forms of coercion". Ms Harris's non-committal position is "consistent with the Taiwan Relations Act", says her aide. By implication it is Mr Biden who strayed from the norm. The vice-president may want to reassure Mr Xi that America is not pushing for war. The danger is that he may take it as a weakening of America's resolve.

Ms Harris offered another intriguing clue in her interview with CBS News. Asked which country was America's greatest adversary, she pointed to Iran, which she said had "American blood on their hands". Most politicians in Washington probably would have named China. Mr Biden's national-security strategy identifies the country as "the only competitor with both the intent to reshape the international order and, ➤

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increasingly, the economic, diplomatic, military, and technological power to do it."

Perhaps Ms Harris had Iran front of mind because it had just fired more than 180 ballistic missiles at Israel. Her adviser insists the vice-president is "clear-eyed" about China, pointing to her comments at the Democratic National Convention, when she vowed to ensure "that America, not China, wins the competition for the 21st century; and that we strengthen, not abdicate, our global leadership". Moreover, much of her foreign-policy experience as vice-president has been in dealing with Asian allies alarmed by China's bellicosity.

Though her comments and those of her entourage mostly align with current policy, the tone feels softer than Mr Biden's or Mr Trump's. Ms Harris may talk of competition, but not of deterrence. She has said: "We must be able to compete and win. We should not seek conflict." She emphasises the need for open lines of communication. The only warning to China is that, as her aide puts it, "there will be real economic consequences" if it invades Taiwan.

Ms Harris is admittedly in a bind, struggling to emerge from the shadow of the president she still serves. Policy differences either seem disloyal or invite accusations of flip-flopping. Nor does Ms Harris want to be outflanked by Mr Trump, whom she has accused of being meek towards Mr Xi. Her entourage says she fully embraces Mr Biden's "responsibly managed competition" with China. On the competition side of the ledger this involves industrial policy at home, restrictions on high-tech exports to China and strengthening alliances in Asia. On the responsible management side it features co-operation with China on restricting fentanyl smuggling, dialogue on artificial intelligence, contacts with Chinese leaders and revived communication between military commanders.

The acute tension between the two powers, which led to dangerous encounters at sea and in the air, has abated since a Biden-Xi summit in November 2023. But the cordiality may not last given the wars raging in Ukraine and the Middle East, and the fact that China is working ever more closely with Russia, Iran and North Korea in an "axis of autocracy". In July a bipartisan commission on America's national-security strategy, mandated by Congress, sounded a warning that America faces "the most serious and most challenging" threats since 1945, including "the potential for near-term major war".

Ms Harris's camp appears not to share such dread, and shows no sign of heeding the commission's call for much higher de-

fence spending. As for the axis of autocrats, "the more they co-operate with each other, the more we can rally allies to our side," her aide says. If elected, Ms Harris's China policy will depend on the world she finds and the people she appoints. Mr Biden, with a lifetime's expertise on foreign affairs, surprised many people by how tough he turned out to be on China.

Jude Blanchette of the Centre for Strategic and International Studies in Washington says some in the Democratic Party think Mr Biden went too far, and want a softer line. Indeed, some Democrats see China as the most biddable member of the axis of autocracy. It wants some form of world order and co-operates with America in certain areas. Besides, adds Ivan Knapathy, a former White House official under Mr Trump, "if you have two wars going on your watch, and you're not going to raise defence spending, you have to turn down the heat in the Pacific." ■

Travel to China

A long way to go

How China is trying to win back foreign tourists

INTERESTING, SAFE and easy to get around, China has what it takes to be the top tourist destination in Asia. Indeed, it was. In the first half of 2019, before covid-19 hit, China's travel agencies handled 8.6m tourist visits, more than any other country in the region, according to the government (see chart 1). China's border authorities recorded 47.7m entries and exits by foreigners, including non-tourists, over that period. But after plummeting during the pandemic, those numbers have yet to fully recover, coming in at 3.1m and 29.2m, respectively, in the first half of this year.

This matters to China, not only because

Cutting back on sending

China, flight passengers, January-June, m
Selected countries of origin



Sources: OAG; *The Economist*

it enjoyed the bragging rights of being Asia's top destination. The government is also trying to kick-start the economy—and wants foreign tourists to help. In 2019 their spending accounted for 0.5% of GDP in China, compared with 0.9% in Japan, 1.1% in America and 2.5% in France. In the eyes of Chinese officials, there is plenty of room to grow. But first they must make their country attractive again.

The Economist dug into data from OAG, a consultancy, to figure out which travellers have stopped visiting China. We examined the sales of tickets for flights to and from China, breaking them down by country. The biggest drop-off has been in the number of travellers from America, which declined by two-thirds in the first half of this year, compared with the same period in 2019 (see chart 2). The tallies from South Korea, Japan and Thailand—all big providers of tourists—are also way down.

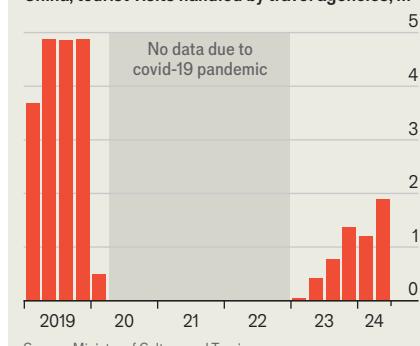
Flights in the ointment

During the pandemic China closed its borders and put in place draconian restrictions to stem outbreaks. That may have reinforced impressions of the country, held by some travellers, as a brutal and uninviting place. It also led to a decline in the number of flights to China. As of September, monthly seating capacity for flights between America and China was still only 28% of what it was in 2019. America's big international carriers—American, Delta and United—recently asked the Department of Transportation in Washington for permission to keep most of their routes to China dormant owing to a lack of demand.

Another big problem for airlines is Russia. Traversing its airspace is the quickest way to fly to China from America and Europe. But two years ago America, Canada, Europe and several other places barred Russian airlines from entering their airspace, punishment for Vladimir Putin's invasion of Ukraine. Russia responded in kind. That has extended flight times and driven up prices for Western carriers. Take British Airways, which restored flights be-

The trip not taken

China, tourist visits handled by travel agencies, m



Between London and Beijing in June of last year, after a three-year hiatus because of the pandemic. In August of this year the airline said it would again suspend the route. No reason was given, but reports pointed to the issue of Russian airspace.

The Chinese government is trying to make up for all this by easing entry for some. Over the past year it has begun allowing people from 13 European countries and several others to visit for up to 15 days without a visa. Travellers from dozens of countries can stop in China for up to six days before flying to a third country. These trial programmes are having an effect: in the first half of this year 58% of all visits to China were made without a visa, according to the government.

But officials acknowledge that more needs to be done. A common complaint of tourists is that many vendors do not accept cash or foreign credit cards. In order to purchase most things, visitors must down-

load one of the country's payment apps, WeChat or Alipay. So the government has released a guide on how to use them. Language is another problem. Outside metropolises like Beijing and Shanghai, few people speak English. And China's "great firewall" prevents visitors from using services such as Gmail and Facebook without a virtual private network.

The biggest problem, though, may be that negative impressions of China are growing in many places. A survey published last year by the Pew Research Centre in America found that, across 24 countries, a median of 67% of adults expressed unfavourable views of China, compared with 28% who had a favourable opinion. The negative perceptions were largely concentrated in rich countries, or those most likely to send tourists to China. In America, for example, half of respondents named China as the top threat, making it an unlikely holiday destination. ■

Thin-skinned men have not been the industry's only problem. It has had to navigate the sensitivities of a government that takes offence easily. In May last year a comedian, Li Haoshi, cracked a seemingly innocuous joke at an offline venue about his two dogs chasing a squirrel. "Exemplary in conduct! Capable of winning battles!" he said of their behaviour, using a slogan promoted by China's supreme leader, Xi Jinping, to encourage Chinese troops. Furious netizens, backed by state media, accused him of insulting the army. Mr Li's company, Shanghai Xiaoguo Culture Media, was fined \$2m and ordered to suspend performances. He was dismissed. The authorities began investigating whether his quip had broken the law.

Stand-up comedy suffered the fallout for months. Officials inspected venues across the country to warn managers and performers to keep in line with "core socialist values". Some performances were cancelled. But in August stand-up comedy returned to streaming channels with two hugely popular talent shows. Ms Yang was the screenwriter of one of them. "If you're going to take offence, go and watch something else," she joked with the audience.

Stand-up comedy in China is still a male-dominated business. Both shows have declared their winners in the past few days. Both were won by men. Only about one-third of the contestants were female. But they caused a stir with jokes about menstruation, gender bias and pressures on women to get married and have children. An online Chinese newspaper called them "even more outspoken than Yang, with many taking bold stances on a string of hot-button gender issues in their sets".

Some men quivered, but officials were probably content. Participants avoided politics or anything bawdy. They clearly knew the bounds. ■

Women in comedy

The last laugh

A row over a female comedian reveals a chasm between the sexes

YANG LI IS no stranger to online uproars. Four years ago the stand-up comedian (pictured) riled many Chinese men with a mildly worded ribbing on a streamed show. Her line, "Why does he look so ordinary, but can still be so confident?" remains infamous among touchy male netizens. On October 18th one of China's biggest e-commerce firms, JD.com, dropped Ms Yang as a promoter of its services after an outcry from still-offended men. Yet women are fighting back.

JD.com did not name Ms Yang, but the context of its announcement made it clear that she would no longer be helping to boost the company's sales during the annual "Singles' Day" shopping festival, which reaches a climax on November 11th. On Weibo, a frequently censored social-media platform, access has been blocked to many of the comments that poured out in response. One can get a sense of the mood, though. Some men accused JD.com of failing to apologise enough for what the firm called the "unpleasant experience" caused by signing up Ms Yang. "How is this any different from Japan's understanding of the second world war?" asked a user in Beijing. Outraged women saw things a little differently. "Just how ordinary and insecure are they?" said one, commenting on the male reaction.

The company should not have been sur-

prised. Ms Yang's associations with other firms, such as Intel and Mercedes-Benz in 2021, had also triggered fury among men. But the 32-year-old comic remains a celebrity in China's stand-up business, which only began to take off in 2009 with the opening of the country's first clubs dedicated to the art. She has nearly 2.5m followers on Weibo; online videos of her routines have drawn millions of views.



Burning men

International



Currency wars

Putin's plan to dethrone the dollar

He hopes this week's BRICS summit will spark a sanctions-busting big bang

Vladimir Putin, Russia's president, was cock-a-hoop on October 22nd when he welcomed world leaders including Narendra Modi of India and Xi Jinping of China at the BRICS summit in Kazan on the Volga river. Last year, when the bloc met in South Africa and expanded from five to ten members, Mr Putin had to stay home to avoid being arrested on a warrant issued by the International Criminal Court in The Hague. This time he played host to a rapidly growing club that is challenging the dominance of the Western-led order.

Now in their 15th year together, the original BRICS (Brazil, Russia, India, China and South Africa) have achieved little. Yet Mr Putin hopes to give the bloc heft by getting it to build a new international payments system to attack America's dominance of global finance and shield Russia and its pals from sanctions. "Everyone understands that anyone may face US or other Western sanctions," Sergei Lavrov, Russia's foreign minister, said last month. A BRICS payments system would allow

"economic operations without being dependent on those that decided to weaponise the dollar and the euro". This system, which Russia calls "BRICS Bridge", is intended to be built within a year and would let countries conduct cross-border settlement using digital platforms run by their central banks. Controversially, it may borrow concepts from a different project called mBridge, part-run by a bastion of the Western-led order, the Swiss-based Bank for International Settlements (BIS).

The talks will shine a light on the race to remake the world's financial plumbing. China has long bet that payments technology—not a creditors' rebellion or armed conflict—will reduce the power that America gets from being at the centre of global finance. The BRICS plan could make transactions cheaper and faster. Those benefits may be enough to entice emerging economies. In a sign that the scheme has genuine potential, Western officials are wary that it may be designed to evade sanctions. Some are frustrated by the unin-

tended role of the BIS, known as the central bank for central banks.

America's dominance of the global financial system, centred on the dollar, has been a mainstay of the post-war order and has put American banks at the centre of international payments. Sending money around the world is a bit like taking a long-haul flight; if two airports are not linked, passengers need to change flights, ideally at a busy hub. In the world of international payments, the biggest hub is America.

The centrality of the dollar provides what Henry Farrell and Abraham Newman, two scholars, call "panopticon" and "choke-point" effects. Because almost all banks transacting in dollars have to do so through a correspondent bank in America, it is able to monitor flows for signs of terrorist-financing and sanctions-evasion. That provides America's leaders with an enormous lever of power.

After Russia's invasion of Ukraine in 2022, the West froze \$282bn of Russian assets held abroad and disconnected Russian banks from SWIFT, which is used by some 11,000 banks for cross-border payments. America has also threatened "secondary sanctions" on banks in other countries that support Russia's war effort. This tsunami has prompted central banks to accumulate gold (see Finance section) and America's adversaries to move away from using the dollar for payments, which China views as one of its biggest vulnerabilities. ➤

► Mr Putin is hoping to capitalise on this dollar dissatisfaction at the BRICS summit. For him, creating a new scheme is an urgent practical priority as well as a geopolitical strategy. Russia's foreign-exchange markets now almost exclusively trade yuan, but because it cannot get enough of this currency to pay for all of its imports, it has been reduced to bartering.

Mr Putin wants the summit to advance plans for BRICS Bridge, a payments system that would use digital money issued by central banks and backed by fiat currencies. This would place central banks, not correspondent banks with access to the dollar clearing system in America, in the middle of cross-border transactions. The biggest advantage for him is that no one country could impose sanctions on another. Chinese state media say that the new BRICS plan "is likely to draw on the lessons learned" from mBridge, an experimental payments platform developed by the BIS alongside the central banks of China, Hong Kong, Thailand and the United Arab Emirates (see chart).

That BIS experiment was innocent in design and initiated in 2019, before Russia's full-scale invasion. It has been stunningly successful, according to several people involved in the project. It could cut transaction times from days to seconds and transaction costs to almost nothing. In June the BIS said mBridge had reached "minimum viable product stage" and Saudi Arabia's central bank joined as a fifth partner in the scheme. This week an Emirati official said the platform has since processed hundreds of transactions worth billions of dollars in total—a figure that is growing rapidly. By creating a system that could be more efficient than the current one—and which would weaken the dominance of the dollar—the BIS has unwittingly stepped into a geopolitical minefield.

"If someone is transacting outside of the dollar system for political reasons, you want that to be more expensive for them than the dollar system," says Jay Shambaugh, a Treasury Department official. The efficiency gains of new kinds of digital money may erode the use of the dollar in cross-border trade, according to the Fed. Reciprocally they could boost China's currency. Speaking to bankers and officials about mBridge in September, a Hong Kong official said it "provides another opportunity to allow the easier use of the renminbi in cross-border payment, and Hong Kong as an offshore hub stands to benefit".

Is it possible that mBridge's concepts and code might be replicated by the BRICS, China or Russia? The BIS doubtless views mBridge as a joint project and believes that it has the ultimate say over who can join. Yet some Western officials say that participants in the mBridge trial may be able to pass on the intellectual capital it involves

to others, including participants in the BRICS Bridge. According to multiple sources, China has taken a lead on the software and code behind the mBridge project. The People's Bank of China (PBOC), the central bank, leads its technology subcommittee and, according to comments made by a BIS official in 2023, its digital ledger "was built by" the PBOC. Perhaps this technology and know-how could be used to build a parallel system beyond the reach of the BIS or its Western members. The BIS has declined to comment on any similarities between its experiment and Mr Putin's plan.

The BRICS's foray into the payments race reveals the new geopolitical challenges facing multilateral organisations. At a meeting of the G20 group of large economies in 2020, the BIS was given the job of both improving the existing system and, at China's urging, of experimenting with digital currencies. Earlier this year Agustín Carstens, its boss, called for "entirely new architectures" and a "fundamental rethink of the financial system". As different members of the organisation have rival objectives, staying above the fray is getting harder. The world has become more difficult to navigate, acknowledges Cecilia Skingsley, the boss of the BIS Innovation Hub. But she says the BIS still has a role to

play in solving problems for all countries "almost independent of what other kind of agenda they might have".

One option for America and its allies is to try to hobble new payments systems that compete with the dollar. Western officials have warned the BIS that the project could be misused by countries with malign motives. The BIS has since slowed down its work on mBridge, according to some former staff and advisers, and is unlikely to admit any new members to the project.

Another option is to improve the dollar-based system so that it is as efficient as new rivals. In April the New York Fed joined six other central banks in a BIS project aimed at making the existing system faster and cheaper. The Federal Reserve may also link its domestic instant-payments system with those in other countries. SWIFT plans to conduct trials of digital transactions next year, leveraging some of its incumbent advantages including strong network effects and trust, says Tom Zschach, its innovation chief.

Any rival BRICS payments system will still face huge challenges. Guaranteeing liquidity will be difficult or require large implicit government subsidies. If the underlying flows of capital and trade between two countries are imbalanced, which they usually are, they will have to accumulate assets or liabilities in each other's currencies, which may be unappealing. And to scale up a digital-currency system, countries must agree on complex rules to govern settlement and financial crime. Such unanimity is unlikely to win the day in Kazan.

For all that, the BRICS scheme may have momentum. There is a broad consensus that current cross-border payments are too slow and expensive. Although rich countries tend to focus on making it quicker, many others want to overturn the current system entirely. At least 134 central banks are experimenting with digital money, mostly for domestic purposes, reckons the Atlantic Council, a think-tank in Washington. The number working on such currencies for cross-border transactions has doubled to 13 since Russia invaded Ukraine.

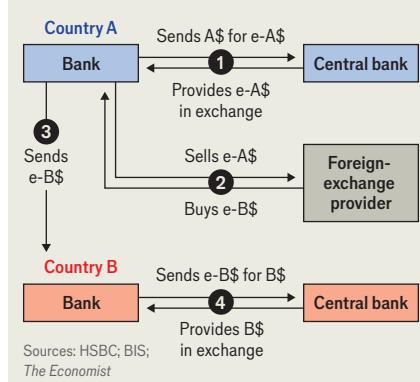
This week's BRICS summit is no Bretton Woods. All that Russia and its pals have to do is move a relatively small number of sanctions-related transactions beyond America's reach. Still, many are aiming higher. Next year the BRICS summit will be held in Brazil, chaired by its president, Luiz Inácio Lula da Silva, who fulminates over the power of the greenback. "Every night I ask myself why all countries have to base their trade on the dollar," he said last year. "Who was it that decided?" ■

Bridging finance

Most international payments typically plod along a chain of intermediary banks. Instead, the mBridge project relies on central banks, and gives them visibility and some control over domestic banks and over the use of their digital currencies by foreign banks. In step one a bank sending a cross-border payment would swap normal currency (A\$) for a digital currency (e-A\$) issued directly by the central bank. In step two the bank would trade it for a foreign digital currency (e-B\$), which it would send in step three. The foreign bank would swap this back into normal money in step four.

Money shot

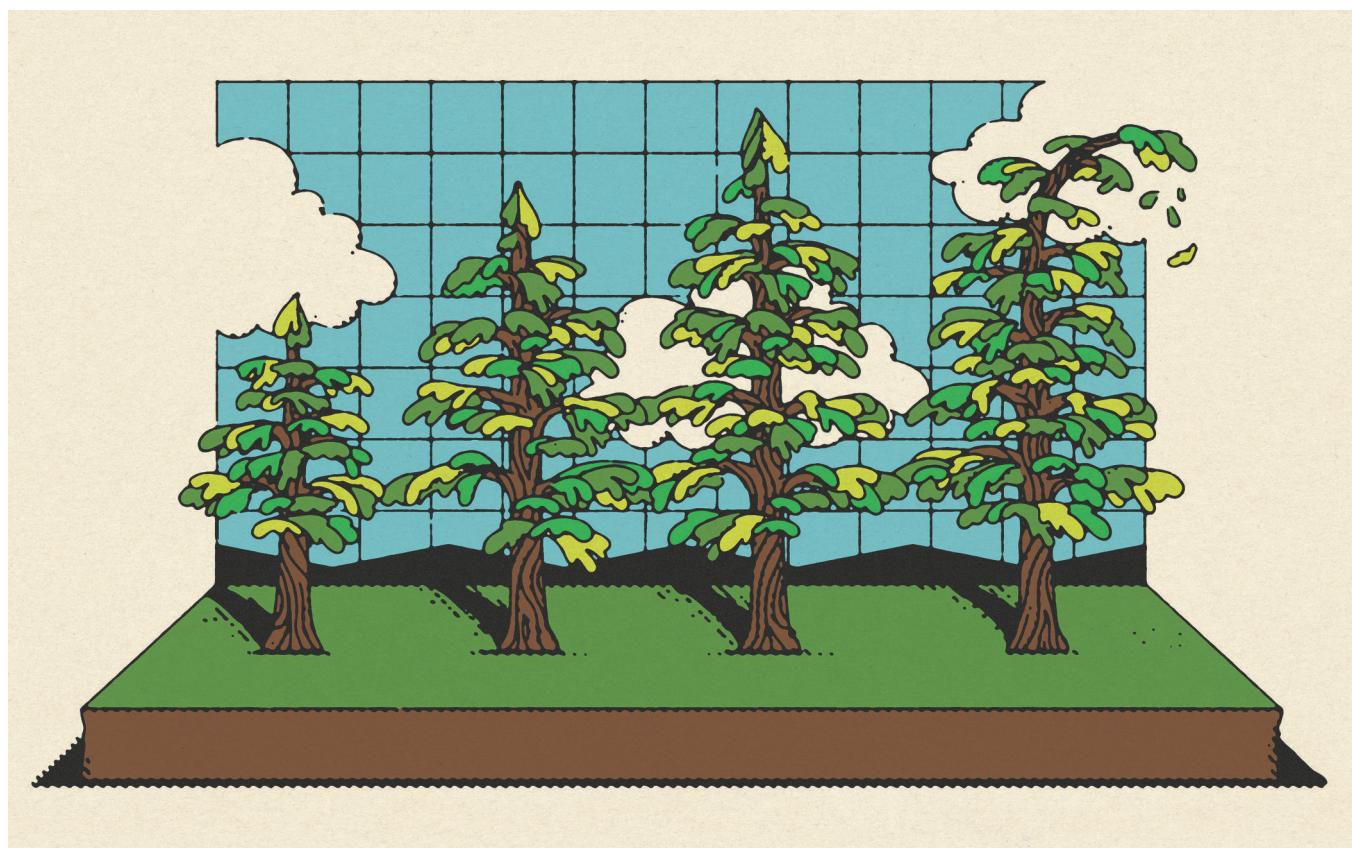
Four steps in an illustrative transaction using two central-bank digital currencies



Sources: HSBC; BIS; The Economist

We are seeking interns to write about foreign affairs. Interns will be paid and based in London. Applications close on December 2nd 2024. For details see: economist.com/foreign-intern-2024

Business



Business and markets

Earned out?

America Inc's growing profits are under threat

MANY INVESTORS will have greeted the start of corporate America's latest earnings season feeling chipper. After a brief wobble in the first half of last year, the profits of big American firms in the S&P 500 index have climbed steadily higher in each subsequent quarter. This time round their profits are expected to grow by a bit more than 4%, year on year.

Faced with fat profits in the present—and the promise of fatter ones in the future thanks to artificial intelligence (AI)—investors have sent the S&P 500 index up by 22% this year, its strongest performance since 1997. Valuations, at 22 times forward earnings, are at eye-watering levels, compressing the difference in yields between stocks and government bonds (see chart 1 on next page). What could go wrong?

One place to look for threats is the earnings season. So far, however, that has made investors only more bullish. The

quarter of firms in the S&P 500 that have already reported their results have easily beaten expectations—even as chief executives have signalled caution. Jamie Dimon, the boss of America's biggest bank, fixed a bleak warning to the front page of JPMorgan Chase's earnings print. Geopolitics and spiralling government debt, he wrote, pose a serious threat to the economy. The bank's stock nonetheless rose by 5%. Inves-

tors seemed to read Mr Dimon's musings more as a pitch to be America's next treasury secretary than an earnest warning.

As interest rates come down, lending margins for banks like Mr Dimon's are being squeezed. Yet cheaper debt also means more companies raise money and strike deals, providing juicy fees. At Goldman Sachs, for instance, investment-banking revenue in the most recent quarter was up by a fifth year on year, more than twice as much as expected.

Worries of a collapse in consumer spending are also starting to fade. Pessimists may point to results from Ally Financial, the lender that was split off from General Motors, which significantly increased its provisions for bad car loans. The number of Americans not paying these off is now at levels seen during the financial crisis. Other signs, however, suggest America's consumers remain indefatigable. Cheaper ad-supported subscriptions have buoyed Netflix; premium credit cards have boosted American Express. National retail-sales figures rose for the third straight month in September.

Corporate America has been propped up in part by surging profits among its technology giants, which have yet to report their results for the quarter. Nvidia, the biggest beneficiary of the AI boom, is ➤

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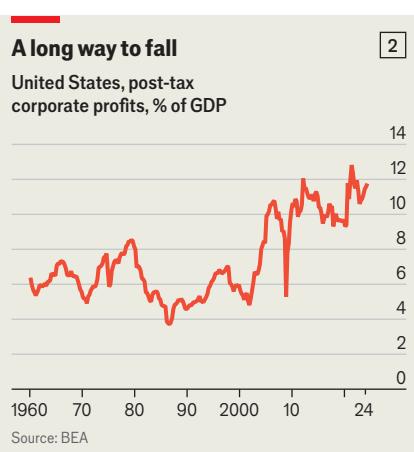
expected to account for 13% of all profit growth in the S&P 500 this year. Add its six famous cousins, which together make up the “magnificent seven” stocks, and that figure rises to 62%. Exclude all seven and the S&P 500’s earnings recession ended not in the third quarter of 2023, but only in the second quarter of this year.

Investors are now betting that America’s profit bonanza will become more evenly shared. Profits among the S&P 493 next year are expected to grow by 13%. The Russell 2000 index of smaller listed companies is also trading above its long-run valuation multiple, suggesting that investors are bullish not only about the outlook for America’s corporate giants but about its middling companies, too.

That is a bold call. To those with a historical bent, it looks like a foolish one. When tallied as a share of GDP, profits have been on a 40-year bull run (see chart 2). In a paper published last year Michael Smolyansky, a researcher at the Federal Reserve, showed that the acceleration in America’s profit growth from 1989 to 2019 was “entirely due to the decline in interest and corporate-tax rates”. This suggests that the outlook for corporate profits will hinge on the decisions of central bankers and politicians.

Since the Fed began raising interest rates in 2022, big American firms have been shielded from the rising cost of financing by high cash balances and long-dated bonds paying low, fixed coupons. The IMF has shown that between 2021 and 2023 net interest expenses of non-financial American companies fell even as interest rates rose. Smaller firms, including the highly indebted ones owned by private-equity funds, were less fortunate. Like many European companies, they tend to rely more on floating-rate loans than on fixed-rate bonds.

The holiday for big American firms, though, is coming to an end. The Federal Reserve may be reducing its benchmark rate, but few expect a return to the record lows of the past decade. American firms



owe \$2.5trn worth of fixed-coupon bonds due before the end of 2027. For the \$840bn of that pile owed by non-financial firms in the S&P 500 index, the median coupon is 3.4%; the yield to maturity, a proxy for the minimum rate firms will have to offer when they refinance these debts, is 4.5%. What is more, the spread between the yields of investment-grade corporate bonds and government debt is also historically low, at just above 0.8 percentage points. If it widens, the cost of refinancing will soar.

The outcome of America’s presidential election could also slow America’s profit juggernaut. Donald Trump, whose chance of victory has been rising, promises a sugar rush for businesses if he returns to the White House. During his first presidency he cut the statutory corporate-tax rate from 35% to 21%. He wants to lower it further, perhaps to 15%. That would be a big boost to profits: each percentage-point decrease in the statutory rate lifts S&P 500 earnings by nearly 1%, reckon analysts at Goldman Sachs. Yet this will have to be weighed against the dangers Mr Trump poses in the longer term. His promise to levy hefty tariffs may cover some companies in protectionist bubble wrap, but others will find their profits squashed if they are unable to pass higher costs on to consumers. His disregard for institutions, meanwhile, could cause confidence in America’s markets to rot.

A Kamala Harris presidency would not pose such nightmarish threats. But nor would it give businesses a sugar rush. If her predecessor’s record is any guide, Ms Harris will continue to frustrate profit-pumping mergers among big American companies and may even seek to break some businesses up. Even more worrying for bosses, she has proposed raising the corporate-tax rate to 28%. Ms Harris would need a majority in both houses to make that happen, something that polls currently suggest is unlikely. Still, as America counts down the days until the election, its corporate titans may wish they could keep things as they are. ■

Remote work

Dig out your trousers

Bosses are insisting workers return to the office. Should they be?

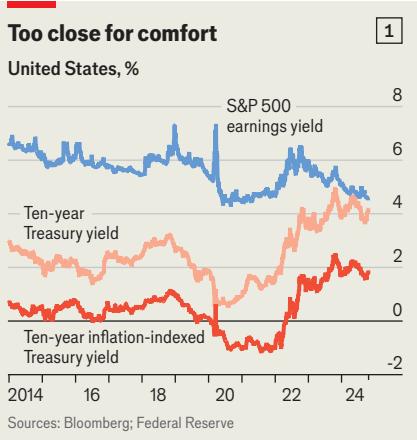
“**M**Y MORALE FOR this job is gone, I’m gonna totally check out,” an Amazon worker recently wrote on Blind, an online forum where employees whinge about their employers. The cause of his discontent was a letter sent last month by Andy Jassy, the tech giant’s boss, that ordered staff back to the office five days a week. The mandate has caused grumbling among Amazon’s office drones, who had previously been required to show up in person only three days a week. At a meeting on October 17th Matt Garman, head of Amazon’s cloud-computing division, told a group of staff that if they did not want to adhere to the policy they could quit.

Amazon is not the only big company that has clamped down on remote work. Goldman Sachs, a bank, PwC, a professional-services firm, and Stellantis, a carmaker, are among those that have raised the number of days they require their employees to come into the office. More are set to follow. A recent global survey by KPMG, another professional-services firm, found that four-fifths of bosses expect a return to the office five days a week within three years.

Such mandates may already be starting to show up in aggregate figures. Every month WFH Research, a group of academics, asks Americans how many days they were able to work from home in the past week. In September around 28% of their working days were at home, down about ►



Hherded



two percentage points from the year before. The change in some industries is more dramatic: the portion of employees in tech, financial and professional-services firms who work at least some of the time from home has fallen by an average of ten percentage points.

Mandating a return to the office tends to irritate staff. A survey by Gartner, a research firm, found that a third of executives and a fifth of other employees would leave their jobs if they were forced back to the office. For some companies, that may be the point. Many tech firms and consultancies hired too many workers during the covid-19 pandemic boom. Getting some of them to leave voluntarily would reduce severance costs—though it also risks pushing talented employees to join rivals.

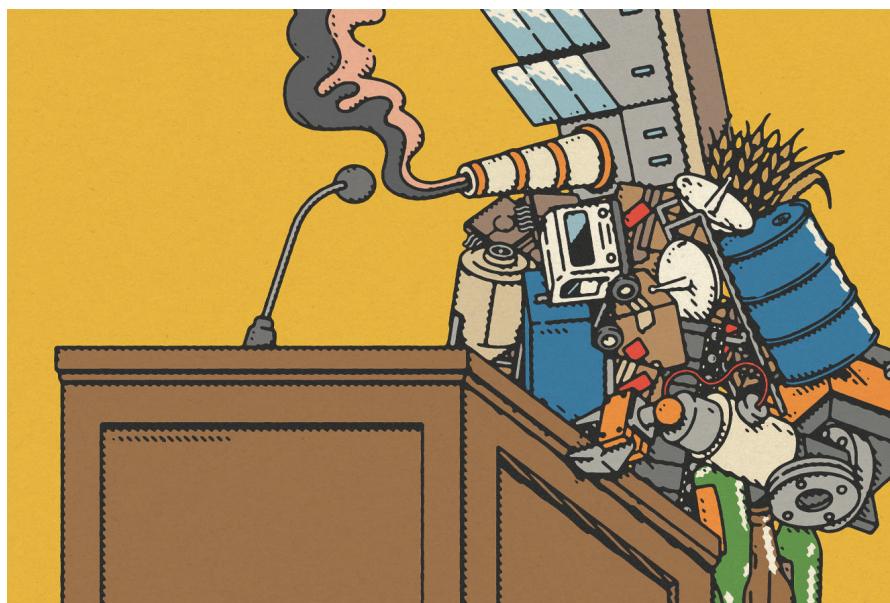
The more likely explanation is that many bosses believe having employees in the office leads to better performance. Plenty of studies now suggest that remote employees are less productive. One paper that looked at data-entry workers in India found that those consistently working from home were 18% less productive than those consistently in the office.

There is less evidence, though, that letting staff work from home a couple of days a week in a hybrid arrangement has a negative effect on performance. A randomised control trial at a Chinese online travel agency by Nick Bloom of Stanford University and two other researchers found no discernible difference in performance between hybrid workers and those who toiled entirely from the office.

Bosses may quibble that a call centre is not representative of the work many of their staff perform. More complex tasks, such as advising a client on how to structure a merger or designing a user interface, can require a lot of collaboration that may be difficult to replicate virtually. Junior employees may also receive less coaching if they interact with others only through scheduled Zoom calls.

Some bosses fret that hybrid work will erode their company's culture, as new employees don't absorb it and old ones forget it. In his letter, Mr Jassy wrote that Amazon's culture "has been one of the most critical parts of our success", and that "it's easier for our teammates to learn, model, practise, and strengthen" it when working together in the office.

For now, investors seem to be withholding judgment. A study published in April by Sean Flynn of Cornell University and two co-authors looked at 600 or so listed American firms that had published remote-work policies. The authors found that variation in the stringency of these had no significant effect on the performance of the firms' shares relative to those of their peers. If Mr Jassy is right, that may soon change. ■



Business in Asia

Tropical depression

SINGAPORE

South-East Asia's stodgy conglomerates are holding it back

FEW PARTS of the global economy hold more obvious promise than South-East Asia. Multinational firms hoping to move manufacturing away from China are racing to establish supply chains in the region. Indonesia, the Philippines and Vietnam are expected to be among the fastest-growing economies in the world during the rest of the decade. Malaysia is likely to join the ranks of the world's high-income economies soon. Singapore's importance as a financial hub has grown as foreigners have deserted Hong Kong.

But when it comes to home-grown businesses, the picture in South-East Asia is murkier. The market value of investible stocks in Indonesia, Malaysia, the Philippines, Singapore and Thailand is around \$90bn. Those five economies have roughly the same GDP as India but less than half its investible market value (see chart 1 on next page). Seven American companies are each worth more than the entire South-East Asian market.

Among the top 50 firms in South-East Asia by revenue, only one—Sea, a Singaporean gaming and e-commerce firm—was founded in this century. State-owned enterprises account for 15 of the top 50. Subsidiaries of the region's tentacular conglomerates account for 14.

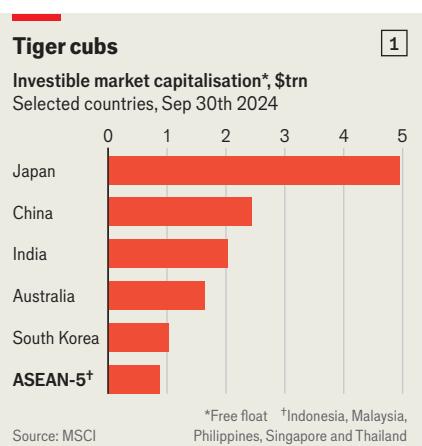
Sprawling corporate empires with long histories—such as Thailand's CP Group, Malaysia's Sime Darby, Indonesia's PT

Djarum and the Philippines' San Miguel—play an outsize role in South-East Asia. Their portfolios span industries from agriculture, energy and property to banking, telecoms and retail. And they often have deep political ties, which help them thrive in industries that rely on the government for licences and permits. Across South-East Asia conglomerates dominate business—and keep the region from reaching its potential.

Not long ago South-East Asia's conglomerates were star performers. Between 2003 and 2012 they generated an annualised shareholder return, including dividends, of 28%, compared with 20% for South-East Asian firms focused on specific markets, according to Bain, a consultancy. That pattern, however, has since inverted: between 2013 and 2022 South-East Asia's conglomerates generated a meagre 4% annualised return, well below the 11% notched up by the region's more focused companies (see chart 2).

Partly that reflects a downturn during the latter period in the prices of various commodities the conglomerates sell. But it also reflects the failure of the groups to adapt. "The industries on which these conglomerates grew are mature or declining," observes Till Vestring, a partner at Bain in Singapore. "Many haven't managed to move into newer sectors."

Some conglomerates want to change ►



like JG Summit and Ayala are big providers of startup funding. Sinar Mas and Lippo Group, another Indonesian conglomerate, are big venture investors in the country. That might be a plus for entrepreneurs who are happy for their businesses to be subsumed into one of the region's conglomerates. But it is awkward for those who might wish to compete with them.

Influential conglomerates are common across Asia, and may even be beneficial for economies where markets are underdeveloped, by improving the allocation of capital and talent. But the conglomerates of South-East Asia are particularly worrisome. South Korea's *chaebols*—family-owned conglomerates such as Samsung, Hyundai and LG—are big and innovative in part because they compete with foreign companies in overseas markets. South-East Asia's conglomerates, by contrast, focus on their domestic fiefs. When they do sell abroad, it tends to be basic commodities such as agricultural goods.

Focusing on the domestic market may be enough to give India's conglomerates, such as Reliance Industries and the Adani Group, the efficiencies that come with sheer size. Not so in South-East Asia. Indonesia's economy, the largest in the region, is a third as big as India's—and it is around three times as large as those of Malaysia, the Philippines, Singapore, Thailand and Vietnam. As a consequence, the conglomerates run by South-East Asia's tycoons are likely to remain smaller and less productive than those in larger economies.

Barbarians on the shores

The deteriorating performance of South-East Asia's conglomerates has caught the attention of foreign private-equity (PE) firms that have broken up similar groups elsewhere. KKR and Blackstone are among those that have been expanding their presence in the region. South-East Asia's conglomerates tend to list only some of their stock publicly, which would make hostile bids tricky. More than half the shares of Malaysia's YTL, the Philippines' SM Investments and Thailand's ThaiBev are privately held. But plenty of opportunities exist to nibble around the edges. In August CVC, a European PE firm, purchased a majority stake in Siloam International Hospitals from Lippo Group for more than \$1bn.

Still, the shallowness of local capital markets makes a subsequent listing of these businesses tricky, and appetite from foreign investors for modestly sized Asian businesses is limited. Without more competition, South-East Asia's corporate morass will continue to blight its otherwise optimistic economic story. ■

► that. Vingroup, the biggest conglomerate in Vietnam, has launched VinFast, an electric-vehicle brand, and briefly made its own smartphone.

A number of the region's conglomerates have sought help from foreign firms to move into areas such as e-commerce, digital banking and renewable energy. Sinar Mas, an Indonesian conglomerate, has joined up with LG CNS, the cloud-computing arm of the South Korean giant, to build data centres. Ayala Group, a conglomerate in the Philippines, teamed up with Ant Financial, a Chinese fintech firm, to launch Mynt, an e-wallet provider. Earlier this month Ayala sold half its stake in the venture to Mitsubishi, a Japanese conglomerate, for \$319m.

For many of South-East Asia's conglomerates, though, extensive political ties have dampened the incentive to innovate. Foreign-ownership restrictions shield them from competition, especially in areas like telecoms, banking, media and property. Cosy relationships with regulators keep domestic upstarts at bay, too.

South-East Asia's conglomerates are also among the biggest sources of funding for the region's new businesses, and not only through their banking subsidiaries. Many have substantial venture-capital arms. In the Philippines conglomerates



Correction Last week, in "Called out", we mischaracterised Crescendo's customer-service tools as operating only in the background of conversations. Sorry.

Weight-loss drugs

Pharma frenzy

Novo Nordisk and Eli Lilly face heavy competition

AMONG THE many newcomers to the business of weight-loss drugs is Hims & Hers, an American e-pharmacy better known for hawking remedies for erectile dysfunction and hair loss. Since May it has offered its own version of Wegovy, a blockbuster slimming jab, thanks to a quirk in American law that lets pharmacies replicate some brand-name drugs when there are shortages. Analysts expect that the company will pocket around \$145m from its weight-loss drug this year.

Over the past two years rocketing sales of Wegovy and its main rival, Zepbound, have propelled the combined market value of Novo Nordisk and Eli Lilly, the drugmakers behind them, from \$560bn to \$1.3trn. The GLP-1 hormone that forms the basis of both drugs has proven highly effective at helping users shed pounds, so much so that their makers have struggled to keep up with demand.

What is more, researchers are now discovering that the benefits of these drugs extend far beyond weight loss, just as prices are set to fall and more convenient forms are under development. Bloomberg Intelligence, a research firm, forecasts that global spending on weight-loss drugs will surge from \$15bn this year to \$94bn by 2030 (see chart 1). With hundreds of challengers eyeing a vast market of potential users, obesity drugs are shaping up to be one of the biggest and fiercest battlegrounds in the history of pharmaceuticals.

So far health insurers and governments have been reluctant to cover the cost of using GLP-1s for weight loss (a smaller dose is prescribed for diabetes). In America, the largest market by far for the drugs, Wegovy



Lots to digest

United States, estimated launch dates of selected weight-loss drug candidates

● Injectable ● Oral

	Manufacturer	Drug	Type
2026	Eli Lilly	orforglipron	●
	Novo Nordisk	cagliseptide	●
2027	Novo Nordisk	semaglutide	●
	Boehringer Ingelheim/ Zealand Pharma	servotudotide	●
2028	Eli Lilly	retatrutide	●
	Altimmune	pemvidutide	●
	Amgen	maritide	●
	Pfizer	danuglipron	●
	Viking Therapeutics	VK2735	●
2029	Eli Lilly	mazdutide	●
	Structure Therapeutics	GSBR-1290	●
	Zealand Pharma	dapaglutide	●
2030 onwards	Novo Nordisk	amycoretin	●
	Roche	CT-388	●
	Zealand Pharma	petrelintide	●

Source: Bloomberg Intelligence

of use. Amgen, a large American biotech firm, is developing a drug that requires patients to inject themselves perhaps only once a month, rather than once a week as currently required. Another solution is to eliminate the needle entirely. Pills are not only simpler to make but also avoid the need for expensive cold storage. Both Eli Lilly and Novo Nordisk are expected to launch oral GLP-1 drugs in 2026.

Drugmakers are also racing to produce more effective treatments, including by experimenting with other active ingredients. Some drug candidates aim to increase the share of body weight patients are able to lose, to perhaps as much as a quarter. Others look to reduce the side-effects of treatment, which should lead more people to take them. About a third of GLP-1 users quit within three months, often because of nausea, vomiting, muscle loss and other nasty things. Zealand Pharma, a Danish biotech firm that is developing a weight-loss drug that targets a different hormone, amylin, says it could offer weight-loss benefits similar to those from GLP-1s but with fewer such problems.

All that competition is expected to bring down prices. Eli Lilly has already halved the price of its jabs. Jefferies, an investment bank, estimates that by the end of this decade the annual cost of weight-loss drugs in America will have fallen to around \$3,000. Still, such prices will be out of reach for the vast pool of potential patients in poor countries. Of the 1bn adults around the world who are obese, more than two-thirds live in developing countries, according to the World Obesity Federation, an NGO. Chinese and Indian pharmaceutical companies are now eyeing those markets.

In China nearly half of all adults are overweight or obese, making it a huge potential market for weight-loss drugs. Both semaglutide (the active ingredient in Wegovy) and tirzepatide (the active ingredient in Zepbound) have now been approved to treat obesity in the country. Eli Lilly and Innovent, a Chinese biotech firm, are developing a drug for the market called Mazdutide that is expected to be available from next year at around half the price of Zepbound in America.

Generics will be even more important in widening access to weight-loss drugs in the developing world. Patent expiries will help: semaglutide will lose its protection in China and India in 2026, which should unleash a flood of biosimilars (as generic versions of biological medicines are known). In China eight weight-loss biosimilars are set to come on the market after 2026. India's drugmakers, which supply more generic drugs than any other country's, are also developing their own knock-offs. The market for weight-loss drugs will not go flabby anytime soon. ■

can cost up to \$17,500 a year for those paying out of pocket. Only half of privately insured patients are covered for it. Medicare, the country's public health-care system for the elderly, is barred by law from providing anti-obesity medicines.

Yet as evidence grows that these slimming drugs offer more than just cosmetic benefits, insurers and governments may start to view them differently (see Briefing). Many of America's 110m obese people suffer from related conditions ranging from heart disease to sleep apnea. Weight-loss drugs could help. There are also early indications that GLP-1s could be used to treat substance-use disorders, Alzheimer's disease and various other conditions. The Congressional Budget Office estimates that, with these new uses, around a fifth of Medicare's population, some 16m patients, could have access by 2026.

Slim pickings

At the same time, competition is likely to make weight-loss drugs both better and cheaper. Although Novo Nordisk and Eli Lilly are expected to dominate the market for the time being, challengers are racing to develop alternatives, forcing the duo to continue innovating. CiteLine, a research firm, estimates that more than 300 drug candidates are in the works, plenty of which are expected to arrive in the next few years (see chart 2). Patrik Jonsson, head of the division at Eli Lilly that is responsible for weight-loss drugs, says that the level of competition is something he has never experienced before.

One area of competition is around ease

Semiconductors**Down memory lane**

High-bandwidth memory could be the next bottleneck for AI

INVESTORS ARE accustomed to volatility in the semiconductor industry. But recent ups and downs have been especially discombobulating. On October 15th ASML, a supplier of chipmaking gear, reported that orders during its most recent quarter were only half what analysts had expected, causing its shares to plunge. Two days later TSMC, the world's biggest chip manufacturer, reported record quarterly profits and raised its sales forecast for the year.

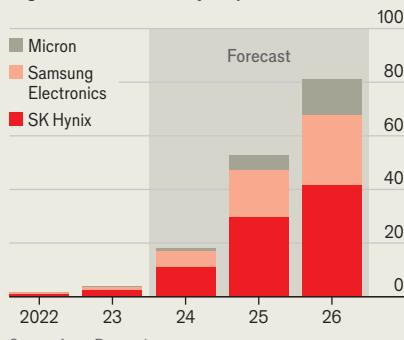
Those contrasting signals reflect the diverging fortunes of the chips needed for artificial intelligence (AI), for which demand has been "insane", according to C.C. Wei, TSMC's boss, and those needed for everything else, for which it is soggy. That pattern is reflected in memory chips. On October 7th Samsung, the market leader, issued a public apology for its lacklustre financial performance. On October 24th SK Hynix, which has surged ahead in the fast-growing segment of high-bandwidth memory (HBM) chips, which are needed for AI, reported a record profit.

HBM chips have become a vital component in the race to build more powerful and efficient AI models. Running these models requires logic chips that can process oodles of data, but also memory chips that can store and release it quickly. More than nine-tenths of the time it takes an AI model to respond to a user query is spent shuttling data back and forth between logic and memory chips, according to SK Hynix. HBMs are designed to speed this up by integrating a stack of memory chips together with the logic chips, boosting speed and reducing power consumption.

Arete Research, a firm of analysts, esti-

Jogging the memory

High-bandwidth memory-chip sales, \$bn



mates that HBM sales will hit \$18bn this year, up from \$4bn last year, and rise to \$81bn by 2026 (see chart on previous page). The chips are also highly profitable, with operating margins more than five times those of standard memory chips. SK Hynix, whose share price has more than doubled over the past two years, controls over 60% of the market, and more than 90% for HBM3, the most advanced version. Nam Kim, an analyst at Arete, says the company took an early bet on HBM chips, well before

the AI boom. Its leadership has since been cemented by its close ties to TSMC and Nvidia, whose graphics processing units run most of the whizziest AI models.

HBM chips are now emerging as another bottleneck in the development of those models. Both SK Hynix and Micron, an American chipmaker, have already pre-sold most of their HBM production for next year. Both are pouring billions of dollars into expanding capacity, but that will take time. Meanwhile Samsung, which manuf-

actures 35% of the world's HBM chips, has been plagued by production issues and reportedly plans to cut its output of the chips next year by a tenth.

With a shortage of HBM chips looming, America is pressing South Korea, home to Samsung and SK Hynix, to restrict its exports of them to China. There are rumours that a further round of chip sanctions by America will include some advanced HBM versions. As demand for them rises, so too will interest from governments. ■

BARTLEBY

Bearing polarisation

How to manage political controversies and partisanship in the workplace

HOWEVER MUCH you might want to keep politics out of business, politics has other plans for you. Events have a habit of sucking organisations into controversy. In 2022 Disney was caught up in a very public row with the state of Florida over a bill about teaching sexuality and gender identity in public schools. Earlier this year Google fired some employees who had taken part in a sit-in to protest against the tech firm's cloud-computing contract with Israel. University administrators have conspicuously struggled to manage the passions aroused by the war in Gaza.

Some firms try to make it part of their culture to remain out of the political fray. One software company, 37signals, is explicit that it "does not weigh in on politics publicly, outside of topics directly related to our business". Google's boss, Sundar Pichai, told employees after the protest that "This is a business, and not a place to...attempt to use the company as a personal platform, or to fight over disruptive issues or debate politics."

But avoiding political and social controversy is very difficult, as "The Age of Outrage", a thoughtful new book by Karthik Ramanna, a professor at Oxford University, makes clear. Polarisation is increasing in many countries; grievances are quickly amplified by social media.

What is more, politics can infect organisations, their leaders included, in deeply insidious ways. In America, now just days away from another divisive presidential election, partisanship is becoming a feature of the boardroom. A study by Vyacheslav Fos of Boston College and his co-authors found that between 2008 and 2020 the executive teams at S&P 1500 firms grew more likely to be dominated by people affiliated to a single party. This echo-chamber effect is

caused primarily by a tendency for bosses to team up with people who share their political views.

Partisanship feeds through into management decisions. A recent study by Anthony Rice of the Chinese University of Hong Kong, which infers bosses' political preferences from their campaign contributions, finds that managers in America increase investment when their preferred party gains control of the White House. Splurging based on partisanship tends not to work out that well: it is associated with lower valuations and operating profits.

Another study, by Ran Duchin of Boston College and his co-authors, finds that politically divergent firms in America, as measured by the affiliations of employees who are registered party supporters, have become less likely to merge over time. Between 1980 and 2010, mergers between extremely divergent firms—those in the top deciles for leaning Republican and Democrat—made up 11% of all deals; by 2019 that figure had fallen to 3%. When firms with different political leanings do merge, there is likely to be higher sub-

sequent turnover among employees.

Political polarisation is not restricted to America. Another study, by Emanuele Colonnelli of the University of Chicago and his co-authors, looks at the political affiliations of private-sector business owners and employees in Brazil. They find that owners are substantially more likely to employ workers who belong to the same party. As you might expect if decisions are being influenced by something other than merit, this seems not to be great for business: firms with a higher share of workers who have the same political views as their owners grow slower compared with those that have more politically diverse workforces.

This picture implies three things. The first is that political polarisation is not something that can easily be suppressed; it might erupt in specific firestorms or it might take hold more insidiously. The second is that the benefits of diversity can extend to political views: partisanship can limit your market, narrow your employee base and hurt your business.

The third lesson, and the argument of Mr Ramanna's book, is that bosses who want to act in a non-partisan way need to develop a process for dealing with polarisation, rather than responding on an ad hoc basis. Among the recommendations he makes is that organisations should appoint a group of people to debate and adjudicate on controversial issues as they emerge. Meta's independent oversight board, which hears appeals about the tech firm's content-moderation decisions, is one model. Rabobank, a Dutch lender, has a long-standing ethics committee to consider dilemmas, from whether its staff can trade cryptocurrencies to the use of client data. Politicians have parliaments. Firms may need an equivalent.



SCHUMPETER

Handset wars

The contest for global smartphone dominance gets interesting



TO CALL APPLE a corporate behemoth is to be uncharitable. It is much bigger than that. On many financial measures it makes more sense to compare the iPhone-maker not with other companies but with stockmarket indices—and not some obscure ones, either. Exclude financial firms and India's Nifty 50 sit on less cash. When Apple reports its annual results on October 31st analysts reckon its net profit will be just below what Germany's DAX blue chips raked in last year. On October 21st its market capitalisation nudged \$3.6trn, more than Hong Kong's Hang Seng.

Rivals in Apple's core smartphone market look puny next to the colossus of Cupertino. Samsung, a down-on-its-luck South Korean electronics conglomerate which sells more handsets globally than any other firm, is worth one-thirteenth as much, despite also boasting a huge semiconductor business. Xiaomi, a Chinese challenger whose devices outsold iPhones in August, generates less than 5% of Apple's gross profit. The average iPhone sells for \$900, compared with \$300 for a Samsung and half that for a Xiaomi. Google, a Silicon Valley neighbour with a tidy digital-ad operation and growing hardware ambitions, shifted \$5bn-worth of Pixel phones in 2023—which against a \$200bn screen of iPhone sales looks, well, like a pixel. Competition? What competition?

Going by Wall Street analysts' targets for Apple's share price, it seems nothing can stand in the way of its triumphant march towards \$4trn. Still, the iPhone's everlasting presence in the world's deepest pockets cannot be taken for granted. In many ways, its position appears less certain than it has been in years.

The iPhone looks the most unassailable in its home market. Nearly half of all Americans aged 12 or more own one. And many of those who do not would like to, given how powerful a marker of status the Apple logo has become. If you are under the age of 20, "you either have an iPhone or blame your parents," sums up Runar Bjorhovde of Canalys, a research firm.

A big wrinkle is that America's smartphone market is shrinking. Americans bought some 124m new handsets in 2023, according to Counterpoint, another research firm, down from 174m six years earlier. Now the strategy of grabbing a bigger slice of a shrinking American pie may have run its course. Apple's domestic

sales peaked in 2021, at 77m. Last year it shipped 70m.

Samsung has long craved a bite out of Apple's business. Its latest high-end phones were early to use Google's Gemini artificial intelligence (AI) to enhance search, photo-editing and other tasks. Gemini, whose co-creator just shared a Nobel prize, slots in neatly with the Android operating system, also designed by Google and made available to Samsung and others on an open-source basis. But not as neatly as it does in Google's own Pixels, which integrate Gemini not just with Android but also with its custom-made mobile chips. Apple has historically relied on a similar fusion of hardware and its operating system, iOS. But it has largely eschewed AI model-making and, in a departure from its habitual control-freakery, has chosen instead to rely on outside help for a critical technology. Apple Intelligence, an AI assistant which it will begin rolling out within days courtesy of OpenAI, creator of ChatGPT, thus risks offering a choppier user experience than Pixels do.

Apple faces even more trouble in China. Its second-largest market is likewise in secular decline, but much more fiercely competitive. No smartphone brand in China exceeds 18% of unit sales. Five local ones—Oppo, Vivo, Honor, Huawei and Xiaomi—plus Apple each chalk up at least 14%. On October 22nd the American firm's chief executive, Tim Cook, unexpectedly popped up in Beijing for the second time this year—possibly in an effort to shake up what Horace Dediu, a veteran Apple-watcher, calls the Chinese market's "steady state".

If so, Mr Cook had better get jiggling. According to a recent survey by Canalys, Chinese consumers are keener than Westerners on AI capabilities, which local rivals have been quick to offer. Apple, meanwhile, still has no launch date for a Chinese-language Apple Intelligence. The ultra-high-resolution cameras that Apple shuns are a selling point for homespun rivals in a selfie-obsessed nation. So is their Chineseness: patriotic consumption has helped Huawei, which America has tried to smother with sanctions since 2019, stage a remarkable comeback. It recently overtook Apple's shipments in China for the first time in three years. Chinese devices, which use a greater portion of cheap but high-quality Chinese components than iPhones do, offer better value for money, says Yang Wang of Counterpoint. At a time of sour consumer sentiment, that matters.

Beyond Pax Cupertino

In parts of the world where smartphone sales are still growing apace, Apple has a different problem—its pricey iPhones are almost nowhere to be seen. Transsion's cut-price devices reign supreme in Africa. In India, where Oppo, Vivo and Xiaomi together account for two-thirds of handsets sold, Apple's share languishes at 5%. It is possible that as their disposable incomes rise, phone-buyers in the global south will, like many Chinese before them, opt for higher-end offerings from their current suppliers, rather than hurrying to buy an iPhone.

Apple may console itself by arguing that these problems look trifling today. The world's 1.5bn iPhone-users represent the wealthiest one-fifth of humanity. Many happily lock themselves in the iOS walled orchard, where Apple sells them high-margin services from cloud storage to streaming and, soon, AI. Apple Intelligence may be a compromise worth making, given OpenAI's machine-learning chops. And Mr Cook is pushing into India, tomorrow's biggest prize. Still, Apple must not forget that dominant doesn't mean indomitable. ■

Finance & economics



Golden era

Ingot we trust

SINGAPORE

What the surging price of gold says about a dangerous world

LESS THAN A mile from Singapore's luxurious Changi Airport sits a rather less glamorous business park. Residents of the industrial estate include freight and logistics firms, as well as the back offices of several banks. One building is a little different, however. Behind a glossy onyx facade, layers of security and imposing steel doors, sits more than \$1bn in gold, silver and other treasures. "The Reserve" hosts dozens of private vaults, thousands of safe-deposit boxes and a cavernous storage room where precious metals sit on shelves rising three storeys above the ground.

After four years of retrofitting, the complex is almost complete. Its grand opening will come at an opportune moment: gold is in the midst of an extraordinary renaissance. Over the past year investors have piled into the metal, driving its price up by 38% to over \$2,700 per troy ounce—a record high (see chart 1 on next page). The buzz has reached unusual places: gold bars

have hit the shelves of Costco, an American retailer, and CU, a South Korean convenience-store chain, as the resurgence of inflation and fears of war drive consumer enthusiasm. Central bankers are also getting involved, as financial fragmentation increases appetite for an ancient asset. The world has entered a new golden age.

Professional investors are often scornful of precious metals, for good reason. Gold produces no income. Warren Buffett, one such investor, says that bets on gold

are made by those who fear other assets, and believe that the ranks of the fearful will expand. Among American institutional investors managing more than \$100m in assets, only a quarter report owning shares in gold exchange-traded funds (ETFs), according to Dirk Baur and Lai Hoang of the University of Western Australia. Just 1.5% of such firms' assets are in gold. All this helps explain why holdings in gold ETFs have failed to rise, even as the price of the metal has climbed (see chart 2).

The biggest fans of precious metals do not always help themselves. Goldbugs make outlandish predictions to justify their bets. A looming American debt default is a favourite; the supposed launch of a gold-backed currency by China and Russia is a new and even more fantastical forecast. But today there are more people convinced that things really are heading south than just a few years ago, and there are more rational reasons to believe so.

Family offices, the preferred investment vehicle for the privately wealthy, are growing fast—assets under management have risen from \$3.3trn in 2019 to \$5.5trn today—and many investors want to protect their wealth from dire outcomes. The value of a currency may fall both against others and in terms of its purchasing power; gold's relatively fixed supply and historical popularity encourages investors to believe ➤

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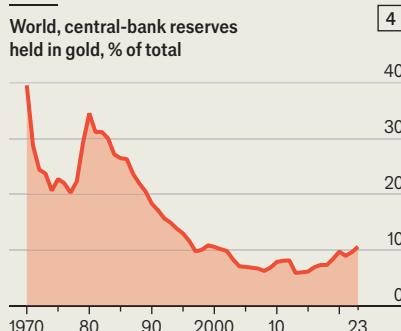
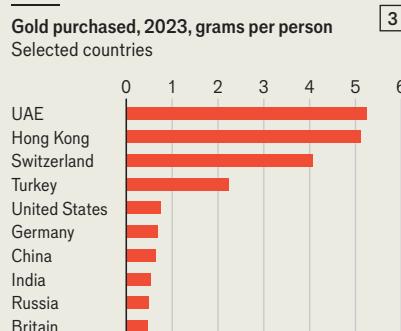
► it can protect them against surging prices and misjudged policies. According to Campden Wealth, a data provider, over two-thirds of family offices invest in gold. Lots of demand is Asian: China and India make up a fifth of the world's economic output, yet account for half of consumer purchases of physical gold. The average Indian is now about as keen on the metal as an American or German (see chart 3).

Moreover, Chinese and Indian fondness for gold is growing. In China a property crisis has prompted people with capital to look elsewhere. Purchases of gold bars and coins rose by 44% in the year to June against the previous 12 months. As India gets richer, more people are able to buy gold. One consequence is that gold-backed lending has taken off. Muthoot Finance, one such lender, has seen its share price almost triple in the past five years.

But it is another class of investors—perhaps the most paranoid and conservative of all—that has really driven the recent rally: reserve managers at central banks. Gold's share of central-bank reserves had declined for decades, from almost 40% in 1970 to just 6% in 2008. More recently, though, its share has steadily climbed, rising to 11% last year, the highest in more than 20 years (see chart 4).

Russia's invasion of Ukraine, and the subsequent freezing of its foreign-currency reserves, was a pivotal moment. It demonstrated to reserve managers that if their country was put under sanctions, American Treasuries and other supposedly safe assets denominated in Western currencies would be of no use. Since the start of 2022, monetary authorities in China, Turkey and India have bought 316, 198 and 95 tonnes of gold respectively, according to the World Gold Council, an industry group. Instead of investing in ETFs, central banks mostly accumulate physical gold, and make sure that they have it close to hand: just as financial assets face the possibility of seizure, so does gold held overseas. The British government, for instance, has refused to repatriate dozens of tonnes of gold to

Bullion brothers



Venezuela, since it refuses to recognise Nicolás Maduro as a legitimate leader.

Not all the central banks snapping up gold have difficult relations with the West. The Monetary Authority of Singapore has accumulated 75 tonnes since the start of 2022. The National Bank of Poland has raised its holdings by 167 tonnes over the same period as part of a strategy to keep 20% of reserves in gold. Adam Glapinski, the bank's president, refers to gold as a strategic hedge, as it has low correlations with other asset classes. "The price of gold," he said in 2021, "tends to be high precisely at times when the central bank might need its ammunition most." In September Laos opened up a flashy monument to the new golden era: a gold-pannelled bullion bank in its capital.

Central-bank demand is unlikely to fall soon. A survey of sovereign investors by Invesco Asset Management this year found that none of 51 central banks expect to cut their gold allocation in the next three years, and 37% expect to raise it. Among central bankers, some 56% believe that gold offers protection against the "weaponisation" of central-bank reserves, and 70% see it as a hedge against inflation.

Demand from central banks, which invest for security reasons rather than returns, also helps explain why gold's rela-

tionship with interest rates has broken down. The metal usually does poorly when real yields on safe government bonds are high, which means they provide a solid return even after inflation. Conversely, when returns to the safest bonds are low, gold tends to rally. In a low-yield environment, investors are more likely to consider an asset that produces no income. Since the end of 2021, however, the once-trusty correlation has collapsed. Gold has climbed in price even as yields on ten-year inflation-protected American Treasuries rose from minus 1% to around 1.8%. When real yields were last this high, gold was worth around \$1,000 per troy ounce, almost two-thirds less than its current price.

How useful will gold be in a crisis? Nicholas Mulder of Cornell University notes that it can be sold in small quantities in the politically neutral Gulf, in exchange for a variety of currencies. Although Russia was cut off from Western gold markets by the restrictions deployed against the government, and some firms have been punished for dealing with Russian miners, a suspicious surge in gold imports by Switzerland from the United Arab Emirates in the months after the invasion of Ukraine suggests that Moscow was managing to market its gold. Preventing the sale of an asset that can be smuggled around the world in small quantities, and melted down, is an all but impossible task.

Ultra-rich investors may buy more gold, too. But for gold purveyors the real target is institutional investors: bringing in just a sliver of the tens of trillions of dollars they manage would be a huge boon. Such purveyors may be in luck. Goldman Sachs, a bank, notes that demand for gold ETFs tends to rise only as American interest rates fall, not before. Typically, a rate cut of a quarter of a percentage point increases gold ETF holdings by 60 tonnes—currently \$5bn in value—over the subsequent six months. Mr Buffett's criticism that gold requires fear, and a belief that the fear will spread, is true. At the moment, though, there are a lot of fearful investors. ■

All that glitters



America v Europe

Hot and cold

The West faces new inflation fears

CENTRAL BANKERS have avoided celebrations. They know full well that consumers and firms, stung by the highest inflation since the 1970s, would not appreciate them. In private, though, many are elated. The sharpest rise in borrowing costs in decades, dubbed “the great tightening” by the IMF, appears to have worked better than anyone expected. Global inflation has retreated to more comfortable levels. Better still, this has been achieved without a sharp rise in joblessness or a recession.

But as inflation cools, new dilemmas emerge. What is striking is how different they are on either side of the Atlantic. European policymakers, having dealt with the novel phenomenon of high inflation, now worry they are returning to a more familiar problem: inflation that is too low, as the continent’s economic growth looks increasingly frail. At the same time, American central bankers are discovering that although they have made a lot of progress, inflation is still higher than they desire. The country’s economy is booming.

Until recently, prices in the two regions had moved in lockstep. Recent analysis by the IMF makes clear the extraordinary nature of the inflationary wave. In the view of the IMF, it came in stages. First, during covid-19 lockdowns, demand for goods surged as supply chains strained. Then, as economies re-opened, pent-up demand for services raised price pressures. Russia’s invasion of Ukraine exacerbated problems. By mid-2022 global inflation was triple its pre-pandemic average, and many of its causes applied to countries everywhere.

Beneath the surface, however, there were differences. American inflation was at first driven by the same shocks as elsewhere, but from late 2021 a tight labour market contributed. The IMF’s research suggests a lack of slack in America’s job market has added two to three percentage points to annual inflation rates. In Europe, which was more exposed to high energy prices after Russia’s invasion of Ukraine, the labour market has been looser. The result—high inflation—was the same, but the two regions got there differently.

Now that supply chains are pretty much back to normal, these differences are becoming apparent. They can be seen in financial markets. The “five-year, five-year forward” inflation expectation is a favoured measure of central bankers. Derived from interest-rate futures contracts,

it shows the inflation rate expected by investors for the five years starting in five years’ time. By the middle of last year, European and American rates had converged. Against a backdrop of high inflation, market participants expected annual price rises to settle at 2.5% on both sides of the Atlantic. Over the past year rates have since diverged, with American medium-term inflation now expected to be higher than European inflation (see chart).

American consumer-price inflation fell to 2.4% in September, coming in above projections of a drop to 2.3%. On October 14th Christopher Waller, a member of the Federal Reserve’s rate-setting committee, described the data as “disappointing”. Investors have begun to scale back their expectations of how quickly the Fed will cut. By contrast, rate-setters at the European Central Bank are more alarmed by the lack of inflation than its persistence. On October 17th the ECB cut rates for the third time this year; markets now expect a further three reductions by the end of March. At their previous meeting, minutes noted “the risk of undershooting the target [of 2%]”. Indeed, the latest reading suggests that today euro-zone inflation is at 1.7%.

Too little, not too much, inflation is a problem with which the ECB is familiar. Inflation was below 2% for most of the decade before 2021. With European growth weakening, Germany in recession and price pressures appearing newly absent, some economists now fear that the ECB mistook a global inflationary surge for a fundamental change in European price dynamics, and raised rates by too much as result. The most recent survey of professional economists by the ECB points to medium-term euro-zone growth of just 1.3% a year, the lowest since the survey began.

Hence the divergence. In America a still-tight jobs market is continuing to make reducing inflation difficult; in Europe the old picture of sluggish growth and weak price pressures is once more asserting itself. The Atlantic is 5,000km and 0.7 percentage points wide. ■



Status economics

Hunger games

NEW YORK

Mass-market weight-loss drugs will transform what it means to be thin

ARRIVING IN STEPFORD, Connecticut, Joanna—protagonist of “The Stepford Wives”, a horror novel—is dragged to a “workout class” at the Simply Stepford Day Spa by a neighbour. The duo are met by 15 identikit women. Their hair, heights and skin colours differ a little. Their waist sizes do not. Each can be no bigger than a British size 8, their waists nipped in by belts and accentuated by 1950s skirts.

As some describe it, this is where the world is now heading owing to the discovery of weight-loss drugs. In three short years since America’s Federal Drug Administration approved these medications their use has exploded. Novo Nordisk, maker of Ozempic and Wegovy, has become Europe’s most valuable company. Eli Lilly, which manufactures Mounjaro, was one of America’s best performers last year. And celebrities including Oprah Winfrey and Kelly Clarkson have emerged, almost overnight, slimmed down and svelte.

Morgan Stanley, a bank, estimates that as many as 9% of Americans will take brand-name versions of weight-loss drugs by 2035. That is just the tip of the iceberg. Demand for versions of these medications is only growing. On the subway in New York, Ro, a health-care startup, advises riders to “skip the shortages” and get access to cheaper versions for as little as \$99 a month. Instagram is plastered with advertisements from firms such as hers and eden, which target young people by using lower-case brand names and soothing colour schemes. In September Kourtney Kardashian, a socialite, began selling a capsule through lemme, her supplement firm, which also flogs vaginal probiotic gummies and anti-cellulite pills.

The most important consequence of the drugs’ discovery is well understood: they will improve the health and lives of most of those with access to them. But the understandable rejoicing at the health benefits has been tempered, in some quarters, by a fear that the drugs will encourage the worst of society’s aesthetic impulses: that they will bring about an even fiercer expectation that everyone should conform to contemporary beauty standards, a trend which may come with its own health burden in the form of mental-health conditions and disordered eating.

People clamour to get on weight-loss drugs for aesthetic reasons, as well as owing to health concerns. This is not mere ➤



► vanity. Evidence of discrimination against fat people is widespread. In Sweden and Mexico, where including a photograph with a CV is common, researchers manipulated images to make identical fictitious job applicants seem fatter or obese. They found that they were significantly less likely to be offered interviews. Petter Lundborg of Lund University and John Cawley of Cornell University have compared the wages of thin and fat women, adjusted for education, experience and other factors, in Europe and America respectively, and found that women with obese BMIs earn around 10% less than their peers. The implication of this is stark: for an obese woman earning, say, \$80,000 the impact of getting on Ozempic could be more economically consequential than any eventual savings she might make on her health bills.

Will weight-loss drugs make discrimination worse? Tressie McMillan Cottom, a *New York Times* columnist, has argued against the notion that Ozempic will cure “the moral crisis of fat bodies that refuse to get and stay thin”. The implicit promise of the drug is that “it can fix what our culture has broken.” (Her preferred solution: rather than solving obesity with drugs, society should simply stop stigmatising fat people.) “Ozempic has won, body positivity has lost. And I want no part of it,” lamented Rachel Pick, a writer, in the *Guardian*.

Such concerns are fuelled by the fact that the “body positive” movement, which pushes back on the idea that everyone should strive to meet the same body ideal, had been gaining ground. Retailers offer more sizes. It has become common to see clothing displayed on bigger women when shopping online. John Galliano of Maison Margiela, a luxury fashion house, used models of all sizes at a show in Paris.

It is natural to think that, in the short term, prejudice against fat people might be

reinforced by weight-loss drugs. So far they have mostly been available to the rich, notes Mr Cawley: “If being able to lose weight is something that is very correlated with a person’s income there is a risk that having obesity could be seen as signalling being lower-income.” But mass adoption is under way—and that will change things.

The signal and the scale

Early man first invented tools. Then he invented jewellery. Archeologists have discovered strings of shells, believed to have been necklaces or earrings, that are 150,000 years old—more ancient than the development of language. The urge to use your appearance to signal ways in which you are distinct from others is one of humanity’s oldest impulses.

People have sent different signals over time and across cultures. Sometimes the impulse for change is the discovery of a newer, shinier material: snail shells were replaced with gold beads and later diamonds. The high-status beauties of the Renaissance were the voluptuous ladies painted by Rubens. Then the industrial revolution made food more affordable for the masses and a leaner look became more desirable. Had Malthus—who in 1798 predicted populations would soon be imperilled by food constraints—been right, fatness would surely still be in vogue.

Weight-loss drugs will probably be responsible for the next big change, and it will not be the creation of Stepford dystopia. Thinness is desirable now because it sends a signal: that one has the time to work out, the money to afford healthy foods and the education to know what diet to follow. In low-income countries such as Malawi and Uganda, where food is scarce for poorer people, obesity is more desirable, as it was in the pre-industrial West. A study by Elisa Macchi of Brown University,

carried out in these countries, manipulated images attached to loan applications, and found that applicants who appeared obese had better access to credit.

The economics of signalling was best articulated by Michael Spence, a Nobel prizewinner. In 1973 Mr Spence developed a simple model of how the labour market works. There are two kinds of job candidates: good, high-productivity ones and bad, lazy ones. Potential employers do not know which is which. Applicants can acquire a degree, but this is hard; bad candidates are unlikely to be able to do it. It is also costly for the good ones to acquire a degree; it takes time and money. In this model, even if there are no true benefits to education, good candidates will acquire degrees as a signalling device, to let employers know they are strong candidates.

Before Mr Spence’s paper, the thinking was that employers valued education because it improved productivity. Mr Spence showed that there might be more to it. Would you rather have gone to Harvard—to have studied, taken classes, made connections—and never be able to reveal it? Or would you prefer to have a piece of paper that says you went? A similar question gets to the truth about body types. Would you rather look slender and in shape? Or would you want to actually be healthy?

With their appearance, people are sending signals that have value in the job and marriage markets. But what if someone did not have to be rich or disciplined to be thin? A signal is useful only if it sends the right message. In Mr Spence’s model, the signal works only if a university education is difficult to attain and acquired only by strong candidates.

Consider another example to see how fast the value of a signal can be lost. When email was new it was clear that, if one addressed you by name in the subject line or the text, a real person was trying to catch your attention. They had, after all, crafted a message just for you. Then it became possible for senders to namecheck a long list of people with ease. For a time, email users were tricked: they clicked, expecting an important message, and instead received a generic ad. Yet they soon learned.

In gossip corners of the internet a transformation in the perception of thin people is already under way. Posters on the “NYC influencer snark” subreddit, a forum dedicated to needling the poor taste of D-List TikTok stars and Instagram influencers, accuse any- and everyone of being on the jab. Often this is idle chatter, but sometimes they provide evidence (or “receipts”). Two months ago “Nycundercover”, a habitual poster, published a screenshot of Serena Kerrigan, who has 217,000 Instagram followers, standing in front of her fridge. “Not that any proof was needed, but she isn’t even bothering to hide her Ozempic ➤

use now," they wrote, above an image annotated with a red arrow, pointing to the tell-tale cap of a GLP-1 pen.

As the medication must be kept cold to be effective, kitchen pictures and bruises on the abdomen (the typical injection site) have become the internet sleuths' way of figuring out who is on the drugs. Perhaps unsurprisingly, these posters are not pointing this out to be nice or to flatter users of the drugs for their new figures. It is a gotcha moment. In the jargon of econom-

ics, they are revealing that the signal the person is sending with their body is a false one. They did not get thin the hard way.

Ozempic is not going to fix society and rid it of status games. Signalling that you are unique or better than others is hard-wired into human nature. However, the idea that it might become easy to be thin suggests that thinness will lose some of its grip on the popular psyche. Something else will doubtless replace it. Perhaps it will be a fixation on muscles, which are

more difficult to feign. Or perhaps the truly elite will be those who signal that they are above it all, anyway, doing so with softer, middling body types.

In many ways, this could be a blessing. The pursuit of thinness, especially for young girls, has come at a great cost. Contrary to what many seem to think, by making it easy for almost anyone to be thin, Ozempic might not only fix America's weight problems—it might also fix America's problem with weight. ■

BUTTONWOOD

Reasons to celebrate

Investors should not fear a stockmarket crash

SHAREHOLDERS ARE enjoying one of their best runs in history. Since a trough last October the S&P 500 index of large American firms has risen by more than 40%; peers in Europe, Japan and Canada have all gone up by at least half as much. The fears of last year, that stubborn inflation would prevent central banks from cutting interest rates, keeping bond yields high and dragging share prices down, have all but vanished. In fact, many of the world's monetary guardians have been slashing borrowing costs just as corporate profits have climbed and animal spirits have surged. The result is that plenty of stockmarkets are now hovering near all-time highs.

Accordingly, investors are engaged in the activity that is traditional for such moments: not sending champagne corks flying, but obsessing about whether the good times are already over. They are hardly short of reasons to fret. Relative to underlying profits, American stocks have rarely been pricier, and then only before big slumps. Unnervingly, more than a third of the S&P 500's market value is concentrated in just ten firms. Spurred on by rich-world governments' insatiable appetite for borrowing, and especially the prospect of Donald Trump entering the White House and sending America's deficit even higher, bond yields are again rising quickly. Volatility is up, too, and gold—typically seen as a hedge against chaos—has been on a rally for the ages. A crash would need a catalyst. But a lot of other potential causes are already in place.

Here, then, is a reason to be cheerful should you end up watching a big chunk of your portfolio go up in smoke. Naturally, this would be unpleasant. Yet the nicest result of the past few decades' academic research on finance is that, at

least in the long run, it matters less than you might think. The reason is that stocks are more like bonds than most investors realise. As prices (or, more precisely, valuations) fall, expected returns rise.

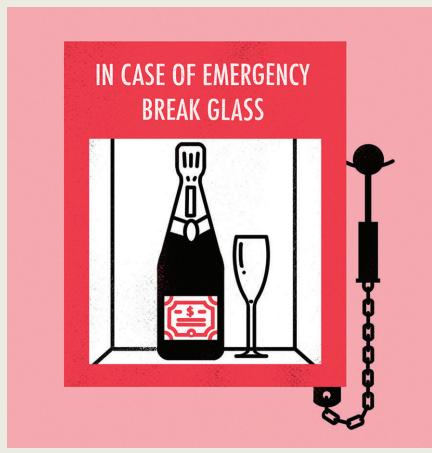
For bonds, this is easy to see. Just consider what happened in 2022. Interest rates rose by several percentage points, dragging up bond yields with them. To align existing bonds, many of which paid next to no interest, with prevailing yields, prices were hammered. After all, investors would buy bonds only if they were sufficiently discounted from face value to make up for their low coupons. Viewed this way, American Treasuries had their worst year in over a century. Unless they sold after the crash, though, this would not have altered their owners' returns by one jot. If they held their Treasuries to maturity, they would still receive every coupon they had been promised, followed by the repayment of principal.

It is not obvious that stocks behave similarly—for one thing, there is no repayment of principal to make up for a drop in prices. Even so, they do, concluded a

panoramic survey of asset-price research published in 2011 by John Cochrane, then at the University of Chicago. The ratio of profits to share prices, once thought to forecast future earnings, in fact does not. What it does predict, much like the yield on a bond, is the shareholder's expected return. Unlike a bond yield, this is not a sure thing: realised returns might fall on either side of the forecast. Thankfully, as is the case with bonds, investors are compensated for falling share prices with higher expected returns.

Armed with this information, one class of investor should welcome a crash. Sky-high stock valuations have badly eroded the returns youngish savers can expect to earn as they age. In a recent note, analysts at Goldman Sachs, a bank, put this into grim numbers. Based on valuations and factors such as market concentration and interest rates, they forecast annualised nominal returns of just 3% for the S&P 500 over the coming decade, compared with a historical average of 11%. A painful crash might at least reset the dial and give youngsters a better chance of retiring at some point.

The broader implication is that anyone holding stocks for the long run—in a pension pot, say—is taking less risk than they might think. Investors often imagine year-by-year returns as like a series of independent coin tosses, in which a run of poor luck implies nothing at all about the odds of the next flip. In this world a crash is simply terrible news. Reality is more pleasant. Investing in stocks is like flipping the coin of the gambler's fallacy: a long series of tails really does make it more likely that you will come up heads next time. Cold comfort, perhaps, when prices are plunging and some of your savings have disappeared. But a good reason to buy at the bottom.





Economic war

Bombing banks

ISTANBUL

Hizbullah's sprawling financial empire looks newly vulnerable

RESIDENTS OF BEIRUT are, by now, used to warnings from the Israel Defence Forces ahead of bombing runs. Typically, these instruct locals to stay away from a tower block suspected of harbouring fighters, or perhaps a school said to double as a weapons cache. The warning on October 20th was a little different. It told people to steer clear of branches of al-Qard al-Hassan (AQAH), a bank.

Israel targeted the bank because it is linked to Hizbullah. Once a mere militia, the group has enormous sway in Lebanon, where it runs a sprawling welfare system, in part funded through business interests at home and abroad. It draws power from a reputation as the Middle East's most professional non-state outfit and from the popularity of its services, which it provides to Lebanon's Shia sect even as it wages war against its neighbour. Israel hopes, therefore, that destroying AQAH branches will help undermine this strength and disrupt the financial flows which keep Hizbullah's soldiers armed, fed and paid.

Lebanon's economy has been a disaster since 2019, when a shortage of dollars precipitated a financial crisis. A huge explosion at Beirut's port in 2020, in which more than 200 people died, made things worse. The government resigned; no subsequent caretaker one has lasted much longer than a year. At official exchange rates, the Lebanese pound has lost 98% of its value against the dollar since the financial crisis.

Last year inflation reached a high of 221% and debt hit 285% of GDP. IMF officials say that there is no one with whom to even begin discussing a bail-out.

This misery has only increased reliance on Hizbullah's services, most of which are funded through AQAH. To dodge Western sanctions, the bank mostly exists outside mainstream finance. It does not hold accounts with Lebanon's central bank and carries out few transactions with the country's other financial institutions. Although America, Europe and Israel have put AQAH under strict sanctions, and America has placed Adel Mohamad Mansour, the bank's boss, on a blacklist, Israeli officials believe these moves have had little effect.

Where does the money Hizbullah holds in AQAH accounts come from? Getting cash into Lebanon is a labyrinthine operation, and often involves Iran. According to several Western officials, Iran's ambassador brings cash on a private jet each time he arrives in Beirut. Funds dribble in through a network of small currency exchanges that Iran uses to take payments for oil. Hizbullah officials are also employed as middlemen for Iran's oil trade. According to America's Treasury, Muhammad Qasim al-Bazzal, one of the group's financiers, each year trades Iranian oil worth hundreds of millions of dollars.

Iran provides \$700m a year in direct support. Less than \$200m of this makes it to Hizbullah's civilian administration—far

from enough to fund its varied social programmes. The rest is siloed in the budget of the military wing, which is kept away from the organisation's bureaucrats, so as to prevent them from being subject to the extremely strict American sanctions that the military arm already faces.

Such distance enables Hizbullah's bureaucracy to solicit funding via a network of humanitarian charities, into which money pours from Europe and North America. Sanctioneers spend a lot of time trying to work out whether new charities are fronts for Hizbullah's financiers, or genuine. The Martyrs Foundation distributes handouts to families of Hizbullah fighters; America placed it under sanctions in 2021.

Other sources of finance are unambiguously illicit. The Treasury reckons that Nazeem Ahmad, just one dubious financier, has overseen at least \$1bn in sales of goods, including art and diamonds, in the past decade. According to American officials, many of the most dodgy flows arrive from West Africa and Latin America. The Ivory Coast is a hotspot for the gem trade; Colombia plays a similar role for drugs. Different regions send cash in different ways. West Africa favours jets laden with cash, whereas South-East Asia tends to opt for disguised remittance payments.

Lebanon's state is a final source of funding. Hizbullah's allies control ministries and, though the government has been in debt default since 2020, it has not stopped spending. The state is due to disburse 20% more than it takes in via taxes this year, with money cobbled together from monetary financing and international aid. Western officials believe contracts go to firms that employ off-duty Hizbullah fighters, among other forms of patronage.

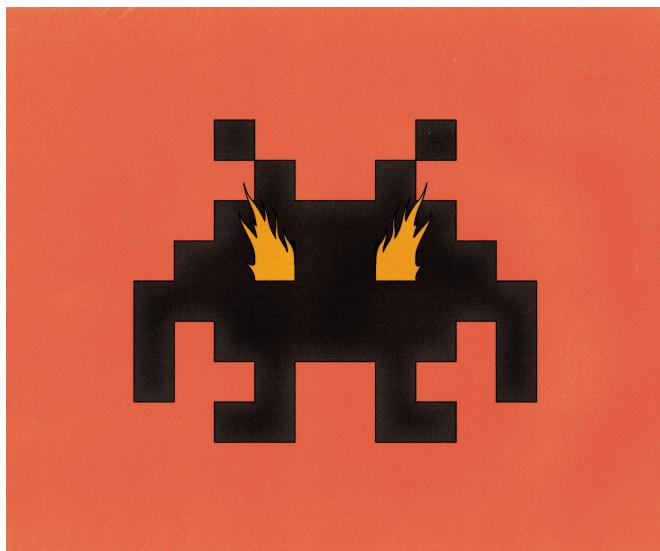
Even before Israel bombed AQAH branches, war was putting this system under strain. Of the million or so Lebanese people displaced in the past month, some 150,000 are believed to be in Hizbullah-run areas. Payments to injured soldiers and the families of those killed are growing. Experienced financial tsars have been killed, prompting a reshuffle and spooking bankers abroad, who are nervous of being linked to Hizbullah's military arm. Donors want to fund orphanages, not explosives.

Iran is unlikely to come to the rescue. Despite its military support for Hizbullah, the country is itself mired in economic difficulties and will not have an appetite to bail out its ally's welfarism. America is seeking support for a plan to force Hizbullah out of Lebanon's government, which would only add to the group's problems. Its soldiers are now said to be complaining about not being paid on time. And Israel's targeting of AQAH could throw everything from handouts to Lebanon's financial plumbing into disarray. As a Western sanctions official puts it: "Job done, for us." ■

FREE EXCHANGE

Confessions of a spiritual opium-eater

How bad are video games for your grades and wages? Chinese students provide an answer



ARRIVING ON THE magical continent of Teyvat, you and your twin are attacked and separated by an unwelcoming god. When you regain consciousness, you set off in search of your lost sibling, exploring seven beguiling worlds (one of which resembles a Chinese national park). Along the way you team up with other heroes, blessed with elemental powers. One can cross lakes by freezing the water beneath his feet. Another can float on air currents of his own creation. Together, your travelling party must fight monsters, solve puzzles and plunder treasure chests.

Released in September 2020 by a Chinese developer, the online game "Genshin Impact" became a big hit. A year after its release, it was attracting more than 13m monthly users in China and more than 50m worldwide. The success of this home-grown creation and others like it was not, however, a source of great pride for China's government. It worries that gaming addiction poses a threat to teenagers. In 2021 a state-run newspaper complained that online games were contributing to myopia, bad grades and alienation. They are often described as "spiritual opium", it said.

In 2019 China's government limited children under 18 to an hour and a half of online game-time a day during the school week. In 2021 it went further, permitting only three hours a week. The limits were part of a crackdown on consumer-tech firms that horrified entrepreneurs and investors. Still, parents around the world will be keen to know whether they did any good.

Those curious will find some clues in a remarkable new study by Panle Jia Barwick and Chao Fu of the University of Wisconsin-Madison, as well as Siyu Chen of Jinan University and Teng Li of Sun Yat-Sen University. It sheds light on the impact of gaming (and other mobile-phone habits) on the grades, well-being and job-market success of Chinese students. To tease out such effects, the researchers make use of the government's imposition of time limits and the arrival of Genshin Impact. They show that mobile-phone apps are contagious: students will use their phone more if roommates do. The study also demonstrates some digital harm: grades suffer along with a graduate's initial job offers.

What sets the study apart is the data. The authors have access to the university records of thousands of undergraduates who en-

rolled at a mid-tier university in an unnamed southern province from 2018 to 2020. More remarkable, they also have access to mobile-phone records—calls made, apps used, locations visited—for millions of subscribers. Because customers provide their national-identity number when they register for a phone, the researchers can match the university records of 6,430 students to their phone data. By looking at their calls, they can map out their friendship networks, even before they arrived at university. And by consulting course schedules and class locations, they are also able to chart where students were meant to be each hour of the week.

The data provide a detailed portrait of undergraduate life. Students spend 93 hours a month on mobile-phone apps, including 12 hours on games. But these averages mask wide variation. A third of the students use their phones at least 210 hours a month—equivalent to 7 hours a day—and a third spend 30 hours a month on games. After the arrival of Genshin Impact, the average student arrived at their study hall 18 minutes later and returned to the dorm 25 minutes earlier, according to the data from their phones. Those treasure chests were not going to open themselves.

Gaming can be a way to retreat from the people around you. Yet the scholars show that app use is social. Extroverted students use games more than their less outgoing peers. Students who report more game-time also report better relationships with roommates. Phone habits spread. A student's use of apps is correlated with their roommates' use, and this correlation seems to reflect causation. How else to explain why a student's use of apps in college correlates with even their roommates' pre-college use?

One difficulty in capturing the effects of phone habits is reverse causality: students doing badly at school may seek escapist comfort. In addition, an independent source of stress, such as homesickness or loneliness, might simultaneously hurt a student's grades and glue them to their phone, without the phone itself harming their grades. The researchers therefore exploit two factors that affected phone use but not grades. One was the appearance of Genshin Impact. The other was the government's curbs on gaming. These limits affected only a few of the students directly: 92% of them were already 18 when the rules began. But the regulation did affect their underage friends. And since gaming is contagious, a reduction in their friends' usage curtailed their own.

Sacrifice to the digital gods

The findings are best conveyed by imagining two nearly identical students, one of whom spends twice as much time gaming as the other. The gamer's grades, on a scale from 0 to 100, would be 0.8 points lower. Because averages are clustered in Chinese universities, that would reduce their class ranking by 10 percentile points. Now imagine two identical students with contrasting roommates: one set spend twice as much time on gaming apps as the other set. That would lower a student's grade average by 0.4 points, partly because it would encourage the student to spend a bit more time gaming as well, reducing their rank by 5 percentile points.

What if gaming limits were extended to undergraduates? The authors estimate it would cut a student's monthly game time from 12 hours to under eight, partly because friends and roommates would also play less. The restraint would raise their grades and lift their wages after graduation by 0.9% or 48 yuan (\$6.80) a month. Games like Genshin Impact, which are free to play, exact a real cost. For some spiritual opium-eaters, intent on discovering other kinds of treasure, even lost wages may seem a small sacrifice. ■

Science & technology



Forensics

The faintest trace

Forensic scientists are borrowing techniques from the study of ancient DNA

E SKE WILLERSLEV was an unusual witness for a murder trial. An expert in ancient DNA (aDNA) at the University of Copenhagen, his day job involved studying the lives of prehistoric peoples and extinct megafauna. And yet over the summer of 2024 he was asked to persuade a jury that he had something to offer in another field altogether: crime-scene investigation.

The crime in question was the murder of Emilie Meng, a 17-year-old Danish girl who went missing in July 2016 and whose strangled body was found in a lake on Christmas Eve that same year. The police had hoped that Meng's trousers, found metres from her body, would yield valuable DNA clues for them to follow up. But after being exposed to the elements for six months, any traces of useful material left on the clothes would be seriously damaged. Desperate for answers, the police turned to Dr Willerslev.

The Meng case is one of the first in the

world to make use of techniques honed in the sequencing and analysis of time-ravaged scraps of genetic material. It may not be the last. In Denmark standard forensic methods fail to retrieve useful genetic information from 20% to 30% of the items in police custody that may or may not contain DNA. In other, less forensically developed, countries, the figure is likely to be higher, potentially contributing to unsolved cases or even wrongful convictions. The forensics community is rightly conservative when it comes to using new technology that could help, says Dr Willerslev. "But on the other hand, I also think it's important

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that you take up these new inventions and start testing [them]." For aDNA techniques, that moment appears to have arrived.

All DNA is made up of four distinct molecules known as bases, strung together in combinations to form long polymer chains. Pairs of chains are linked together by bonds that form between their bases, giving DNA its famous double-helix structure. At certain specific sites along the chains short strings of bases will repeat, often many times in a row, in what are called short tandem repeats (STRs).

Different people will have a different number of STRs at each site, which allows DNA samples to be matched to their owner simply by measuring the number of repeats. If two samples are identical across several sites (a full STR profile usually consists of between 16 and 25 sites), the chances they come from two different people is vanishingly small. The technique is quick and cheap, and massive STR databases of criminals already exist. But it has one big limitation: scientists need stretches of DNA no shorter than 100-400 base-pairs long to be sure of capturing any single STR in full. That is not always possible, as DNA carries on breaking down over time or when exposed to the elements. In such cases, police are left with little to go on.

Researchers working with aDNA cannot afford to be so easily discouraged. In ➤

► ancient human and animal remains, DNA fragments can easily be as short as 35 base pairs. To extract information from these fragments, researchers must identify or "sequence" every single base they can lay their hands on. This involves carefully dissolving the DNA into a solution and separating it from other gunk in the sample, which may include DNA of hitchhiking microbes. After some more preparation, the DNA is then fed to a next-generation sequencing machine that can read millions of fragments in parallel.

Puzzle-solving

Because almost all human DNA is conserved between individuals, software can use a reference genome to put each little fragment in its correct place. The result is long strings of DNA where each pair of bases is identified. Sites where individual pairs of bases differ between individuals are known as single nucleotide polymorphisms (SNPs). Scientists often find tens of thousands of such sites.

Dr Willerslev had been able to obtain SNPs from Meng's trousers. Then came the task of trying to identify whom they could have come from. In 2023 a man called Philip Patrick Westh was arrested in connection with a kidnapping case in the same area; because of similarities between the cases, the police believed that he had killed Meng too (Mr Westh denies most of the accusations related to the kidnapping case and pleaded not guilty to the charge of killing Meng). To assess the probability that the genetic material from Meng's trousers had come from Mr Westh, Dr Willerslev made use of a DNA database of ordinary, healthy Danes. If the SNPs found on the trousers were identical to those in Mr Westh's DNA, went the logic, and enough of them were sufficiently rare variants, the probability that they did indeed come from Mr Westh went up. Dr Willerslev testified that this particular pattern of SNP variants would be at least one million times more likely to turn up if the sample included DNA from Mr Westh, or a close relative, than if it did not.

Modern forensic labs do some SNP analysis already. For instance, says Bo Thisted Simonsen from the Danish state forensic genetics lab at the University of Copenhagen, SNP data is sometimes used to obtain information about a perpetrator's height, ethnicity and eye colour. In certain cases, police can also upload a suspected perpetrator's SNP profile to a commercial ancestry database to look for matches. As many home kits allow people to test themselves for certain SNPs, police can often turn up people related to the perpetrator. The American authorities did just this to catch the Golden State Killer in 2018, using DNA collected from an old rape kit.

But identifying a suspect from SNPs is

another matter. Degraded samples can be extremely complex to analyse, says Dr Simonsen, in particular if material from several people has been mixed together. There are no standardised forensic protocols for separating out those signals, nor for how to confidently calculate the probability that the DNA belongs to a suspect. That matters because the stakes are somewhat higher in a criminal case than in the study of mammoths and dodos. But, says Dr Simonsen, "We expect that nut to be cracked." He hopes to learn from Dr Willerslev's team and develop new forensic tools. The work has already started: in September, researchers from Aalborg University and the University of Copenhagen, with whom he collaborates, published a paper describing an approach for doing identification calculations based on SNPs.

He is not the only one to see potential. An American company called Astrea Forensics has recently spun out from the palaeogenomics group at the University of California in Santa Cruz, to offer aDNA expertise to law enforcement. Their specialty is the nuclear DNA found within hair, which has long been considered too fragmented and scarce to be of any use.

Next-generation forensics

One of the cases that spurred the scientists to start the company involved the rape and murder of a nine-year-old girl called Daralyn Johnson in 1982. Hair found on her underwear was initially linked to a man named Charles Fain. Seventeen years after receiving a death sentence, Mr Fain was exonerated: mitochondrial DNA—which is easier to obtain than nuclear DNA but can only rule people out—found in the hair proved that it did not belong to him. But it was not until the hair's fragmented nuclear DNA underwent next-generation sequencing for SNPs that a new suspect was found. On June 26th a man called David Dalrymple, who was already serving a sentence of 20 years to life for kidnapping and sex crimes, was found guilty of Johnson's murder. He has appealed against the verdict and maintains his innocence.

Among prosecutors and scientists looking at aDNA-style analysis, "This is the next big phase of forensic DNA testing," says Theodore Lagerwall of Canyon County in Idaho, who prosecuted the Johnson case. Kelly Harkins Kincaid, the co-founder of Astrea Forensics, calls the case "historic"; to her knowledge, it is the first time that these methods have identified a suspect in America. Two days after Mr Dalrymple's conviction, Mr Westh was found guilty of the murder of Emilie Meng; he immediately appealed. The case does not rest entirely on aDNA analysis; conventional forensic techniques also found Meng's DNA on a roll of tape at his house. The courts have yet to reach a conclusion. ■

Entomology

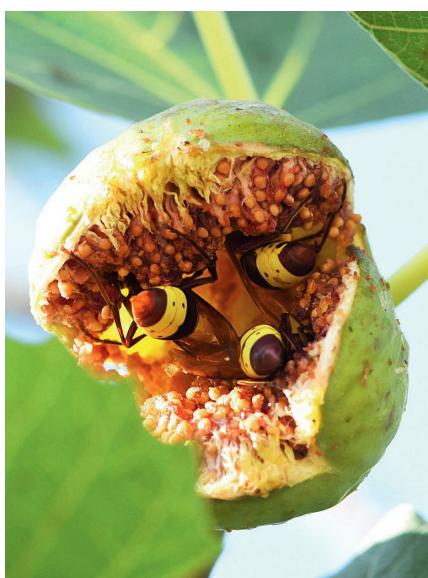
Buzzing without being buzzed

Oriental hornets have a remarkable tolerance for alcohol

LIKE PEOPLE, many animals enjoy having a drink every now and again. Rather than sip brandy or Chablis, though, they feed on fermented fruit, but the effects are the same. Though alcohol is rich in calories, it muddles minds and shortens lifespans. It presents a serious risk to animals and most avoid drinking to excess.

Then there is the Oriental hornet, a bug native to northern Africa and south-western Asia, which loves fermented fruits and is so attracted to human-made alcoholic beverages that it will aggressively fight for them with a sting that is akin to being jabbed with a searing hot tack. Everyone has assumed that the rules for the hornet were the same as those for other species—that the alcohol poses them problems. But new research reveals that the rules do not apply. The bugs are immune to becoming drunk and do not have their lives shortened by booze, either.

The problems from alcohol come from the yeast that makes it. The fungus guards the fruits, vegetables and grains that it grows on by producing a toxin, ethanol, to ward off competitors. Very few animals can endure consumption of food rich in ethanol. To date, the champions of this particular contest have been tree shrews and fruit flies, which can periodically ingest concentrations of up to 3.8% and 4% ethanol respectively without suffering ill effects (humans can tolerate far more: ►



D'you come here often?

wine is typically 10% alcohol and spirits are around 40%). With this in mind, Sofia Bouchebti at Ben-Gurion University of the Negev and Eran Levin at Tel Aviv University found themselves perplexed by Oriental hornet oenophilia.

Since the existing literature on the predilection of Oriental hornets for strong human drinks was sparse, Dr Bouchebti and Dr Levin decided to explore how much ethanol the bugs could cope with. They put small groups of the insects into testing boxes where they were fed sugar water for seven days that was laced with 0%, 1%, 10%, 20%, 60% or 80% ethanol. The hornets fed the 80% solution were, in effect, a negative control and were not supposed to survive. All the same, they did.

Stunned, the researchers ran experiments to monitor longevity and nest-building behaviour. They report in *Proceedings of the National Academy of Sciences* this week that even as the hornets gorged on the 80% ethanol solution they maintained normal lifespans, built ordinary nests and behaved as they usually did. Unlike all other known animals, they were unphased by chronic consumption of exceedingly high levels of ethanol. Follow-up work with chemically labelled ethanol that was fed to the insects revealed that the key to their extraordinary abilities is the presence of multiple copies of the gene for alcohol dehydrogenase, which supports the production of enzymes that break ethanol down into components that can be metabolised.

As to why Oriental hornets have multiple copies of this pivotal gene, Dr Bouchebti speculates that it has to do with a close relationship that the hornet has with the fungus *Saccharomyces cerevisiae*, also known as brewer's yeast. During the winter, the queens of many social wasps, like the Oriental hornet, are known to harbour the yeast on their bodies along with other microbes. Then, when spring arrives, they transfer it to their newly hatched workers who then spread it to the fruits they come into contact with. It would seem that evolution has driven hornets carrying extra copies of the alcohol dehydrogenase gene to be selected for over time, so they can continue to make use of these food sources even after they are rendered utterly inedible to other species by the ethanol released by the yeast.

In essence, the relationship between the yeast and the hornets seems to be symbiotic; the hornets carry the yeast to things it can feed on and the yeast then preserves these food sources for these hornets, and only them, to feast upon. Whether any other species of social wasp has such a remarkable tolerance for alcohol remains to be determined; but Dr Bouchebti and Dr Levin think it is likely, given the fondness that so many of them seem to have for brewer's yeast. ■



Viticulture

Robocrop

SAFFRON WALDEN

Winemakers are building robots to pick grapes

MODERN FARMS are increasingly automated—from GPS-controlled combine harvesters to machines that shake apples from trees. One task, though, seems stubbornly resistant to being ceded to robots: picking grapes.

Like all soft fruit, grapes have a narrow window of ripeness, and are prone to being bruised or crushed if picked by clumsy metallic fingers. Matters are worse if the fruit is intended for fine wine. At upwards of £5,000 (\$6,480) per tonne, the value of an individual grape—grown in the right place at the right time—is enough to make such accidents unacceptable. Most vineyards therefore have a strict no-robots policy.

A project at Saffron Grange vineyard in Essex, however, aims to change some minds. Engineers at Queen Mary University of London (QMUL), working with Extend Robotics, a firm also based in London, are building a grape-picking robot equipped with visual sensors powered by artificial intelligence (AI) to tell when fruit is ripe, and pressure-sensitive fingers to grasp and cut bunches from vines without having to shake any fruit loose.

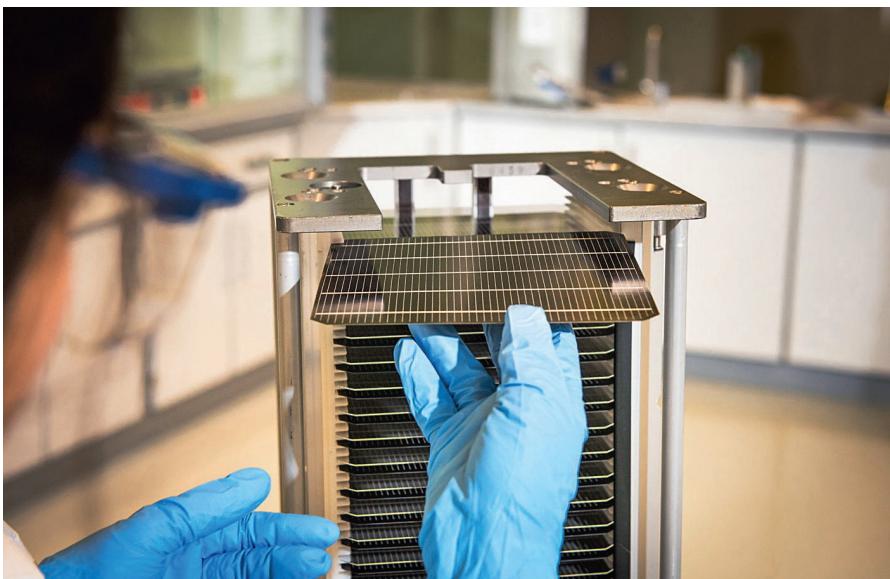
The visual sensors work by looking for light that has passed through the grapes and measuring which wavelengths come out the other side. A glass of ethanol and a glass of water may look the same to the naked eye but if you can see exactly which wavelengths of light are absorbed by the liquid, it is trivial to tell them apart. The

same technique can be used to determine the levels of sugar present in grape juice, says Lei Su, a photonics researcher at QMUL. Doing all this when the juice is still inside a grape, the grape is still on a vine, and the vine is in the Essex countryside is the challenge: “The information contained in the spectrum is actually too abundant,” says Dr Su. So the team has trained an AI model to focus on the grape itself and ignore the noise. In the long run, the hope is to separate the sensors from the robot entirely, and have a static system that can autonomously monitor an entire vineyard—an array of cameras watching the grapes grow, checking for disease, and alerting vintners to when the optimal time is to start their harvest.

The project is still in its early stages. The current version of the robot has to be awkwardly puppeteered in real-time by a pilot wearing a virtual-reality (VR) headset (a Quest 3, produced by Meta, a social-media giant). The owners of Saffron Grange vineyard have provided leaf, grape and juice samples to train the AI systems and committed to planting half a field of vines in which the robot can run amok. Needless to say, the machine is not yet ready to be allowed anywhere near this year's actual grape harvest.

Robotic help would be a boon for the vineyard. Harvest time is short and intense—a ten-day flurry of activity when a typical English vineyard's staff will swell five-fold. The perfect window to harvest grapes for sparkling wine is just “a few days”, says Nick Edwards, Saffron Grange's director, but sparse autumn sunlight, labour shortages and variations induced by climate change mean it often takes more than a week. With a robot, Paul Harrison, the vineyard's manager, envisions turning grape-picking into a 24-hour operation by hiring skilled labourers in Australia who could dial into the VR controls and pick grapes remotely, after his local workers have clocked off for the day. He hopes to offer the same service in reverse during the southern hemisphere's harvest, since the two growing seasons and time zones perfectly offset each other. By picking grapes over a shorter time, losses of crops to mildew, frost and pests could also be reduced.

Remote-controlling the grape-picking robots will also help to break what Chang Liu, Extend's founder, describes as a vicious circle for robotics companies, in which there are too few robots around to generate useful data, and too little useful data with which to train and build future robots. With the help of robots piloted at a distance, Extend will be able to amass training data (in this case on how to best pick grapes). In time, the robots would become autonomous, leaving the humans with more time to relax and enjoy the English sparkling wine. ■



Solar power

Sunny side up

OXFORD

An upper crystal layer makes solar panels more powerful

IT IS COMMONLY claimed, and also true, that enough sunlight falls on Earth in the course of an hour to meet a year's worth of global power needs. Some of that sunlight is currently converted into electricity by arrays of solar panels: by the end of 2023, these panels covered almost 10,000 square kilometres of Earth's surface, producing some 1,600 terawatt-hours of electricity, about 6% of that generated worldwide.

The amount of installed solar-capacity has been doubling roughly every three years. This is happening as the silicon-based solar cells used in the panels have been getting cheaper with intense competition among firms in China, which with state support have come to dominate the industry. At the same time, researchers have found ways to make the cells better at absorbing the energy in sunlight. Modern solar panels operate with efficiency rates of 22-24%—a massive increase from the 6% achieved when the first practical solar cells were invented in the 1950s at Bell Labs in New Jersey, and were so expensive they mostly powered satellites.

Yet most processes have their limits. The maximum theoretical efficiency of a silicon solar cell—the amount of energy in sunlight that is turned into electricity—is around 29%. This is possible only in laboratory conditions. When cells are packed together into solar panels, the total efficiency of the panel is unlikely to get above 26%. This is partly because the spaces be-

tween cells and other parts of the panel, such as the frame, do not contribute to making electricity. There are also inevitable losses of energy in the wires connecting the cells.

The future of solar power, however, could lie in a new, more efficient, type of solar cell that has just gone into production. Made with a family of crystalline materials called perovskites, they are capable of delivering panels with practical efficiency rates well above 30%.

Jumping the gap

Traditional solar cells typically contain two layers of ultra-pure silicon, both doped with an additive to make them semiconducting (ie, the ability to work as either a conductor or insulator). As they absorb light, electrons receive enough energy to jump across the junction between the layers, producing an electric current. Although other semiconductors can do the same, none rivals the affordability of silicon, which is produced cheaply from sand.

The original perovskite is a mineral called calcium titanium oxide. It was discovered in 1839 and named after Count Lev Perovski, a Russian mineralogist. The name has since become a generic term for substances with a similar crystalline structure. One of the things that makes perovskites so attractive to researchers as an alternative to silicon is that, in addition to being efficient at absorbing the energy in

sunlight, they can also be made cheaply from easily obtainable materials, including a number of metals and halogens, like chlorine, bromine and iodine.

Even though their light-absorbing superpowers have been known for some time, they have been difficult to harness, not least because perovskites degrade quickly and can be susceptible to moisture. Researchers are therefore searching for ways to make them more stable and to adapt manufacturing processes to protect the cells from the elements.

A leader in developing perovskite panels is Oxford PV, a British company. The firm has developed "tandem cells", consisting of a thin layer of perovskite placed on a bed of silicon. The idea is that the two materials working together can extract a greater amount of energy from sunlight than each could individually. To do so, the perovskite layer is tweaked to absorb light from the blue end of the spectrum while the silicon layer mops up the wavelengths at the red end, says Chris Case, the company's chief technology officer.

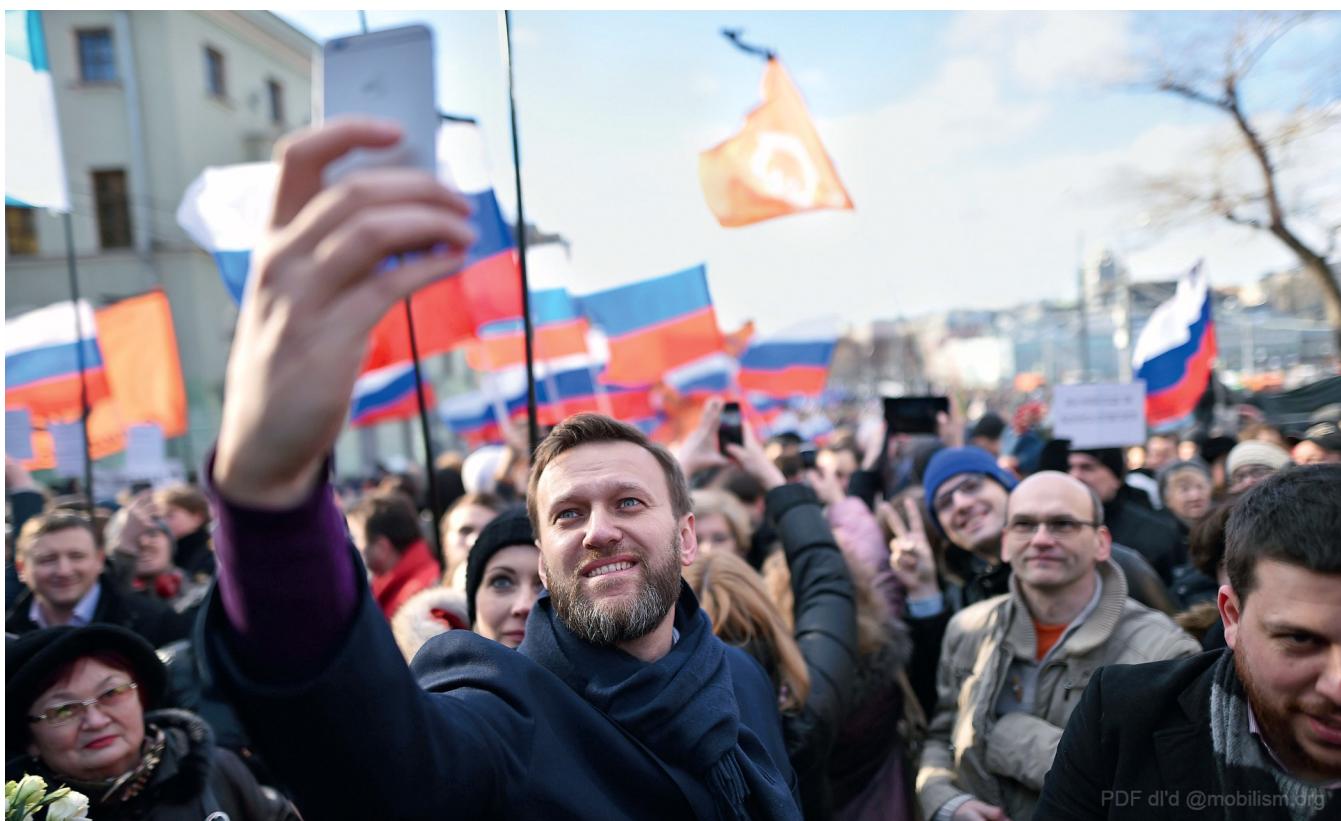
The firm has opened a factory in Germany which has just started to supply commercial tandem-cell solar panels to its first customer, an unnamed utility in America. The panels are being installed, along with conventional silicon units, at a new grid-connected solar farm. This will provide perovskites with their first big test at this scale, not just for efficiency but also durability and longevity. As silicon panels are expected to continue working for 20-25 years, perovskites must demonstrate similar lifespans.

The first production panels have an average efficiency of 24.5%, adds Dr Case. A new generation under development has reached 26.9%, and this is expected to increase to well over 30% as research continues. The theoretical efficiency limit for a perovskite tandem cell in a laboratory is around 43% (compared with the 29% for silicon) even if that is also unlikely to be reached once it is integrated into a panel.

Other companies are also close to commercialising their versions of perovskite-on-silicon solar panels. Hanwha, a big South Korean industrial group, has invested 137bn won (\$102m) in a factory to make tandem cells for its QCells range of solar panels. At lab scale, the firm says individual cells have achieved a maximum efficiency of 29.3%.

The current world record for a lab-based perovskite tandem cell is 34.6%. This was claimed in June by LONGi Green Energy Technology, a big Chinese manufacturer. It began working on mass-production for the cells in October 2023. The firm says it has also achieved 30.1% efficiency in a prototype commercial-size panel, though it has not yet announced when production will begin. ■

Culture



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Opposing Putin's tyranny

Alexei Navalny, written by himself

In a posthumous memoir, the Russian opposition leader chronicles his martyrdom

THREE AND A HALF years before Alexei Navalny was murdered by Vladimir Putin, he was very nearly killed by him, and he described the feeling of sliding into oblivion. “It’s all lies, what they say,” he wrote. “My whole life is not flashing before my eyes. The faces of those dearest to me do not appear. Neither do angels or a dazzling light.” He sensed his brain was shutting down: “Life is draining away, and I have no will to resist...Then I died.”

In August 2020 Navalny, Russia’s most prominent opposition leader, was poisoned with a nerve agent in Siberia by assassins from the FSB, Russia’s security service. Flown to a hospital in Berlin, he stayed in a coma for 18 days. Less than six months later, in January 2021, he returned to Russia to face Mr Putin, the tyrant who wanted him dead. His encounter with oblivion in 2020 had only strengthened his determination to face squarely up to death inside Russia.

Patriot. By Alexei Navalny. Translated by Arch Tait and Stephen Dalziel. Knopf; 496 pages; \$35. Bodley Head; £25

To your correspondent, who sat two rows behind Navalny on that flight, one thing was clear: Navalny’s return to Moscow was more than a physical journey. It marked his transformation from man to hero. His death earlier this year in a prison above the Arctic Circle enhanced that rep-

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utation. Now his book, “Patriot”, creates a record that will last. It has been published in 22 languages, including Russian.

Ever since he was arrested at passport control, the question his fellow prisoners and much of the world asked openly (and guards discreetly) was: why did he return to Russia, given that he would almost certainly be arrested or killed? Navalny writes that the question frustrated him. He went back to his country and his people because he had a clear sense of mission—to liberate Russia from a despot’s grip. “If your convictions mean something, you must be prepared to stand up for them and make sacrifices if necessary.”

The early chapters of “Patriot” cover his childhood in military towns near Moscow; his summers spent near Chernobyl with his Ukrainian grandmother; his courtship of his wife, Yulia; and his infatuation (and disillusionment) with Boris Yeltsin, the first president of Russia after the Soviet Union’s collapse. Those chapters—which go up to 1999, when Mr Putin came to power and Navalny entered politics—were written as he recovered in Germany. Had he stayed there, he would have written a complete memoir as an exiled politician.

But he did not. A quarter of the way into the manuscript, Navalny flew back to Moscow. He reflects on the dramatic change in his narrative with characteristic irony. “It is ➤

► traditional in fiction to write something along the lines of: ‘The smooth flow of my narrative is disrupted at this point by such-and-such event.’’ The remaining three-quarters of the text was written in prison. Guards tried to intercept the notes he passed from his cell and arrested three of his lawyers; they limited his access to pen and paper to 90 minutes a day. Somehow his words broke through prison walls.

“Patriot” carries echoes of works by political prisoners in Russia and elsewhere. Much like Fyodor Dostoevsky’s “The House of the Dead” (1862), Aleksandr Solzhenitsyn’s “The Gulag Archipelago” (1973) and Martin Luther King’s “Letter from Birmingham Jail” (1963), “Patriot” transcends its place and time. Its value lies not in what it tells you about the cruelties of Mr Putin’s regime, but in what it reveals about the human spirit.

Yet in its intensity and colloquial style, Navalny’s book is best understood as a 21st-century counterpart to one of the most important texts in Russian literature: “The Life of the Archpriest Avvakum, Written By Himself”. Avvakum was a 17th-century cleric and religious dissident who defended his faith. He was twice banished, imprisoned in Siberia and eventually executed by being burned alive. Avvakum entitled his book *zhitiye*—which can be translated as “life” and interpreted as “hagiography”. A heretic in the eyes of the church and state, Avvakum wrote a book that prepared him for sainthood.

“Patriot”, too, is a passionate account of Russia’s extreme violence and a moving reflection on endurance and accepting death. It is animated by Navalny’s faith, his love for Yulia, his land and his people, as well as his hatred of those who corrupt Russia’s souls and despoil its lands.

Navalny hated Mr Putin not because this man tried to kill him, but because he suppressed individual dignity and built a state based on greed and lies, glorying in cynicism and violence. Mr Putin’s war against Ukraine was also a war against Navalny’s dream of Russia as a normal European country whose citizens could be free to make their own decisions. In a dictatorship, Navalny’s only weapon was his life.

The stronger Navalny was spiritually, the angrier Mr Putin grew. He deprived Navalny of sleep and locked him in solitary confinement, housing a yelling psychopath nearby to try to drive him mad. He sought to break Navalny’s will during a hunger strike by tantalising him with the smell of fried chicken. “Prison is the best place to improve your stamina,” Navalny wrote in December 2023, when he was moved to the Arctic penal colony. His body was wasting away, but he wrote that his mood “is great and quite Christmassy”.

Navalny collapsed suddenly, showing signs of poisoning, and died on February

16th 2024. But his story does not end there; nor does the book. An epilogue, written in March 2022, describes Navalny’s calm reaction to a new sentence of nine years in a penal colony. “I knew from the outset that I would be imprisoned for life—either for the rest of my life or until the end of the life of this regime.” He also knew that a regime does not “come crashing down in such a way that its falling debris breaks open the doors of prisons”.

He prepared for death by working on what he called his “prison Zen”. He had two techniques. One was to imagine the worst thing that could happen and accept it, skipping the stages of denial, anger and bargaining. “I will spend the rest of my life in prison and die here. There will not be anybody to say goodbye to...All anniversaries will be celebrated without me. I’ll never see my grandchildren.”

The second technique involved faith. If you are “a disciple of the religion whose founder sacrificed himself for others, paying the price for their sins” and you trust “in the immortality of the soul and the rest of that cool stuff”, then “what is there left for you to worry about?” He remained a devoted Christian until the end and trusted that “Good old Jesus and the rest of his family...won’t let me down and will sort out all my headaches. As they say in prison here: they will take my punches for me.” ■

The history of sexual identity

Sexy time

Fierce Desires. By Rebecca Davis.
W.W. Norton; 480 pages; \$35

THE FIRST time the lads slept together was in 1864. Teenage soldiers in the Union army, Hubbel Pierce and Alonzo Choate met on the march to the South and fell for each other, brothers in arms. When they returned to their lives as homesteaders in Michigan, Pierce gave Choate a ring. In letters they called each other “beloved husband” and joked about their sex life. Relatives joined in the teasing. In one letter, Choate’s sister wrote a postscript in which she referred to her brother as Pierce’s “wife”.

If they had lived in modern times, Choate and Pierce might identify as gay, and people might refer to them as such. Today sexuality makes people who they are: straight and gay, the stripes in a rainbow flag, she/her/they/them. Some argue that is the way it has always been. Many on the left believe that “Today’s sexual identi-



Flexing sexual norms

ties are authentic because they are eternal,” writes Rebecca Davis, a history professor at the University of Delaware.

Poppycock, Ms Davis writes in “Fierce Desires”, a chronicle of American shagging from the colonial era to the present. The idea that sex defines people did not emerge until, roughly, the turn of the 20th century. If Choate and Pierce had met just a few decades later, their contemporaries would have seen them as categorically different from heterosexuals. Meeting as they did in the 1860s, neither they nor their relatives appeared to believe that their intimacy made them different. And their romance did not stop them from going on to marry women.

In the 19th century sex was something you did, not who you were. Sex among young men was “common and mostly unpunished” because it was seen as a passing phase in the transition to marriage. Before the 20th century identity was not intrinsically sexual, Ms Davis argues. People were gentlemen or servants; free or enslaved; bad Christians or good (or non-believers); indigenous, English and, later, American. Those identities shaped their sex lives and ideas about the morality of sex. For the Pueblo of New Mexico, intercourse between an unwed native woman and a foreign man was an act of diplomacy. Christians saw the same act as sinful. (Luckily for Christians prone to slipping up, God is often a forgiving sort.)

A slew of historical forces gradually pushed sex to the centre of the self. Gays and lesbians flocked to cities and, as they found each other, began to pinpoint their sexual orientation as “the defining aspect of their difference”, writes Ms Davis. As gays became more visible in the 1920s, particularly on stage in cabarets and speak-easies during what people once called the “pansy and lesbian craze”, those who were not gay began to define themselves in ►

opposition to homosexuals. These people began to call themselves “heterosexual”.

The idea that sex formed the cornerstone of identity was just emerging; it would be popularised by intellectuals, activists and the state. In the late 1800s doctors came to understand same-sex desire as an illness of the mind rather than an aberrant act of an otherwise normal person. The government agreed and purged homosexuals from the army and civil service in the 1940s-50s. At the same time, thinkers including Herbert Marcuse, a German-American philosopher, laid the intellectual groundwork for the sexual revolution of the 1960s when they wrote that sexual liberation was a prerequisite for the political kind. By this point, no matter whether one favoured sexual repression or freedom, everyone seemed to agree: sex was more than an act. It defined the person.

Ms Davis is an engaging guide to the past, especially when she upends assumptions. But as the book builds to a climax, her account stops just short of satisfaction. She chronicles the emergence of sexual identity but does not adequately explain how it arose. Why, exactly, gay urbanites identified sexual orientation as the source of their difference goes unanswered. “Fierce Desires” is therefore an entertaining romp but ultimately frustrating. Ms Davis is a tease. ■

Language and the internet

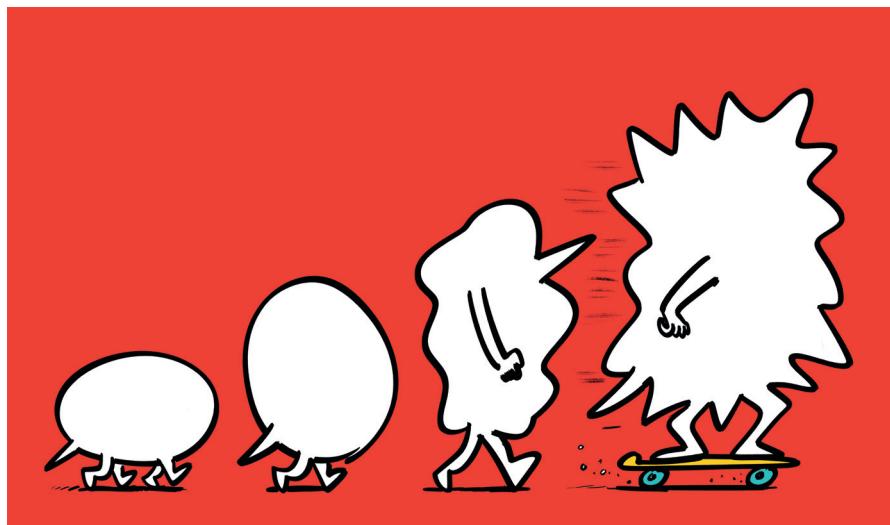
Why do you Tok like that?

TikTok is changing how Gen Z speaks

THE WORD “demure” is old—it describes the sort of modest lady Victorians esteemed—but it is freshly fashionable. There are some 800,000 posts on TikTok with the tag #demure. Youngsters today are using the word with lashings of irony, invoking it to describe everything from Saturn to sunset to New York City’s bin service.

TikTok is changing how young people talk. Other fusty words, such as “coquette”, are fashionable again. Colloquialisms are on the rise: members of Gen Z say “yapping” instead of “talking” and trim “delusional” to “delulu”. New words have also become popular. Take “skibidi”, a term popularised by a meme of an animated head singing in a toilet; it means “cool”, “bad” or “very”, depending on the context.

On social media words spread far and fast. Each year at least 100 English words are produced or given new meaning on TikTok, reckons Tony Thorne, director of the



Slang and New Language Archive at King’s College London. Some linguists think the platform is changing not just what youngsters are saying, but how they are saying it. A “TikTok accent”, which includes “up-talk”, an intonation that rises at the end of sentences, may be spreading.

The platform’s versatility encourages experimentation. Users can combine audio, text and video in a single post. That means words that sound especially satisfying can go viral, as well as those that are memorable in written form. Linguistic code has emerged, dubbed “algospeak”, to dodge content-moderation algorithms. It includes euphemisms (sex workers are called “accountants”), and misspellings (“seggs” instead of sex).

The mutation of language on TikTok is also due, in large part, to the age of its users. Most are 18-34 years old. That matters because “Young people are language innovators,” says Christian Ilbury, a sociolinguist at the University of Edinburgh. For decades youngsters have created words to distinguish themselves from adults. On social media such neologisms find a big audience. Mr Ilbury describes this as “linguistic identity work”; parents have long called it attention-seeking.

The platform brings together fan groups and communities, from #kpopfans (people who like Korean pop music) to #booktokers (people who love reading). These groups create their own slang, says Adam Aleksic, a linguist and influencer. Some of it leaks into the mainstream. Other slang comes from specific groups: black people have innovated and spread hundreds of English words over the years, from “cool” to “tea” (gossip). Journalists and screenwriters popularise such words; now TikTokers do, too.

All this speeds up the evolution of language. That delights logophiles but befuddles dictionary-makers, who must keep a record of the ever-expanding lexicon. The

Oxford English Dictionary (OED), Britain’s most illustrious chronicler of language, adds a word only after it has been used for about five years. That is too slow to keep up with modern parlance. The OED is just now adding words such as “binge-worthy”, which already feels tired; its own “word of the year” for 2023, “rizz” (charm), which originated and was popularised online, has not yet made the cut. TikTok has just the phrase to describe such a modest approach: very demure. ■

Continuation novels

You look so familiar

Karla’s Choice. By Nick Harkaway. *Viking*; 320 pages; \$30 and £22

CHARACTERS DO NOT die with their creators. Some live on in bold new guises in modern spin-offs and mash-ups. Over the past two decades, authors have brought Shakespeare’s protagonists and Jane Austen’s heroines into the 21st century in a range of inventive “retellings”. Another sort of resurrection can come in the form of a continuation novel. Literary estates commission authors they regard as a safe pair of (typing) hands to breathe new life into a franchise and further the adventures of much-loved characters.

Some writers have risen to the challenge more than once. Sophie Hannah has five whodunnits featuring Agatha Christie’s Hercule Poirot. Anthony Horowitz wrote two Sherlock Holmes novels, and Sebastian Faulks has produced a breezy Jeeves and Wooster caper in the vein of P.G. Wodehouse; both authors have taken ➤

► James Bond on separate missions with Britain's Secret Intelligence Service.

Another literary spy features in a new novel four years after the death of his creator: John le Carré's valiant yet unassuming cold-war warrior, George Smiley. Set between the events chronicled in "The Spy Who Came in From the Cold" (1963) and "Tinker Tailor Soldier Spy" (1974) and incorporating familiar faces from le Carré's fiction, "Karla's Choice" is a continuation novel crafted with more care and attention than most. It was written by Nick Harkaway, the *nom de plume* of le Carré's son.

The book begins with an unexpected visitor and a mysterious disappearance. In the spring of 1963 a Soviet assassin named Miki Bortnik turns up at the door of Laszlo Banati's literary agency in London and announces to the assistant, fellow Hungarian émigré Susanna Gero, that he has come to kill her boss. No murder is committed: Miki reveals he has changed his mind; more important, Laszlo has gone missing. British intelligence is alerted, and George Smiley, recently retired, is lured back to "the Circus" to locate him and find out why he has fallen foul of Moscow.

From this premise, Mr Harkaway thickens his plot and spins a satisfyingly intricate tale filled with intrigue and suspense. Laszlo, more a Soviet agent than a literary one, becomes a wanted man by both sides. Smiley follows his trail to Vienna, Budapest and Berlin, a city that "existed in a frozen parody of peace". As stakes are raised and loyalties are tested, he comes to realise that lurking in the background and calling the shots is his Russian counterpart and nemesis, Karla.

Continuation novelists must be expert impersonators. They have to adhere to tried-and-tested formulas and emulate distinct narrative styles and voices. To render his book authentic, Mr Harkaway draws on all the winning elements that made his father's novels so memorable. He creates a recognisably murky world of treachery, duplicity and moral complexity. He blends in le Carré's tradecraft and jargon, such as lamplighters (surveillance agents) and Cousins (Americans). His cast includes the usual ragtag members of the Circus along with "the Stasi's favourite son", Hans-Dieter Mundt. Now and again he delights with a knowing wink to aficionados: "Spying is waiting," he declares, recycling a leitmotif from "The Russia House" (1989).

In his author's note, Mr Harkaway poses a question that is central to the success of a continuation novel: "Does it feel right?" The answer here is a resounding yes. "Karla's Choice" could have been a crude pastiche and a dull drama. Instead, it is an accomplished homage and a captivating thriller. It may be a standalone story, but with luck Mr Harkaway will continue playing the imitation game. ■

Masayoshi Son's legacy

The setting Son?

The tech industry's biggest gambler will not be remembered as a Silicon Valley great

Gambling Man. By Lionel Barber. *Allen Lane*; 416 pages; £30. To be published in America by Atria/One Signal in January; \$29.99

The Money Trap. By Alok Sama. *St Martin's Press*; 304 pages; \$30. *Macmillan Business*; £22

MASAYOSHI SON, boss of SoftBank, a Japanese tech and telecoms giant, is one of the boldest investors of modern times. He earned billions from prescient investments in Arm Holdings, a chip company, and Yahoo and Alibaba, two internet pioneers. Yet Mr Son also vaporised billions with astonishing speed by staking the likes of WeWork and countless other tech confections. Revered for his insight, he is mocked for his overreach.

Discerning the true Masa, as he is known, is no small task. Two new books illuminate his essence, though neither quite reconciles the central dichotomy of his long career. One, a cradle-to-present treatment by Lionel Barber, former editor of the *Financial Times*, lays claim to being the first Western biography of Mr Son. The other, a lively memoir by Alok Sama, Softbank's former chief financial officer, offers an unvarnished insider's peek at the man.

Mr Barber paints Mr Son, who granted the author extensive access, as heroic, if flawed. "If hubris brought him tumbling down, not once, not twice but three times, he never gave up," he writes. Mr Son's career arc is epic and his persistence legendary. As an ethnic Korean growing up in

poverty in Japan, he was a keen student who yearned from a tender age to be wealthy. A teenage Mr Son fixated on and finagled a meeting with a Japanese entrepreneur, Den Fujita, who had brought McDonald's franchises to Japan. Fujita gave him two pieces of advice: learn English and pursue computers.

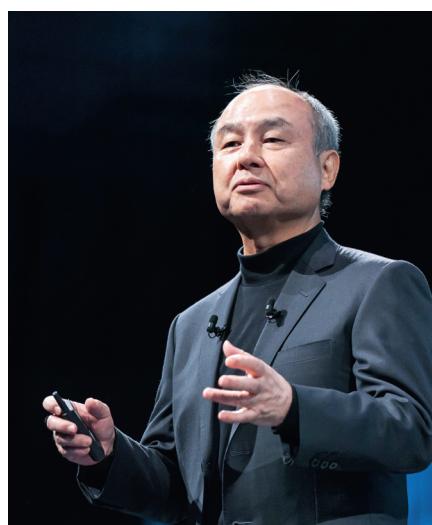
Before long, Mr Son found his way to the University of California, Berkeley, where he teamed up with a professor to start his first company. Mr Barber outs Mr Son as slippery, both in his own myth-making and in his business dealings: the professor, 92 years old when Mr Barber tracks him down in Berkeley, claims Mr Son cheated him out of money.

Operating from Japan, Mr Son forged himself into the tech world's "Zelig" (a constant chameleon played in a film of that name by Woody Allen). He did a deal with Rupert Murdoch, an Australian media baron; claimed to have shared with Steve Jobs, Apple's co-founder, his own sketch for a smartphone before the iPhone's release; and in 2017 launched the largest-ever tech investing fund, the so-called "Vision" fund, with \$100bn. With that he fuelled a fundraising craze among startups.

A literary tell-all, Mr Sama's narrative chronicles his own journey as an Indian-born former investment banker to become one of Masa's key lieutenants. As such, his tale functions as a Rorschach test for readers, who will either interpret it as a paean to the glories of dealmaking or a screed against the vacuousness and intellectual dishonesty of pursuing wealth at the expense of relationships.

Figuring out what makes Masa "tick" is Mr Sama's mission, though he never quite fulfils it. He concludes that it is too simple to attribute Mr Son's verve to the scars he got as an outsider growing up in Japan. If anything, Mr Son is *sui generis*, a cultural, financial and entrepreneurial black swan. Mr Sama cleverly captures his former boss's charm—"When he looked at me and smiled, it was like Nick Carraway meets Gatsby"—yet he also narrates Mr Son's absurd and reckless side. For example, an affection for "numerical symmetry" led Mr Son to promise India's prime minister, Narendra Modi, a \$10bn investment over ten years and America's president-elect Donald Trump an investment of \$50bn and the creation of 50,000 jobs.

In the end, Mr Sama says he tried warn-



Masa, in the spotlight

BACK STORY

Shooting the messengers

Ta-Nehisi Coates's new book has set off a controversy over free speech

IT IS A common response among visitors to Israel, even before the war in Gaza. They see the “teeming cafés” and “cocktail bars” of Tel Aviv, as Ta-Nehisi Coates puts it, and, in the West Bank, hardship and expropriation. The contrast offends natural justice and inspires compassion for Palestinians. It would be odd if it did not. The book Mr Coates has written on the basis of such impressions, and the controversy it has ignited, together spotlight an urgent issue—but perhaps not the one he intended.

Mr Coates (pictured) has justly won acclaim and fame for his trenchant essays on race in America. “The Message”, out in Britain next year and in America now, recounts trips he made to a slave-trading site in Senegal and to South Carolina, where obtuse book-banners targeted another of his titles. These chapters introduce his theme of the use and abuse of stories in the service of repression. But the main tale he tells is about Israel and the West Bank, where in 2023—before the atrocities of October 7th—he spent ten days.

Therein lies a glaring problem with “The Message”. It is discourteous to both your subjects and readers to spin a book out of a ten-day visit to a bitterly contested foreign land. First impressions can be valuable—and Mr Coates’s observations on the wrongs of Israeli settlements are powerful—but they are also incomplete. His is “a stranger’s story”, he acknowledges, yet he tells it anyway.

The second problem is what, in a passionate indictment of Israel, Mr Coates intentionally leaves out. He alludes to Israel’s wars with hostile neighbours without saying why they were fought. He makes no mention of Palestinian terrorism, nor of what the failures and fanaticism of Palestinian



leaders have cost their own people. The only Israeli views to feature are those of chastened peaceniks. All this contradicts the journalistic credo that Mr Coates himself sets out: that writers must “walk the land” they mean to describe.

Excluding the context of Israel’s actions, which he calls “patently immoral”, nobbles his analysis. On the plus side, it helps him liken the Palestinians’ plight to the long oppression of African-Americans. This flawed analogy between Zionism and white supremacy—between a tragic internecine struggle and a one-sided subjugation—is axiomatic on the “anti-colonial” left. With talk of the “separate and unequal nature of Israeli rule”, Mr Coates labours the comparison. As much as a political dispatch, his book reads as a bid to prove his bona fides to his comrades.

So “The Message” is pompous and misguided. Importantly, however, it is not—as some have unfairly alleged—hateful or antisemitic. Its faults are not disqualifying. Mr Coates had a perfect right to publish it.

And critics have an equally perfect

right to interrogate it and him. Tony Dokoupil, a morning-show host for CBS, did that on September 30th. During an interview to promote “The Message”, he suggested it would “not be out of place in the backpack of an extremist”, and asked whether Mr Coates was questioning Israel’s right to exist.

Cue a brouhaha that is as much about media ethics as about the contents of the book. Keyboard activists called Mr Dokoupil racist (he is white and Jewish; Mr Coates is black). Meanwhile some of his colleagues at CBS complained about the interview to executives, who admonished the presenter for falling short of editorial standards. Shari Redstone—whose conglomerate, Paramount Global, owns CBS—stood up for Mr Dokoupil and rebuked his bosses.

The episode was profoundly troubling: the shaming of Mr Dokoupil, not the interview. That was robust but cordial. Mr Dokoupil ensured Mr Coates had time for his answers and ended by calling him “buddy”. It fell squarely within the bounds of responsible broadcasting. Evidently, though, some at CBS and beyond think certain in-group orthodoxies are too sacred to be challenged. (To his credit, Mr Coates did not encourage the pile-on, insisting “I can take care of myself.”)

This is the message that “The Message” has crystallised. It is not about the conflict in the Middle East but the Western intellectual malaise it has exacerbated. Legitimate opinions of all stripes are increasingly seen as inadmissible, and reasonable questions as unaskable. For some, disagreement is grounds for character assassination or censorship. In that insidious way of thinking, free expression is a conditional right—in other words, not a right at all.

▶ ing Mr Son that his breakneck investments would end poorly. Mr Son eventually lost more than \$10bn just on WeWork, an office-letting firm. Why? The enormous size of his investing fund meant that Mr Son needed to write large cheques, so he favoured big bets, even in firms that were not really tech companies. However, Mr Sama cannot help but judge his former boss in a net-positive light. “No matter the results, I will always be inspired by the colossal vitality of Masa Son’s visions,” he writes.

But what of those visions? After his investments imploded Mr Son announced he was taking a breather, only to say more recently he and SoftBank are back in the tech-investing game. This month the firm put \$500m into OpenAI’s latest fundraising round, which values the startup at a stunning \$157bn. The inveterate gambler of Mr Barber’s title cannot quit the casino. Mr Son is 67 and still has billions to burn.

His lasting impact on Silicon Valley is likely to be how he egged on venture cap-

italists to raise ever-larger sums to compete with him. But his spotty record disqualifies him from the list of tech-investing greats such as Arthur Rock, an early backer of Apple, or John Doerr and Michael Moritz, who staked Google. Were his career to end today, Mr Son would be remembered as a bold financier whose timing was awful as often as it was spectacular and who has not created anything nearly as unique as the entrepreneurs whose companies he has sometimes correctly backed. ■

Economic & financial indicators

	Gross domestic product % change on year ago latest quarter*			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 govt bonds change on latest, %	Currency units per \$ Oct 23rd % change on year ago
United States	3.0	Q2	3.0	2.7	2.4	Sep	3.0	4.1	Sep	-3.4	-7.3
China	4.6	Q3	3.6	4.7	0.4	Sep	0.5	5.1	Sep [§]	-4.4	1.8
Japan	-1.0	Q2	2.9	0.2	2.5	Sep	2.6	2.5	Aug	-3.7	-4.7
Britain	0.7	Q2	1.8	1.1	1.7	Sep	2.9	4.0	Jul ^{††}	-3.0	-4.0
Canada	0.9	Q2	2.1	1.3	1.6	Sep	2.4	6.5	Sep	-1.2	-1.3
Euro area	0.6	Q2	0.8	0.8	1.7	Sep	2.4	6.4	Aug	3.1	-3.1
Austria	-0.9	Q2	-0.2 [#]	-0.3	1.8	Sep	2.9	5.3	Aug	2.4	-2.4
Belgium	1.1	Q2	0.8	1.1	4.3	Sep	4.0	5.4	Aug	-0.3	-4.6
France	1.0	Q2	0.7	1.2	1.4	Sep	2.5	7.5	Aug	-0.6	-6.1
Germany	nil	Q2	-0.3	0.1	1.8	Sep	2.4	3.5	Aug	6.2	-1.6
Greece	2.7	Q2	4.4	2.2	3.1	Sep	3.0	9.5	Aug	-6.4	-1.2
Italy	0.6	Q2	0.7	0.6	0.7	Sep	1.2	6.2	Aug	1.6	-4.4
Netherlands	0.8	Q2	4.1	0.7	3.3	Sep	3.4	3.7	Sep	8.2	-1.9
Spain	3.1	Q2	3.2	2.7	1.7	Sep	3.0	11.3	Aug	2.6	-3.2
Czech Republic	0.9	Q2	1.5	1.1	2.6	Sep	2.2	2.7	Aug [#]	0.3	-2.5
Denmark	4.4	Q2	4.6	1.6	1.3	Sep	1.6	2.9	Aug	10.5	1.8
Norway	4.2	Q2	5.7	1.0	3.0	Sep	2.2	4.0	Jul ^{††}	17.0	12.3
Poland	3.2	Q2	6.1	3.2	4.9	Sep	3.8	5.0	Sep [§]	1.0	-5.7
Russia	4.1	Q2	na	3.6	8.6	Sep	7.5	2.4	Aug [§]	2.9	-1.2
Sweden	0.6	Q2	-1.0	0.7	1.6	Sep	2.0	8.2	Sep [§]	6.3	-0.8
Switzerland	1.8	Q2	2.8	1.1	0.8	Sep	1.2	2.6	Sep	7.1	0.2
Turkey	2.5	Q2	0.3	2.9	49.4	Sep	57.7	8.5	Aug [§]	-2.0	-4.8
Australia	1.0	Q2	0.9	1.3	3.8	Sep	2.5	4.1	Sep	-0.6	-1.5
Hong Kong	3.3	Q2	1.4	3.0	2.2	Sep	1.9	3.0	Sep [#]	12.0	-2.9
India	6.7	Q2	4.5	6.9	5.5	Sep	4.7	7.8	Sep	-0.5	-4.9
Indonesia	5.0	Q2	na	5.1	1.8	Sep	2.3	4.8	Q1 [§]	-0.1	-2.5
Malaysia	5.3	Q3	na	5.1	1.9	Aug	2.0	3.2	Aug [§]	2.7	-4.5
Pakistan	2.8	2024**	na	2.8	6.9	Sep	15.5	6.3	2021	-1.7	-7.4
Philippines	6.3	Q2	2.0	5.4	1.9	Sep	3.2	4.7	Q3 [§]	-2.8	-5.9
Singapore	4.1	Q3	8.7	2.7	2.0	Sep	2.6	2.0	Q2	19.9	0.2
South Korea	1.7	Q3	0.5	2.5	1.6	Sep	2.5	2.1	Sep [§]	3.4	-1.8
Taiwan	5.1	Q2	1.2	4.2	1.8	Sep	2.1	3.4	Aug	13.9	0.5
Thailand	2.3	Q2	3.1	2.5	0.6	Sep	0.7	1.1	Aug [§]	2.2	-3.7
Argentina	-1.7	Q2	-6.8	-3.5	209	Sep	2212	7.6	Q2 [§]	1.0	-0.5
Brazil	3.3	Q2	5.9	3.0	4.4	Sep	4.3	6.6	Aug ^{***}	-1.5	-7.6
Chile	1.6	Q2	-2.5	2.3	4.0	Sep	3.9	8.9	Aug ^{***}	-2.8	-2.4
Colombia	1.8	Q2	0.4	1.5	5.8	Sep	6.7	9.7	Aug [§]	-2.4	-5.7
Mexico	2.1	Q2	0.6	1.4	4.6	Sep	4.8	2.8	Aug	0.3	-5.2
Peru	3.6	Q2	9.8	2.8	1.8	Sep	2.5	4.9	Sep [§]	0.2	-4.1
Egypt	2.4	Q2	na	2.4	26.4	Sep	29.3	6.5	Q2 [§]	-5.3	-4.3
Israel	-2.2	Q2	0.3	0.3	3.5	Sep	3.2	2.6	Aug	4.9	-7.3
Saudi Arabia	-0.8	2023	na	1.5	1.7	Sep	1.7	3.3	Q2	-0.9	-2.4
South Africa	0.3	Q2	1.8	1.1	3.7	Sep	4.6	33.5	Q2 [§]	-1.8	-5.2
										9.5	-132
											17.8
											6.1

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 Oct 23rd	% change on:			Index Oct 23rd	% change on:		
		one week	Dec 29th	2023		one week	Dec 29th	2023
United States S&P 500	5,797.4	-0.8	21.5		Pakistan KSE	87,194.6	1.1	39.6
United States NAS Comp	18,276.7	-0.5	21.8		Singapore STI	3,600.8	0.3	11.1
China Shanghai Comp	3,302.8	3.1	11.0		South Korea KOSPI	2,599.6	-0.4	-2.1
China Shenzhen Comp	1,956.6	6.2	6.5		Taiwan TWI	23,334.8	1.4	30.1
Japan Nikkei 225	38,104.9	-2.7	13.9		Thailand SET	1,470.3	-1.0	3.8
Japan Topix	2,637.0	-2.0	11.4		Argentina MERV	1,774,319.0	-0.1	90.8
Britain FTSE 100	8,258.6	-0.8	6.8		Brazil BVBSP*	129,233.1	-1.9	-3.7
Canada S&P TSX	24,573.6	0.1	17.2		Mexico IPC	52,142.1	-0.7	-9.1
Euro area EURO STOXX 50	4,922.6	0.3	8.9		Egypt EGX 30	30,414.1	-0.4	22.2
France CAC 40	7,497.5	0.1	-0.6		Israel TA-125	2,153.0	1.0	14.1
Germany DAX*	19,377.6	-0.3	15.7		Saudi Arabia Tadawul	11,901.8	-1.1	-0.5
Italy FTSE/MIB	34,697.2	0.1	14.3		South Africa JSE AS	86,464.2	0.1	12.4
Netherlands AEX	890.0	-0.3	13.1		World, dev'd MSCI	3,697.6	-1.0	16.7
Spain IBEX 35	11,865.2	-1.1	17.5		Emerging markets MSCI	1,141.8	-0.2	11.5
Poland WIG	81,087.1	-3.2	3.3					
Russia RTS, \$ terms	1,137.5	nil	5.0					
Switzerland SMI	12,147.1	-0.4	9.1					
Turkey BIST	8,714.7	-2.7	16.7					
Australia All Ord.	8,476.3	-0.9	8.3					
Hong Kong Hang Seng	20,760.2	2.3	21.8					
India BSE	80,082.0	-1.7	10.9					
Indonesia IDX	7,787.6	1.8	7.1					
Malaysia KLSE	1,641.5	0.5	12.8					

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

Commodities

The Economist commodity-price index 2020=100	Oct 15th	Oct 22nd*	% change on month	% change on year	
Dollar Index	131.2	130.4	1.0	6.3	
All Items	138.8	137.6	-2.4	4.8	
Food					
Industrial					
All	125.0	124.5	4.3	7.8	
Non-food agriculturals	132.8	132.6	-0.7	11.9	
Metals	123.0	122.4	5.8	6.6	
Sterling Index					
All items	128.8	129.1	4.2	-0.2	
Euro Index					
All items	137.5	137.9	4.2	4.3	
Gold	\$ per oz	2,662.4	2,743.9	3.7	39.9
Brent	\$ per barrel	73.8	76.0	1.3	-13.9
Sources: Bloomberg; CME Group; FT; LSEG Workspace; NZ Wool Services; S&P Global Commodity Insights; Thompson Lloyd & Ewart; USDA; WSJ. *Provisional.					
For historical indicators data, visit economist.com/economic-and-financial-indicators					

OBITUARY

Fethullah Gulen

The scholar-preacher who tried to transform Turkey from within died on October 20th, aged 83



AT THE CENTRE of a luxury retreat centre in the wooded Poconos Mountains in Pennsylvania, a stocky elderly man sometimes walked slowly about. He had been there since 1999, but was not often seen. In his native Turkey he was under investigation, and from 2014 a wanted man. When, reluctantly, he let BBC journalists come to interview him that year, he showed them his living quarters: not the grand Ottoman-style palace at the centre of the private estate, but two rooms in an adjacent building. His bedroom barely had space for a mattress on the floor, his prayer mat, a chest of drawers and a glass-fronted cabinet. How modestly and simply he lived! The second room, however, was lined with crammed bookshelves, and on a desk was a computer. Through this Fethullah Gulen still regularly preached, in his archaic and Koran-coloured cadences, to his millions of followers in Turkey and beyond. It was through this he was to become the second-most-powerful man in Turkey, with only President Recep Tayyip Erdogan surpassing him.

His rise had begun with schools. As a travelling preacher in eastern Anatolia in the 1970s, he had set up "lighthouses" for poor but devout boys who could not otherwise get an education: boys much as he had been in this hard region, learning the Koran at a tender age, hanging on the wise talk of village elders rather than playing with his friends, surrounded by the smoke of the incense lamp his imam father lit in the evenings. He added to his curriculum, though, ideas he had picked up later, including modern science and Western philosophy, all blended with a mild, mystical Sufi strain of Islam. The schools multiplied, and acquired dormitories; at their peak there were 2,000 in Turkey and abroad. Their amazing spread, he liked to say, was nothing to do with his own intellect or energy. It was God's gift to him, and to Turkey.

His schools were so good that parents fought to get their children on the list. Their graduates breezed through exams for the civil service, the army and government jobs. Each "golden generation" of graduates helped the next up and on. By 2016 his followers, "Gulenists", as people called them, held an estimated 30% of the top judiciary posts and 50% of jobs in the police. Their presence was so ubiquitous that they formed a state within the state.

"Dark", "opaque" and "secret" were the words often applied to them. In his view, they were bringing only light. His organisation—for his network of schools, thanks be to God, had rapidly grown into one—was called Hizmet, "service". His followers were working for pluralism, peace and clean government; they emphasised friendly relations with other faiths; they believed, as he insisted he did, in democracy, free markets and free speech. And they had purpose. They should move within the arteries of the secular system, he told them, without anyone noticing, until they reached all the centres of power.

He liked to compare this subtle, incremental work to restoring a ruined house. Islam in Turkey was now corrupted. It was their duty to rebuild it in the ancient style as a place of halls and heavenly kiosks, welcoming and peace, filled with light and with ideas of immortality. It might seem that the hurly-burly of politics did not belong there. But Islam did not require its adherents, especially civil-society groups, to leave politics alone.

For a time, this had suited Mr Erdogan's purposes. He was elected in 2002 by the people, but with few supporters in the bowels of government. Mr Gulen had plenty, so they became allies. Mr Erdogan, like him, wanted to see more Islam in public life. Mr Gulen posed no threat to him, for he was already in America. And his followers embedded in the bureaucracy could dispatch all the president's critics to maximum-security jails. They proved the ideal instrument to clinch Mr Erdogan's grip on power.

The president then fell out with him in spectacular fashion. In 2013 Gulenists among the judges and in the police began to investigate corruption in the government. They arrested many of the president's allies, some of them ministers. The investigation was stopped, but Hizmet was now a cancer, in Mr Erdogan's words. Then, in 2016, an army faction backed by Gulenists staged a violent coup. It collapsed, but not before 250 people had been killed. Mr Erdogan responded with mass indiscriminate purges. Hizmet's schools were shut down and its newspapers closed.

Most Turks were convinced Mr Gulen was behind both events. As Hizmet's leader, he had to be. Sitting in America, he might even be a CIA asset. He denied it completely. In the corruption investigation, how could he have issued orders to the judges to act? From Pennsylvania, he had no power to make them do anything. As for the coup, he had suffered through four, and was insulted to be linked to another. If the coup-leaders claimed to be protecting democracy, they were betraying his ideals. How could he, a scholar concerned with wisdom and the divine breaths of poetry, soft-hearted as a child, a man who stressed good manners and had never in his life missed a prayer, involve himself in this fight?

That serene mask, however, often slipped aside. He pitied his oppressors, but declared them stains on the pages of history. With savage chops of his right hand and arms appealing to the heavens, he cursed Mr Erdogan online and wanted to spit in his face. He bewailed the state of Turkey under him, and feared for its future.

Clearly he could not return. Turkey had appealed frequently for his extradition, and there was plenty of circumstantial evidence, including his audience with two coup leaders; but the Americans needed more. He still insisted that he did not want power, but did not object when his followers in the Poconos venerated his shoes, or fought over the scraps he had left on his plate. He was their leader and Messiah, and could have been Turkey's too. As it was, all he had of it, in his glass-fronted cabinet, was a small collection of different sorts of dry Turkish sand. ■

In today's cutting-edge and fast-paced business landscape, where time is money, the capacity and ability to face key challenges by articulating unique ideas can be a key differentiator for professionals across industries and employment functions. Honing writing skills fosters stronger relationships with stakeholders, colleagues, customers and clients, and facilitates seamless innovative collaboration across teams and departments. Furthermore, a brand new set of mega skills for planning and executing your writing can contribute to shaping a more productive and efficient workday, leading you to work smarter, not harder. Concise, compact, compressed, succinct, brief and terse communication that is never repetitive nor redundant can expedite decision-making processes, by eliminating bottlenecks. (If you are still reading, we admire your persistence—but not your taste!) Unlock new opportunities for career advancement by capturing the attention of the peers in your team, group and cohort, and reap the benefits in your work and personal life. There is no time like the present, so start sharpening your business-writing skills today with our online course on professional communication.

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