The Economist

HOLIDAY DOUBLE ISSUE

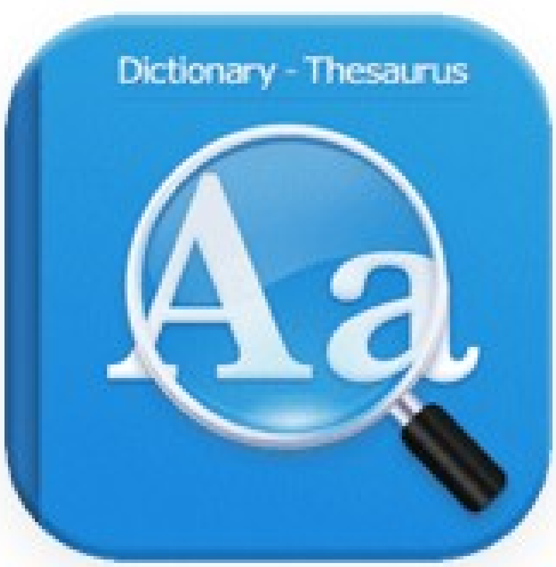
DECEMBER 21ST 2024–JANUARY 3RD 2025

FEATURING: *Tokyo's mega fish market* · *The mysteries of sex* · *Retired planes' second act* · *The fabulous Triassic* · *A tale of Odessa* · *The rise of the axolotl* · *Does money buy happiness?* · *The Ivy League rat race* · *Chinese calligraphy* · *and much more...*

December 21st 2024

载

Notability - 高效、便捷的PDF笔记App, 随时记录你的想法! 点击下载



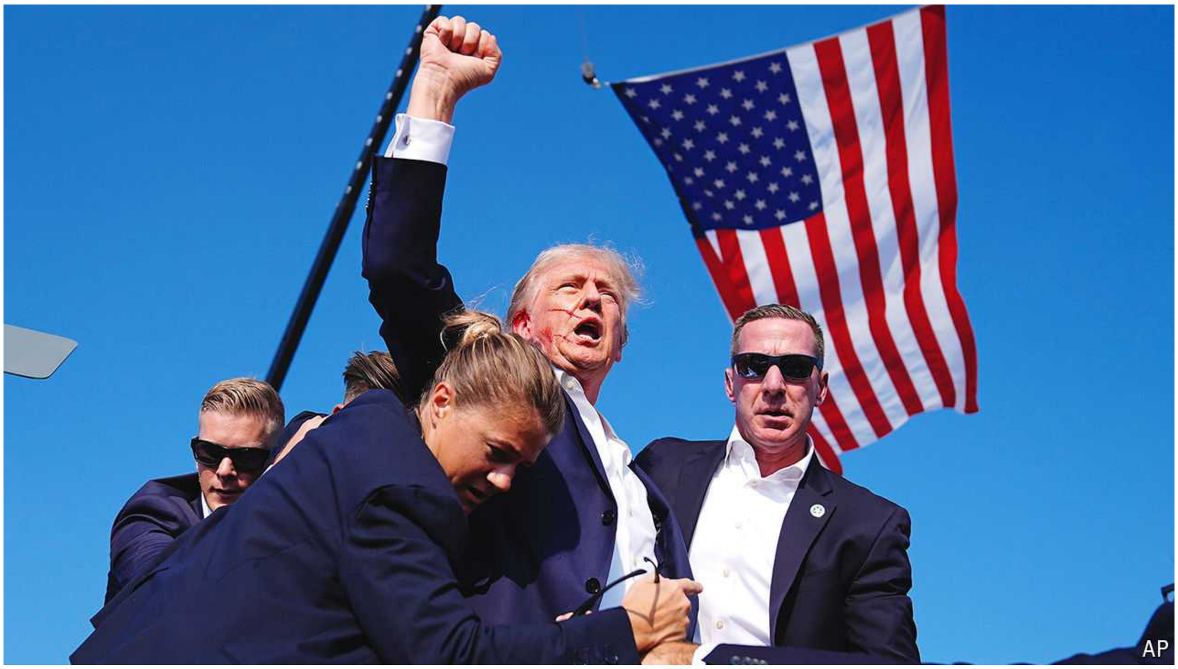
欧路词典 - 英语学习者的必备词典App! Android、iOS、电脑端全平台可用。点击下载

The world this week

The world this week | The world this year

The world this year 2024

December 19th 2024



In a remarkable comeback**Donald Trump** was elected as America's president for a second time. Six months before the vote Mr Trump was found guilty of falsifying business records in a hush-money case, the first criminal conviction handed to anyone who has sat in the Oval Office. In July a gunman tried to assassinate the Republican at a campaign event, slightly wounding him; Mr Trump's rallying cry of "Fight, fight, fight!" energised his base. Kamala Harris's "brat summer" turned out to be a damp squib for the Democrats, who also lost control of the Senate at the election. Ms Harris became the Democratic candidate when Joe Biden pulled out of the race after a disastrous debate for him.

I could never be president

Elon Musk aligned himself with Mr Trump and spent $277m backing the Republicans. His wealth has risen by $170bn since the election, thanks mostly to the increase in the value of his Tesla stock.

Israelinvaded **Lebanon**, after Hizbullah intensified its rocket attacks. In preparation for its offensive Israel injured or killed thousands of Hizbullah operatives by tapping and exploding their pagers and Israeli forces went about eliminating the Iranian-backed militia's leadership, including Hassan Nasrallah, its long-serving head. The leadership of **Hamas** was also all but wiped out. Yahya Sinwar, the mastermind of the terror attacks on October 7th 2023, was killed sitting in a chair. In April Iran launched its first direct missile attack on Israel. America, Britain, France, Jordan and other Arab states contributed to Israel's defence.

The war in **Gaza** ground on, even though Hamas found itself increasingly isolated and boxed in. There was no let-up in the misery for ordinary Gazans caught up in the fighting, and aid agencies warned of possible famine. In December Israel and Hamas seemed to be moving closer to a ceasefire.

Iran's president, Ebrahim Raisi, was killed in a helicopter crash. The new president, Masoud Pezeshkian, brought a change of tone to the government, suggesting he would like to restart negotiations with the West. At the start of the year Islamic State bombed an event commemorating an Iranian general assassinated by America in 2020, killing 95 people.

Syrian rebels rolled into Damascus, bringing an end to the 53-year rule of the Assad regime. The speed of the advance took everyone by surprise, not least Bashar al-Assad, who fled to Moscow. The rebels are led by an Islamist group, which has appointed an interim prime minister until March 2025.

Election day

Labour won **Britain's** election with a stonking majority, ending 14 years of Conservative rule. But things quickly turned sour for Sir Keir Starmer's new government. Anti-migrant riots soon broke out and a decision to end winter-fuel aid for pensioners was widely criticised. Businesses took fright at a tax-raising budget. The Tories chose Kemi Badenoch as their new leader, the first black person to head one of Britain's big parties. In February Michelle O'Neill became the first Irish-nationalist to lead Northern Ireland's executive.

Ukraine lost ground in its fight against Russia. In a bold move, Ukrainian troops took the fight across the border into Russia's Kursk province. But Russia turned to North Korea for soldiers to replenish its forces, the first time in a century it has invited a foreign force into the country. NATO allies sent F-16 fighter jets to Ukraine for the first time and America allowed it to use long-range ATACMS missiles. Meanwhile, Sweden at last joined NATO. Mark Rutte became the military alliance’s new secretary-general.

My vote don’t count

In **Russia** Alexei Navalny, the country’s leading opposition figure, died mysteriously in the Arctic prison where he was being held. No serious opponents to Vladimir Putin were allowed to stand in a sham presidential election. Soon after the poll an affiliate of Islamic State in Central Asia attacked a venue holding a rock concert in Moscow’s suburbs, killing 145 people.

With inflation easing, the big central banks started to cut **interest rates** for the first time in years. The European Central Bank set the ball rolling, followed by the Bank of England and the Federal Reserve. The Bank of Japan went in the other direction, raising its main rate in March for the first time in 17 years. At the end of the year, the Fed cut again, taking its main rate to a range of between 4.25% and 4.5%, but it also signalled that it would drastically slow the pace of reductions in 2025.

Stockmarkets shuddered at the Fed’s forecast of a slower pace of easing, though it was generally a good year for equities, with markets hitting many record highs. The S&P 500 broke its first of the year in January, two years after the previous record was set. It has risen by 23% in 2024. Japanese markets broke highs set 34 years ago, but they plunged in early August in an unwinding of the carry trade. The Nikkei 225 is up by 17%. **Nvidia**, which saw its stock increase by 170%, vied with Apple and Microsoft for the title of world’s most valuable company.

Japan’s new prime minister, Ishiba Shigeru, called a snap election and in a shock result his Liberal Democratic Party lost its majority. He now depends on a minority coalition to govern, just as the country faces some stiff economic challenges.

In **[Bangladesh](#)** Sheikh Hasina won re-election in January, but huge demonstrations in July and a violent crackdown on the protests caused her to flee the country, ending 15 years of autocratic rule. Elsewhere in South Asia **India's** BJP lost its majority in India's election, forcing Narendra Modi to turn to allied parties for support. **Sri Lanka's** presidential election was won by Anura Kumara Dissanayake, a former Marxist. Candidates linked to Imran Khan claimed that **Pakistan's** election was rigged; parties aligned with the army formed the government.

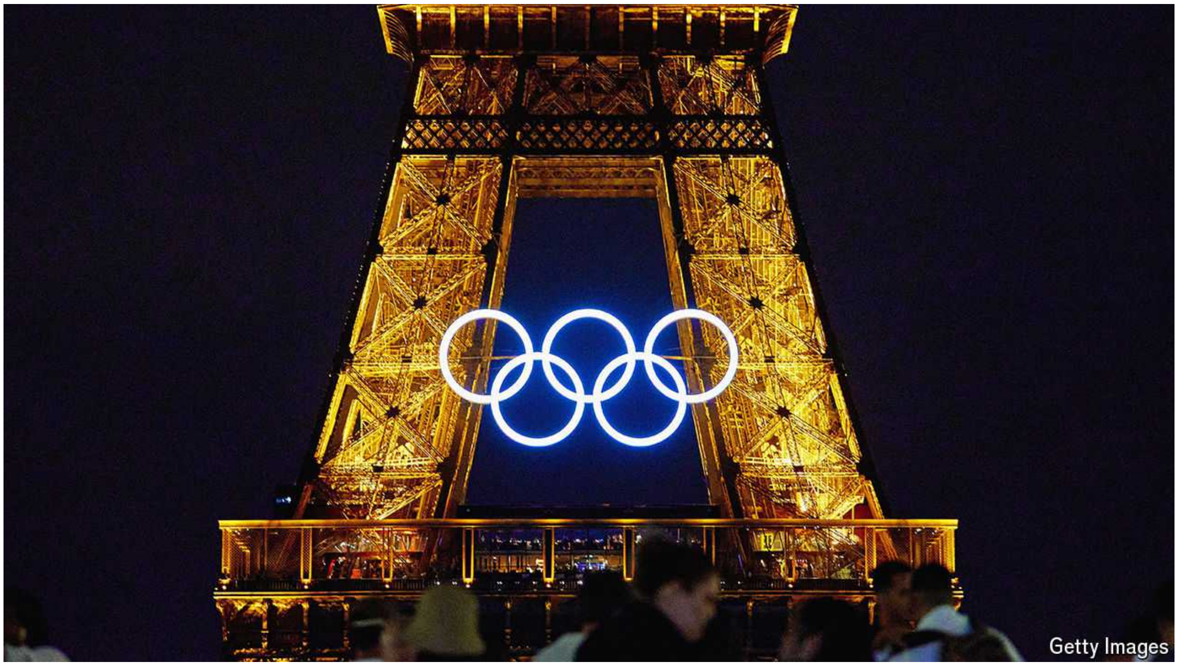
Vote, baby, vote

More than 70 elections were held in 2024 in countries covering more than half of the world's population. In **South Africa** the African National Congress lost its majority for the first time since the end of apartheid. Claudia Sheinbaum was elected as **Mexico's** first female president. Prabowo Subianto, **Indonesia's** defence minister, declared victory in a presidential election. After a constitutional crisis **Senegal's** presidential ballot was won by Bassirou Diomaye Faye, an anti-corruption crusader who was freed from prison less than two weeks before the vote. **Georgia's** Russia-friendly governing party was returned to power, despite widespread protests against a law curtailing the media and NGOS.

Thailand was thrown into political turmoil when the Constitutional Court dismissed Srettha Thavisin as prime minister. Paetongtarn Shinawatra was sworn in as Thailand's new leader. She is the daughter of Thaksin Shinawatra, an influential former prime minister and de facto chief of the ruling Pheu Thai party.

People have the power

[South Korea](#)'s president, Yoon Suk Yeol, was impeached by parliament after he briefly imposed martial law. Mr Yoon's order prompted huge protests in Seoul, calling on him to resign. The constitutional court now has six months to decide whether he should indeed leave office.



In **France** Emmanuel Macron's centrists lost heavily to hard-right and left-wing parties in a snap parliamentary election. The president appointed a moderate prime minister, who lasted just three months before losing a vote of confidence, the first time the National Assembly has turfed out a government since 1962. Mr Macron appointed another centrist, François Bayrou, to the job. It wasn't all gloom for Mr Macron. The Paris **Olympics** were a success and a restored **Notre Dame** reopened just five years after a fire gutted the cathedral.

The beleaguered **German** government led by Olaf Scholz also lost a vote of confidence in parliament, triggering early elections for February 2025.

Hurricane Helene, which hit Florida and the south-eastern United States, was among the worst **storms** of 2024, killing over 200 people there. Valencia was deluged by flooding from heavy rains; at least 220 people died. In December Mayotte, in the Indian Ocean, was devastated by a cyclone. Thousands of islanders are missing.

Ballot or the bullet

Venezuela's opposition candidate for president, Edmundo González, was recognised by America and the EU as the winner of an election, though Nicolás Maduro's regime thought otherwise and the autocrat stayed in office. America slapped new sanctions on Venezuelan officials after the inevitable post-election crackdown on the opposition.

A new transitional council took charge in **Haiti**, though it could do little to stop the violence and chaos caused by roaming gang lords. A peacekeeping force led by Kenyan troops eventually made its way to the country but had little effect. In November the council sacked the prime minister it had approved in May. The worst atrocity was the murder of 180 mostly elderly people by a gang leader who believed they were using witchcraft.

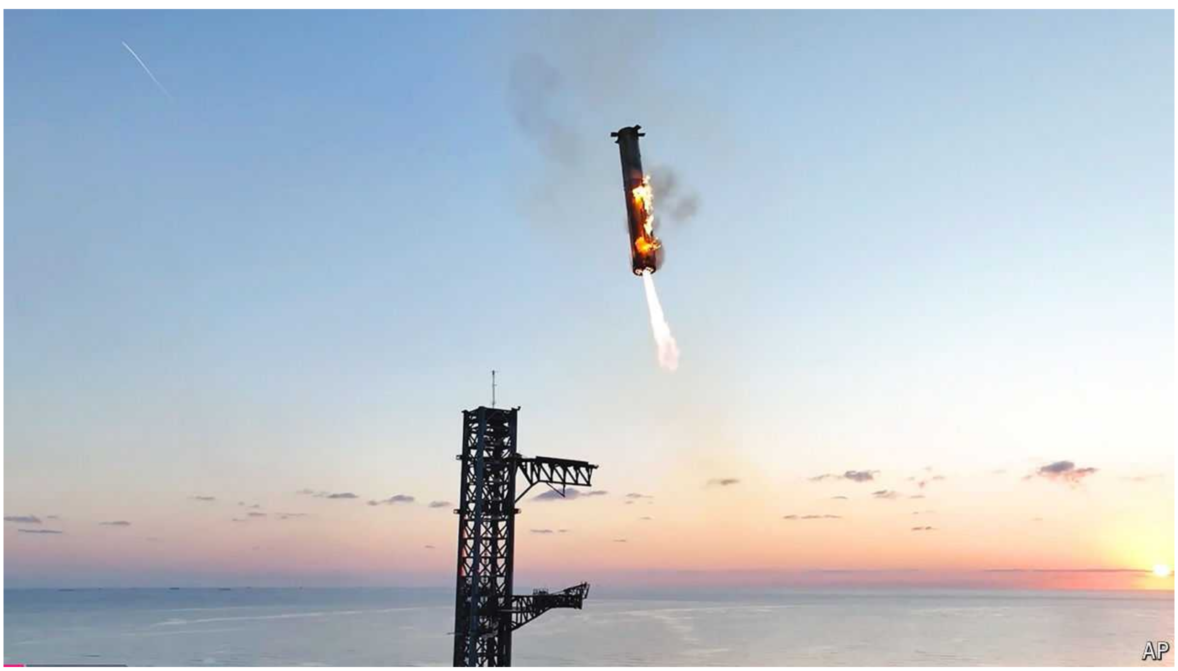
It was a bad year for the **car industry**. The slowdown in demand for electric vehicles hurt Tesla, which reported its first year-on-year decline in deliveries since 2020. Quarterly revenue at BYD, a Chinese maker of EVs, overtook revenue at Tesla for the first time. Tesla's stock was languishing until the "Trump trade" boosted shares in companies that markets think will do well under the new administration. In Europe workers at Volkswagen went on strike after the firm announced a painful restructuring. Carlos Tavares abruptly resigned as chief executive of Stellantis. Honda and Nissan talked about merging.

The industry was also rocked by Joe Biden imposing **tariffs** of 100% on Chinese-made EVs (though America imports few EVs from China). The EU, a much bigger market for Chinese EVs, followed suit by levying its own duties. China responded by imposing trade penalties on certain European products.

Tariffs will be a big issue under Mr Trump, who has vowed to impose more of them to protect American industry.

Every company seemed to push out a strategy in 2024 for using **artificial intelligence**, though Alphabet, Google's parent company, lost $80bn in market value in a day amid controversy over Gemini, its AI model. In overcompensating for diversity Gemini depicted erroneous images of historical figures, including black Vikings and a female pope. Google also lost a landmark antitrust case over its search engine. In 2025 a judge will decide whether to break up Google.

Boeing had a terrible year. In January a panel fell off one of its planes after take-off, leaving a gaping hole in the side of the aircraft. The incident turned up more safety mishaps in Boeing's manufacturing process, leading to the resignation of Dave Calhoun as CEO. To top it all Boeing workers went on strike, causing more delays to production.



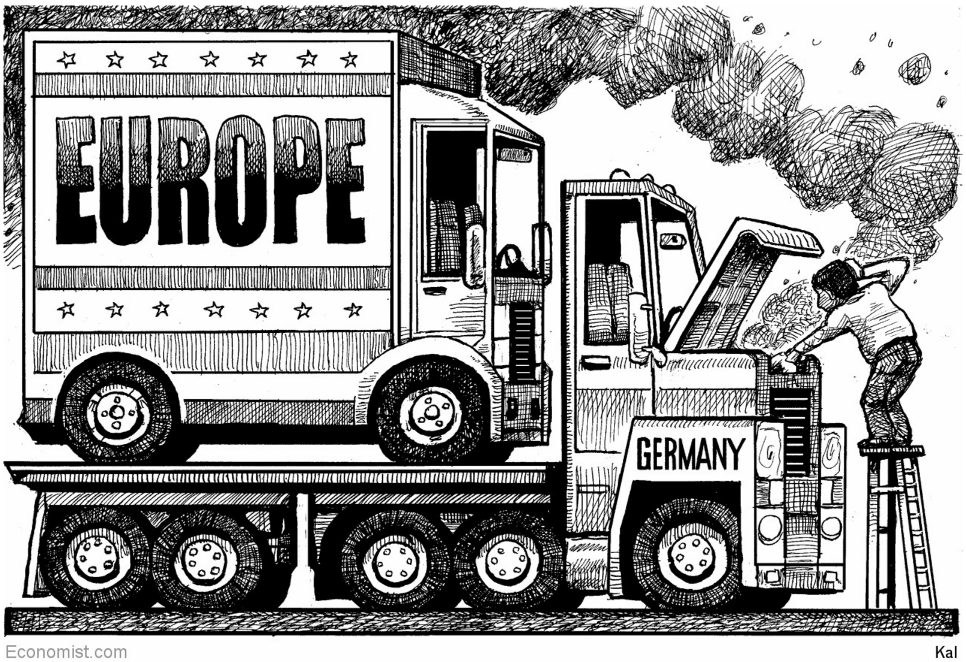
Boeing was also humbled by the breakdown of its Starliner spacecraft, stranding two astronauts at the International Space Station. But there were **successes in space** elsewhere. SpaceX's Starship took one giant leap forward when the rocket's booster returned directly to its launch pad. NASA went back to the Moon for the first time since 1972 with its *Odysseus* lander.

Japan became the fifth country to land a spacecraft on the lunar surface. And a private crew of four astronauts flew 1,400km (870 miles) above Earth's surface, the farthest humans have travelled in space apart from missions to the Moon. The crew was led by Jared Isaacman, whom Mr Trump wants to lead NASA. Mr Isaacman has vowed to "usher in an era where humanity becomes a true spacefaring civilisation".

The world this week

The weekly cartoon

December 19th 2024



Dig deeper into the subject of this week's cartoon:

Europe: Once dominant, Germany is now desperate
Leader: Germany cannot afford to wait to relax its debt brake
German election 2025: Who is ahead in the polls?

The editorial cartoon appears weekly in The Economist*. You can see last week's here.*

This week's cover

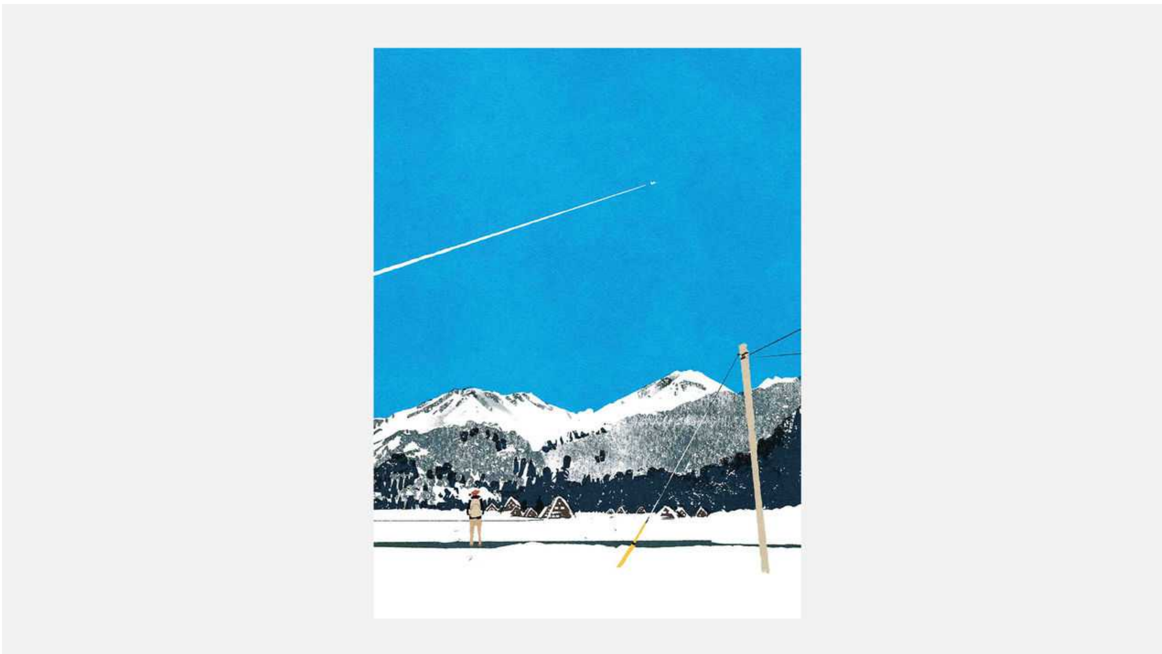
How we saw the world

December 19th 2024

Choosing the cover of the end-of-year double issue can feel odd. No matter how tumultuous the news (and events in Syria and Georgia are making sure that the holiday season brings little in the way of calm), it swerves away from it. Instead inspiration comes from myriad special features, which this year include everything from efforts to cancel Pushkin in Odessa, to the glories of the Triassic period, to the afterlife of aeroplanes.

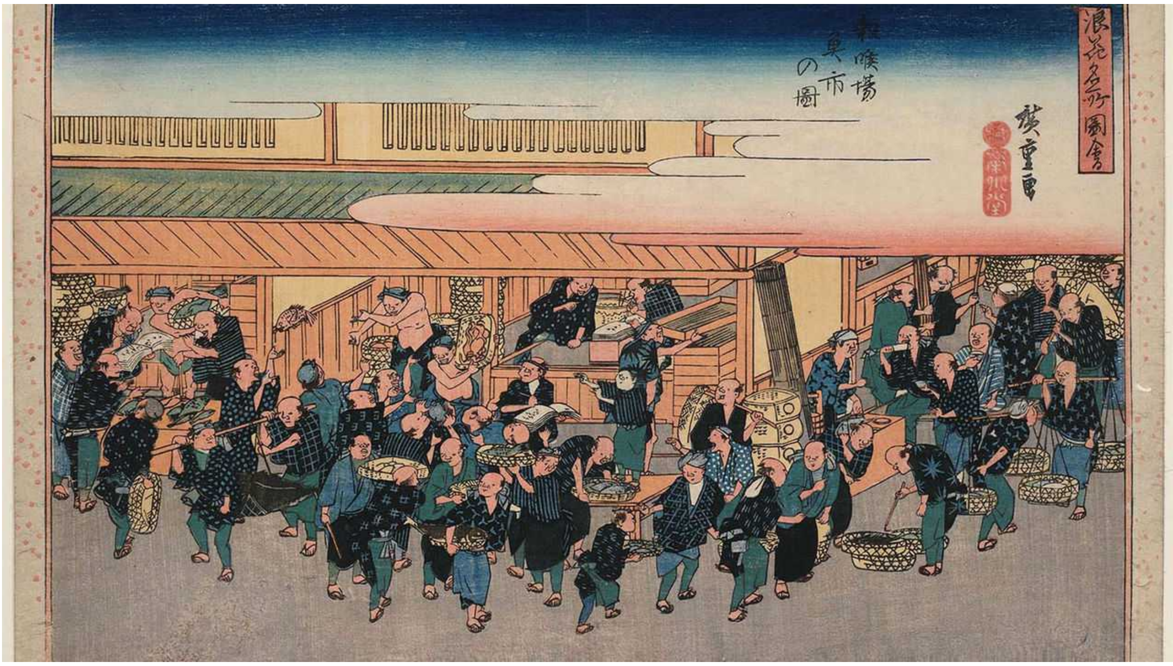
It has become customary for our brilliant designers to come up with two types of cover. The first takes inspiration from just one story to create a single image that nods to the season in some way. The other incorporates all the stories for readers to discover (Christmas Easter eggs, if you like). Last year's cover was an unapologetically festive version of the second variety: a Christmas tree in suitably seasonal green and red.

This year was no different. Our first idea drew on a piece about Paul Salopek, an American writer who is on a 38,000km journey across the planet, retracing the path of the first human migration—on foot. Our correspondent walked with Mr Salopek through the heat of a Japanese summer.

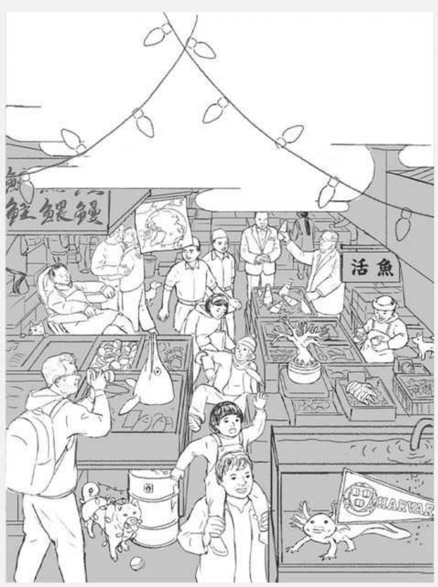


That didn't seem quite the right weather for a cover at this time of year so the sketch showed him walking through the snow. In the first iteration he is rather small, dwarfed by the sheer length of his journey but also oddly overshadowed by a telephone pole.

The second idea drew on a story about [the world's greatest fish market, Toyosu](), in the Japanese capital, Tokyo. Fish is more Christmassy than you might think. Many countries incorporate fish into their festive meals (herring in Denmark, shrimp on the BBQ in Australia, the feast of the seven fishes in Italy). And a fish market is an icy place, which also seemed to suit the season.

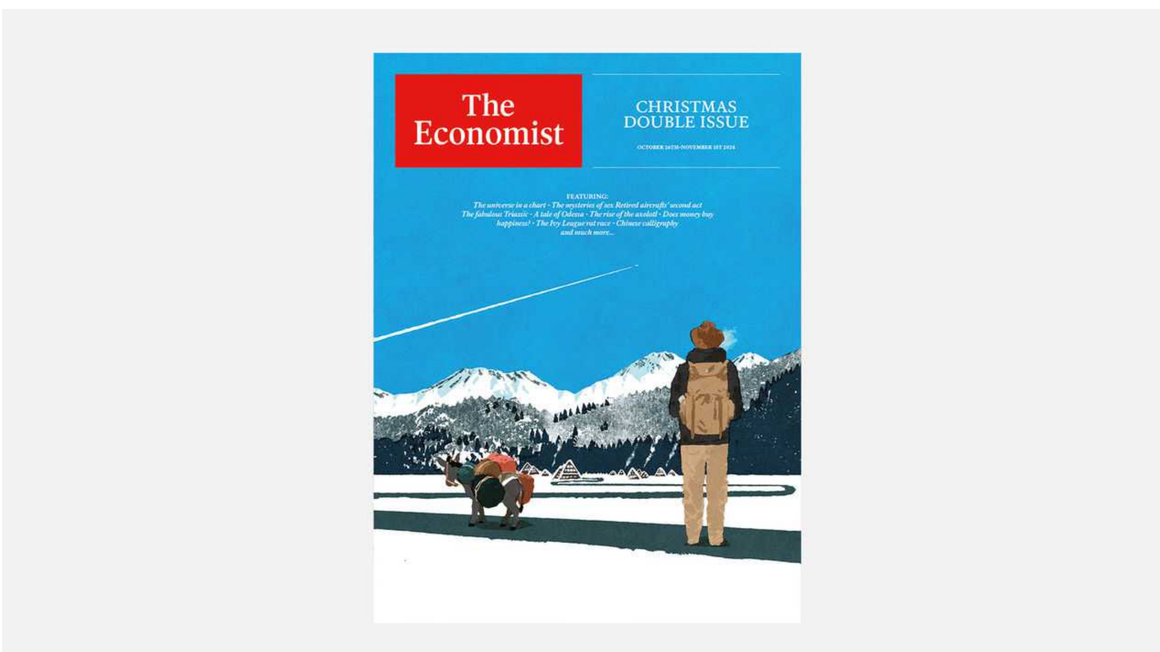


The illustrator, Xinmei Liu, took inspiration from a Japanese painting, “Fish Market at Zakoba”, from the series, “Famous Views of Naniwa”, by Utagawa Hiroshige, which dates back to around 1834. It felt appropriate because apart from the fish market and Mr Salopek’s walk through Japan, we have two other stories about Japan in the issue this year: one about the rigours of [Japanese child-rearing](), and another about Godzilla, a classic of the Japanese film industry.



Ms Liu used the image as a starting point for a cover showing a fish market that featured references to all the stories in the issue. Her first version works well. A good Samaritan helps someone who has slipped over. An axolotl lurks in a tank (mournfully, I assume, given their status as a delicacy in Japan). A couple canoodle between crustaceans, a nod to the story about how little anyone actually knows about sex. A cat and a dog get under everyone's feet, representing the tale of America's abandoned pets and the network of volunteers rescuing them.

It's all in black and white so it's hard to imagine the mood of the final design. The colours of the original artwork are muted blues and browns. The blues would work but replicating those tones wholesale wouldn't bring the cheer we want from a holiday cover. The Harvard pennant looks odd in a tank of water. We're missing Pushkin, who made a late appearance in the issue in a piece about cancel culture in Ukraine. And there isn't enough space to advertise the stories in the issue—crucial information to tempt readers.



In the redrafted first option, Mr Salopek looms much larger and the pole has gone. A heavily laden donkey has appeared, a nice allusion to the extent of his journey and the time of year. The balance of the image works far better and overall it is charming. But it might not hold readers' interest for two weeks.

The reworked fish market is delightful. The colours are warm and cheerful. The fairy lights glow and now include a planetary bulb alluding to a story charting the entire contents of the universe. A new string of lights has been wound around the coppiced bonsai tree. Pushkin has joined the axolotl in the fish tank and the Harvard flag is pinned in a more fitting spot. The references to each story are distinct and cryptic enough to keep you poring over it, if not for a fortnight, then at least for the duration of a glass of mulled wine.■

The World Ahead

- The World Ahead 2025

The World Ahead

The World Ahead 2025

Future-gazing analysis, predictions and speculation

December 19th 2024

EVERY NOVEMBER we publish our annual predictive guide to the coming year, The World Ahead. In this year's edition, our correspondents and invited experts consider the global outlook in geopolitics, business, technology and culture; the implications of Donald Trump's victory, for America and the world; and the challenges and opportunities of rapid technological change in clean energy, artificial intelligence and medicine.

See the full edition.

Leaders

Leaders | The world

What to make of 2024

A turbulent year has shed fresh light on some important truths

December 19th 2024

Our pages have been full of suffering in 2024. War has raged on three continents: the world watched Gaza, Lebanon and Ukraine most closely, but the fighting in Sudan was the most deadly. Storms, tempests, floods and fires have ruined lives, and taken them. All the while, the rivalry between countries siding with China and the American-led Western alliance has deepened, even as America has chosen as president a man whose commitment to that alliance is in doubt.

At first sight, therefore, 2024 has amplified a growing sense that the multilateral order which emerged from the second world war is coming apart. Increasingly, governments act as if might is right. Autocrats flout the rules and the Western powers that preach them are accused of double standards.

However, take a wider view, and 2024 holds a more hopeful message. It affirmed the resilience of capitalist democracies, including America's. At the same time, it laid bare some of the weaknesses of autocracies, including China. There is no easy road back to the old order. But world wars happen when rising powers challenge those in decline. American strength not only sets an example; it also makes conflict less likely.

One measure of democratic resilience was how the year's elections led to peaceful political change. In 2024, 76 countries containing over half the world's population went to the ballot box, more than ever before. Not all elections are real—Russia's and Venezuela's were farcical. But as Britain showed, when it turfed out the Conservatives after 14 years and five prime ministers, many were a rebuke to incumbents.

Elections are a good way to avert bad outcomes. In India, in a raucous festival of democracy, the increasingly illiberal government of Narendra Modi had expected to enhance its dominance. Voters had other ideas. They wanted Mr Modi to focus less on Hindu nationalism and more on their standard of living, and they steered him into a coalition. In South Africa, the African National Congress lost its majority. Instead of rejecting the result—as many liberation movements have—it chose to govern with the reform-minded Democratic Alliance.

In America the year began amid warnings of election violence. Donald Trump's clear victory meant America escaped that fate. That is a low bar, but Americans may now not face such perilous circumstances for many years—in which time its politics will evolve. The fact that so many African-Americans and Hispanics voted Republican suggests that the Democrats' divisive and losing politics of identity has peaked.

The enduring nature of America's power was visible in the economy, too. Since 2020 it has grown at three times the pace of the rest of the G7. In 2024 the S&P 500 index rose by over 20%. In recent decades China's economy has been catching up, but nominal GDP has fallen from about three-quarters the size of America's at its peak in 2021 to two-thirds today.

This success is partly thanks to pandemic-inspired government spending. But the fundamental reason is the dynamism of the private sector. Along with America's huge market, this is a magnet for capital and talent. No other economy is better placed to create and profit from revolutionary technologies like biotech, advanced materials and, especially, artificial intelligence, where its lead is astounding. Were it not for growing protectionism, America's prospects would be even brighter.

Contrast all that with China. Its authoritarian model of economic management will have fewer admirers after 2024, when it became clear that the country's slowdown is not just cyclical, but the product of its political system. President Xi Jinping has resisted a consumer stimulus, for fear of too much debt and because he sees consumerism as a distraction from the rivalry with America. Instead he instructs young people to "eat bitterness". Rather than have his country's disappointing economic performance on display, he has preferred to censor statistics—though flying blind leads to worse economic decisions.

The failings of authoritarianism have been even clearer in Russia. It now has the advantage over Ukraine on the battlefield, but its gains are slow and costly. At home inflation is mounting and resources that should have been invested in Russia's future are being wasted on war. In a free society Vladimir Putin would have paid for his ruinous aggression. Even if the fighting stops in 2025, Russians seem stuck with him.

Attempts to change the world by force are hard to sustain, as Iran has affirmed. With Russia, it spent billions of dollars to keep Bashar al-Assad in power in Syria after an uprising was about to topple him in 2011. As Iran's economy buckled and sentiment hardened against its foreign mischief-making, the mullahs in Tehran could no longer afford to prop up a dictator whose subjects had rejected him. The victory for people power in Syria came after Hamas and Hizbullah, both Iranian proxies, had been crippled by Israel.

Democracies have vulnerabilities, too. This is clearest in Europe, where the political centre is crumbling as governments fail to grapple with Russian aggression and their weakness in the industries of the future. If Europe fades, America will also suffer—though Mr Trump may not see it that way.

And many questions hang over Mr Trump. Iran's retreat and the promise of a ceasefire in Gaza give him a chance to forge relations between Israel and Saudi Arabia, and even to find an accommodation with Iran. He could also oversee a peace that gives Ukraine a chance to escape Russia's orbit. Yet risks abound. Markets have priced in Muskian deregulation and AI-propelled growth. If Mr Trump becomes mired in cronyism, or pursues mass deportation, persecutes his enemies and wages a trade war in earnest rather than for show, his presidency will do grave harm. Indeed, those risks were worrying enough for *The Economist* to endorse Kamala Harris. We still worry today.

Assume, though, that Mr Trump opts against self-sabotage. In 2025 and beyond, technological and political change will continue to create remarkable opportunities for human progress. In 2024 democracies showed that they are built to take advantage of those opportunities—by sacking bad leaders, jettisoning obsolete ideas and choosing new priorities. That process is often messy, but it is a source of enduring strength. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Leaders | Georgia on your mind

Keep the Caucasus safe from Russia

Georgia's protesters and president need help

December 18th 2024

Georgia was once seen as a vital island of democracy in the Caucasus. A year ago the European Union still hoped to fasten it to the West, formally recognising it in December 2023 as a candidate for full membership. Since then, almost everything has gone wrong.

First, in May, the ruling Georgian Dream party passed a law requiring organisations that received money from abroad to register as "foreign agents", a trick used in Russia and in Hungary, under the autocratic Viktor Orban, to harass pro-democracy outfits. Georgian Dream is led by a reclusive billionaire-oligarch, Bidzina Ivanishvili, who made a fortune in Moscow in the 1990s before returning home. He has tried to position his country in equipoise between Russia and the West, but has found himself ever more firmly under Vladimir Putin's thumb.

The EU said in May that the new law looked as if Georgia were wriggling out of its pre-membership promises to reform, not least because the new conditions would hamstring independent election monitors. And the general election in October was indeed far from fair. Plausible claims of ballot-rigging, biased state media, threats to ban opposition parties and the intimidation of voters were well enough documented for the European Parliament to reject the result and call for a fresh poll. Georgia's president, Salome Zourabichvili, also called the election illegitimate.

Georgian Dream responded on November 28th by suspending the country's accession talks with the EU, triggering vast demonstrations in the capital, Tbilisi, and many other cities besides. The police have responded with beatings and arrests. Amnesty International says it has verified "numerous instances of torture and other ill-treatment, several of which also revealed the organised and systemic nature of these abuses".

As the protests and thuggery persist, a crisis looms. Georgia's next president must be chosen by an electoral college consisting of the parliament plus regional representatives. Ms Zourabichvili, whose term is due to end on December 29th, says that this parliament is illegal and refuses to stand down until it is replaced by a body that was elected fairly. Meanwhile the college, dominated by Georgian Dream, has chosen a new president, a former Manchester City footballer, in a vote with only a single candidate.

How should the West respond? Ms Zourabichvili needs support for her brave refusal to hand her office to Russia's choice. Those who back democracy should continue to recognise her, not her rival, as president. In addition, sanctions should be imposed on those responsible for the violence and for cooking the election. Some countries, including America, Ukraine and the Baltic states, have made a start, with travel bans on a few top officials, and in some cases on Mr Ivanishvili, who holds no government position. These could be reinforced by reaching further down the power structure (to cover those who run the state media, say), as well as extending them to the subjects' families. Those most responsible should have their assets frozen.

Two big omissions from the list of those imposing personal sanctions stand out. One is Britain. Like many other countries, it has halted most forms of official co-operation, but that hits mainly the innocent. The other is the EU. This week its impressive new foreign-affairs chief, Kaja Kallas, proposed a list of people for sanctions, but her move was blocked by the vetoes of Hungary and Slovakia, both led by apologists for Mr Putin. If you needed an emblem of the EU's shameful weakness in the face of autocracy, that would be hard to beat. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Leaders | Of clouds and Crutzen

Global warming is speeding up. Another reason to think about geoengineering

Reducing sulphur emissions saves lives. But it could also be hastening planetary warming

December 19th 2024

SEEN FROM afar—as it first was, by human eyes, on Christmas Eve 1968—Earth is a wonder. When the astronauts of Apollo 8 saw their bright, cloud-girdled home rise over the barren lunar horizon they recognised at once that it was dynamic, beautiful and exceptional: something to be cared for.

But the view from space does not only inspire: it also informs. Satellites reveal how Earth is changing, and thus what sort of care it needs. And the latest such diagnostic information is that, although Earth remains as beautiful as ever, it has been getting a little less bright.

Satellite data show that, since the turn of the century, Earth's albedo—the amount of incoming sunlight it reflects—has been dropping. Because light not reflected is absorbed, that adds heat to the system and exacerbates global warming. It is part of the reason why the rate at which the planet is warming, until the 2010s around 0.18°C a decade, now appears to be well over 0.2°C a decade. In the decade to 2023 (admittedly a particularly hot year) it was 0.26°C. For ecosystems under stress the rate of warming can matter a lot; for humans faster warming brings forward extremes that might not have been seen for decades.

One reason for this dimming is air pollution—or, rather, its absence. Fossil fuels contain traces of sulphur along with the carbon and hydrogen that give them their name; the sulphur dioxide that is created when hydrocarbons burn forms tiny airborne particles that make the air smoggy. This is deadly. Every year global deaths from air pollution number in the millions.

Preventing sulphur emissions from getting into lungs improves people's health, productivity and spirits. This is why the Chinese Communist Party has been keen on such reductions. And China's efforts have been impressive; over the past two decades scrubbing sulphur from smoke stacks has reduced its gargantuan emissions by about 90%. Likewise, restrictions on the sulphur content of fuel used by shipping has seen emissions on the high seas plummet since 2020.

Reducing sulphur emissions also lowers albedo. Sulphate particles scatter light. As a result, some of it bounces back into space. Sulphate particles can also serve as seeds for the water droplets that make up clouds. Fewer such seeds can make clouds less bright; sometimes clouds do not form at all.

Quite how much of Earth's accelerated warming can be put down to the reduction in sulphur emissions is uncertain. The workings of clouds are complex and sulphur is not the only factor at play. But atmospheric scientists have long expected more warming when this offset is removed. As one of the greatest of them, Paul Crutzen, wrote in 2006: "Air-pollution regulations, in combination with continued growing emissions of CO_2, may bring the world closer than is realised to the danger [of catastrophic global warming]."

In his seminal paper Crutzen also noted that there was an alternative. Particles high in the stratosphere stay aloft far longer than those close to the surface, and so provide much more cooling per tonne. A thin layer of sulphates deliberately added to the stratosphere could provide the same amount of cooling as all the thick, polluting smogs clogging the lower atmosphere while doing much less damage to human health. Crutzen did not advocate this. But he did say it should be researched more vigorously, and that there might be deteriorations which warrant action. One such, he suggested, would be seeing the rate of warming rise above 0.2°C a decade.

Since then, the amount of research into solar geoengineering with stratospheric aerosols has increased substantially. But it remains pitifully small, in part because the experts whom governments listen to on climate and research policy are leery of it. A report to the European Commission at the end of 2024 added to calls for a moratorium on practical steps towards it, and argued for various restrictions on research. And it is indeed a daunting prospect, not least because it requires a high level of trust in science, a resource declining even faster than the world is warming.

Crutzen wanted swift cuts in greenhouse-gas emissions to render debates about geoengineering moot; he also feared that this was just "a pious wish". The world's capacity to do without fossil fuels has increased a lot since then. But emissions have yet to decline, and warming is speeding up. As well as cutting emissions, governments should urgently heed Crutzen's call for research and discuss how such powers might be used. The message of Apollo 8 still applies; the bright, beautiful world needs to be cared for. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Leaders | When nations excel

The Economist's country of the year for 2024

The winner toppled a tyrant and seems headed for something better

December 19th 2024

Each December *The Economist* picks a country of the year. The winner is not the richest, happiest or most virtuous place, but the one that has improved the most in the previous 12 months. The debate among our correspondents is vigorous. Previous winners include Colombia (for ending a civil war), Ukraine (for resisting an unprovoked invasion) and Malawi (for democratising). In 2023 we gave the prize to Greece for dragging itself out of a long financial crisis and re-electing a sensible centrist government.

Our shortlist this year had five names on it. Two took a stand against bad government. In **Poland** the new administration of Donald Tusk, formed after parliamentary elections in 2023, spent the year trying to fix the damage done by its predecessor. The Law and Justice party, which had ruled for eight years, eroded liberal democratic norms by capturing control of the courts, media and business, following the model of Viktor Orban in Hungary. Mr Tusk has begun the long slog of repairing institutions. He has also made Poland an even stronger pillar of European security, with its large army and rising defence spending. However, he has cut some constitutional corners, and Poland's relations with Germany are poor.

Some 10,000km away, **South Africans** also demanded better. In elections in May the African National Congress (ANC) lost its parliamentary majority for the first time, having ruled since the end of apartheid in 1994. Voters were fed up with economic failure, aggravated by ruling-party bigwigs gutting and looting organs of the state. The ANC must now govern through a coalition, and its more reasonable leaders have chosen to do so with the Democratic Alliance, a liberal party with a record of running towns and cities well. The new coalition will struggle to solve gaping problems such as unemployment and crime, but it offers a chance of better rule.

A country can win our prize for economic reform. **Argentina**'s policies have long been dire, with profligate spending, high inflation, multiple exchange rates and serial defaults. In 2024 Javier Milei, its "anarcho-capitalist" president, unleashed the world's most radical free-market experiment, slashing public spending and deregulating. This paid off: inflation and borrowing costs fell and the economy started to grow again in the third quarter. But Argentina still has an overvalued currency, and public support for shock therapy may not last.

Our runner-up is a late entrant: **Syria**. The ousting of Bashar al-Assad on December 8th ended half a century of depraved dynastic dictatorship. In just the past 13 years civil war and state violence have killed perhaps 600,000 people. Mr Assad's regime used chemical weapons and mass torture against perceived opponents, and resorted to industrial-scale drug-dealing to raise cash. His fall brought joy to Syrians and humiliation to his autocratic backers—Russia, which lent him air power to drop barrel bombs, and Iran, which counted Syria (with Hamas and Hizbullah) as part of its "axis of resistance".

Mr Assad was easily the worst tyrant deposed in 2024. But the quality of what replaces him matters, too. Hayat Tahrir al-Sham (HTS), the most powerful rebel group, which now controls Damascus and chunks of the rest of Syria, has been pragmatic so far. But until 2016 it was affiliated with al-Qaeda, and for some years it governed Idlib province competently, but repressively. If HTS gains too much power, it may impose an Islamist autocracy. If it has too little, Syria may fall apart.

Delta force

Our winner is **Bangladesh**, which also overthrew an autocrat. In August student-led street protests forced out Sheikh Hasina, who had ruled the country of 175m for 15 years. A daughter of an independence hero, she once presided over swift economic growth. But she became repressive, rigging elections, jailing opponents and ordering the security forces to shoot protesters. Huge sums of money were stolen on her watch.

Bangladesh has a history of vengeful violence when power changes hands. The main opposition party, the BNP, is venal. Islamic extremism is a threat. Yet the transition has so far been encouraging. A temporary technocratic government, led by Muhammad Yunus, a Nobel peace prizewinner, is backed by students, the army, business and civil society. It has restored order and stabilised the economy. In 2025 it will need to repair ties with India and decide when to hold elections—first ensuring that the courts are neutral and the opposition has time to organise. None of this will be easy. But for toppling a despot and taking strides towards a more liberal government, Bangladesh is our country of the year. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Leaders | Doing good

How to give money to good causes

Let a balance of morals, liberty and efficiency be your guide

December 19th 2024

Satoshi Kambayashi

It is the season for giving. Nearly two-fifths of Americans tell pollsters that they sign over more of their savings to charity in the holiday season than at any other time of year; more than two-thirds of Britons say they plan to donate money at Christmas. But the labyrinth of charities, good causes and people in need can be as hard to navigate as the seasonal family get-together. How to give well?

Unfortunately, the idea that you should treat charitable donations methodically has been tarnished by effective altruism, a movement associated with Sam Bankman-Fried (SBF), a convicted crypto con man who insinuated that his fraudulent enterprise was ultimately all about doing good. Happily, the notion that there is a wise way to give has a long and noble history. Aristotle suggested that virtue stemmed from correct giving: to the right people, in the right amounts, for the right reasons and at the right times.

For the modern giver, three considerations could usefully serve as a guide. First should be to observe your own moral priorities. Giving to rescue dying languages and to save dying children both have an intrinsic value. Religion and philosophy may help you balance their competing claims. But ultimately, how important you find one good cause compared with another is a matter of personal choice.

Another consideration is how much freedom you should allow worthy recipients to choose between different good things for themselves. You might be fired up with the mission to lift up the neediest out of poverty. But they may prefer to spend your precious money on a funeral for a close friend than to invest in a cow as a source of future income. You need to decide how much to defer to their wishes. This way of thinking helps explain why schemes offering cash transfers have become more popular in recent years. GiveDirectly, which offers such handouts in poor countries, has alone raised over half a billion dollars in the past three years.

The third consideration is efficiency. Be it preventing river blindness, improving literacy or doling out cash, some organisations are better than others at getting the job done.

However, it is not always possible to know how efficient charities are. Sometimes the dollar gains for each dollar spent are hard to measure, if not impossible. How do you quantify whether a programme to support democracy has been successful? If an autocrat ends up in power, you may conclude the effort was futile; then again, you may think it was worth staving off democratic collapse at least for a while. Smaller charities can struggle to collect the data they need to evaluate their work. That does not mean charities that try to solve complex problems or lack data are worse; just that how well they do good is anyone's guess.

When you can get evidence about charities' efficiency, it should enter your calculations. A defined goal, such as digging wells for clean water, should be measurable. So, too, should programmes that promise quick results.

Because some charities really do get more done per dollar, whom you give to can matter as much as how much you give.

GiveWell, a charity ranker, spends thousands of hours on such calculations to produce a list of the best charities. Drawing on the SBF-free insights behind effective altruism, it focuses on the organisations with plenty of data and places special weight on saving the lives of young children. Charities themselves could do more to be transparent on efficiency, so as to help donors make more informed decisions.

Not just for Christmas

Obviously, there is more than one way of measuring efficiency and different methodologies will reflect different priorities. Rigorous giving calls for thought and judgment. That may seem like hard work, but the effort helps donors maximise the benefit of what is given. And, as Aristotle argued, it makes those who give better, too. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Letters

- Letters to the editor

Letters | On gambling, Stack Overflow, museums, Africa, Britain, ancient Rome, book titles, Britishisms, lift humour

Letters to the editor

A selection of correspondence

December 19th 2024

Letters are welcome via email to letters@economist.com

The dark side of gambling

I was shocked, saddened and outraged about your leader stating that the boom in sports betting is something to be celebrated ("America's gambling frenzy", December 7th).

I lost my 28-year-old son to suicide in May. I did not know until after his death that he had lost thousands of dollars of his hard-earned money. He had kept it secret that a sports-gambling problem had overtaken his life and mind. Based on the evidence that I have gathered since my son's sudden death, I would argue that the "gambling frenzy" is mostly about exploiting and endangering people's lives in the name of this predatory industry's greed and disregard for human life, rather than being "about people being free to enjoy themselves".

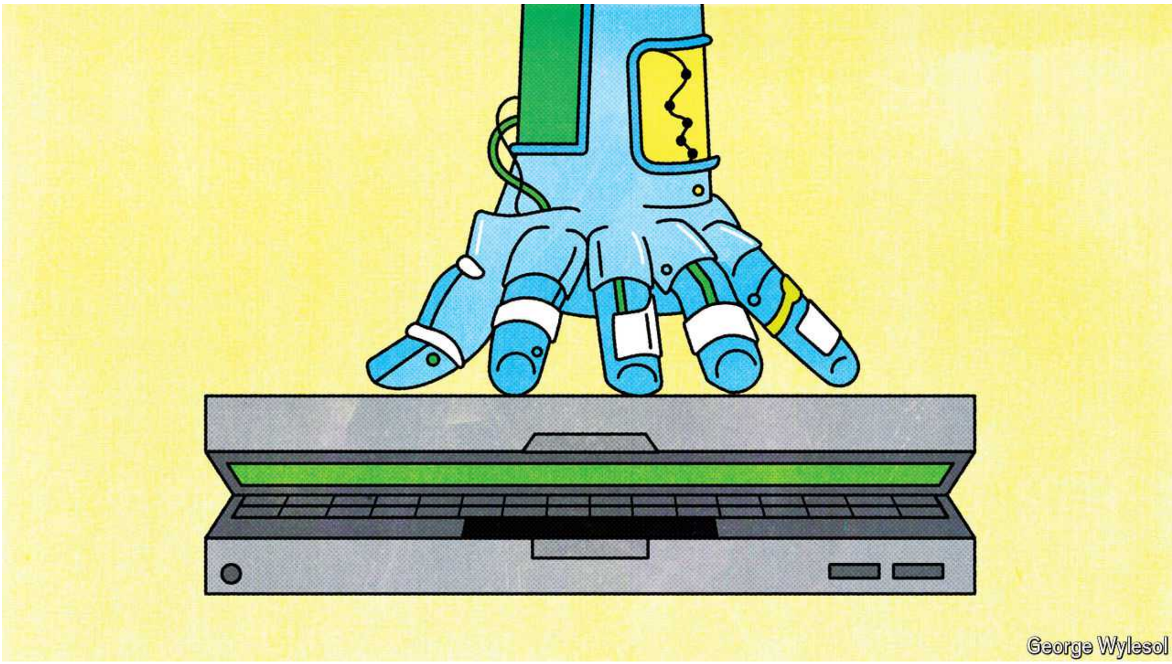
You skirted over the role of technology. The smartphone has indeed fuelled the boom. Armed with data of an individual's betting tendencies, the industry cultivates and fuels addiction and targets those whom it has identified as problem gamblers. Horrified as I examined my son's phone after his death, I saw first-hand how sports-gambling operators offered him free box-seat tickets to live sports events, addressed directly in texts to him from a "VIP host" and "free" ($200-plus) gambling money to ensure he remained actively engaged with the multiple gambling apps on his phone.

You described online sports gambling as "often a communal activity", and therefore less of a worry than "sitting at a [slot] machine, alone". The $10,000 bet my son frenetically placed on a losing NHL Stanley Cup game team during the last 48 hours of his life was followed by a series of still more frenetic bets placed in isolation on his phone to try to win back his massive loss. It is clear he died alone.

You said that "Other vices that America enjoys and taxes, like alcohol, are responsible for far more catastrophic harm." Yet, according to recent studies in America and Britain, people who are addicted to gambling are more likely to attempt suicide than those addicted to substances.

As described by Les Bernal, national director of the Stop Predatory Gambling organisation, the entire business model is based on human suffering—and this is normalised.

NAME WITHHELD



Stack Overflow responds

"Death by LLM", November 23rd) mentioned Stack Overflow as one of ChatGPT's corporate victims. Like the rise of the web, mobile and cloud, generative artificial-intelligence tools are another chapter in the changing technology landscape and by no means offer a conclusion for any particular company or industry.

For more than 15 years, developers have come to Stack Overflow to get a solution to a specific problem. Our goal over the past two years has been to ensure developers not only contribute to the foundation of GenAI, they also become an integral part of building its future.

There are more than 58m questions and answers on the Stack Overflow site alone. In a world where technology evolves at an unparalleled pace, the ability of teams to share insights, solutions and experiences is crucial and cannot be achieved just by AI. The future of the internet and the modern tech landscape isn't going to be measured by web traffic. It is going to be focused on the quality of data, trust in data and the communities of experts and human beings curating that data.

With so many GenAI solutions plagued by misinformation, a user's trust in data, trust in technology products, and trust in community knowledge is more crucial than ever. This is at the heart of our recent announcements with companies like Google, OpenAI and GitHub to ensure AI tools are socially responsible in sharing content from Stack Overflow and attributing it back to the users that generated those responses.

There are powerful synergies between Stack Overflow and these AI partners. This hardly feels like we are a victim of this technology. Instead we are an active architect in building its future.

PRASHANTH CHANDRASEKAR
Chief executive
Stack Overflow
New York


Alamy

Museums are for the people

The soundbite from Dan Hicks that the museum is "a prison cell, where objects go to die" may reflect today's fashionable thinking, yet repeating it uncritically has led to us losing sight of what the Western museum is about: unrestricted mass access to heritage and art ("Losing your marbles", *The World Ahead 2025*, November 23rd). The British Museum was founded in

1753 and, except in the 1980s, has always been free for the public to visit. Historically there have been precious few institutions in the world where this has been possible.

It has always been more common for antiquities and art to be monopolised by the few rather than the many, such as in Britain's stately homes. Before they went to "die" at the British Museum, many of the Parthenon sculptures were incorporated into other buildings in Athens. Most Egyptian artefacts were buried with elites and never saw the light of day.

There are places where artefacts die a second death. Museums are not among them.

DR ROBERT FROST
Research fellow
University of Leicester

According to "Restoring pride" (November 30th) Nigeria intends to build an ambitious new museum to adequately host the Benin bronzes. Yet the British Museum refuses to give back its holdings. There is a simple solution to this conflict. Copy the bronzes identically, which is possible today, put them anonymously next to each other and invite Nigerian and British museum representatives to choose between them in a random sequence. The public would then have a better opportunity to see these beautiful pieces.

BRUNO FREY
Permanent visiting professor
University of Basel

Give Africa some credit

"The Africa premium" (November 16th) highlighted how perceptions of risk inflate borrowing costs for African countries. However, your dismissal of homegrown African credit-rating agencies underestimated Africa's capacity for transformative innovation. A credible, African-based credit-rating agency, armed with deep regional expertise and granular data, could reshape risk assessment. The experiences of Latin America and Asia demonstrate that local rating agencies don't merely reflect market realities, they help transform them.

DIANA AMOA
Greenwich, Connecticut

The road less travelled

It is no wonder that the England Coast Path took so long to complete ("Coastally awesome", *The World Ahead 2025*, November 23rd). In his famous article from 1967, "How long is the coast of Britain? Statistical self-similarity and fractional dimension", Benoit Mandelbrot proved that, mathematically speaking, the coast of Britain is, in fact, infinitely long. The article gave birth to the theory of fractal geometry.

PETER TANKOV
Institut Polytechnique de Paris


PictureLux/Eyevine

Tutor in classics

"Gladiator II" may be a poor film overflowing with historical inaccuracies ("What does Gladiator II get wrong?", November 16th). But perhaps it will spark an interest in studies of the ancient classics and Rome. As Dame Mary Beard mentioned in "SPQR", historical Rome is a study of imagination, fantasy, horror and fun as well as a subject from which we can learn a great deal about our own societies today. In these troubled times, we would be wise to pay heed to the brilliant books analysing the Roman Empire and the reasons for its downfall. If it takes a part-gibbon, part-Gollum computer-generated monkey to ignite interest in Rome, so be it.

CHRISTIAN SCOTT UHLIG
Copenhagen

Solid Christmas reading

Thank you for the list of books with the oddest titles, which included such gems as "Highlights in the History of Concrete" ("Judging a book by its title", December 14th). I am as much a fan of severe contests between intelligence and ignorance as any of your loyal readers, but it was still a welcome treat to read an article in *The Economist* that had my husband and I crying with laughter. And I'm sure all my loved ones will be delighted with their forthcoming Christmas presents.

PETER EDWARDS
Cambridge

You included "The Book of Marmalade: Its Antecedents, Its History and Its Role in the World Today" as one of the winners of the Oddest Book Title the Year. You asked, "How many different roles can marmalade have? And above all who on earth is buying this stuff?" For the latter, the answer seems obvious: Paddington Bear.

BILL LLOYD
Borex, Switzerland

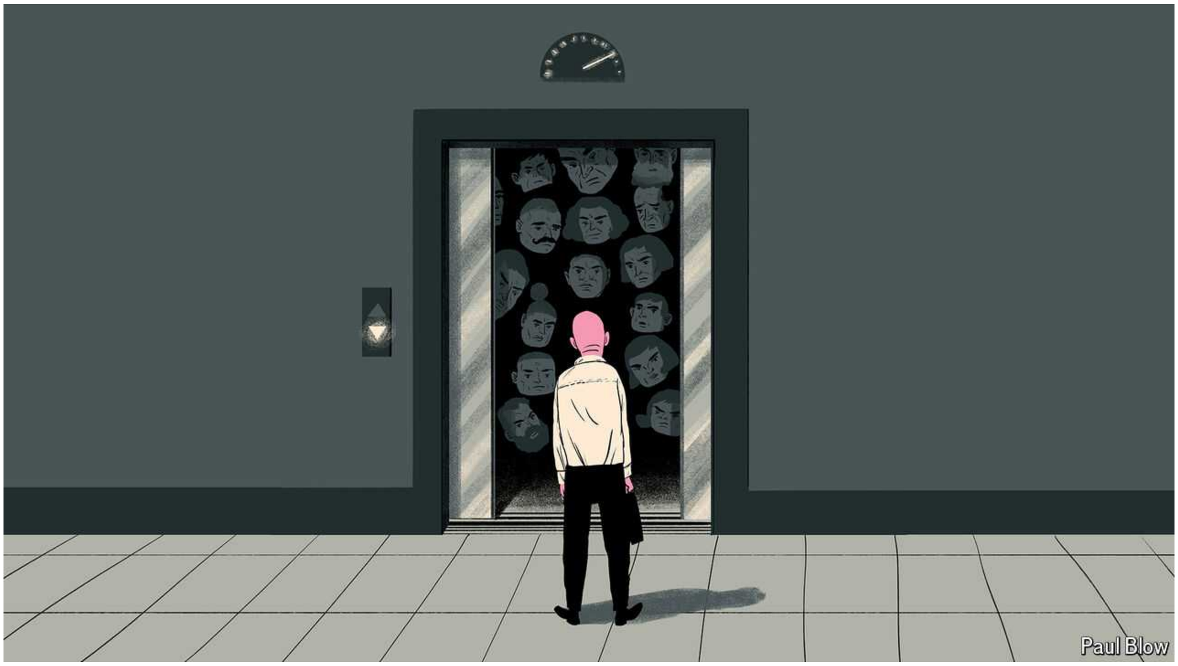
Some authors just don't want to die not knowing what would have happened if they hadn't given their book a title featuring the longest "F" word in the English language.

JON MANNING
Author of "Overcoming Floccinaucinihilipilification: Valuing and Monetising Products and Services"
Melbourne

Strange Britishisms

Dorothy Corner Amsden's letter (November 2nd) on unfamiliar British expressions did not mention "put paid" or "cock-a-hoop". Then there is "chancellor of the exchequer".

MICHAEL FIELD
Farmington, Maine



A murder mystery in the lift

The letters on elevator etiquette (December 14th) in response to a Bartleby column reminded me of the story of Alfred Hitchcock and Peter Bogdanovich. Both men were descending in an elevator in Manhattan and Hitchcock couldn't resist exploiting the usual awkward dead silence. Just as other people were getting in the elevator, he turned to Bogdanovich and started a conversation with "Well, it was quite shocking, I must say there was blood everywhere!"

KEITH CARLSON
Belmont, Massachusetts

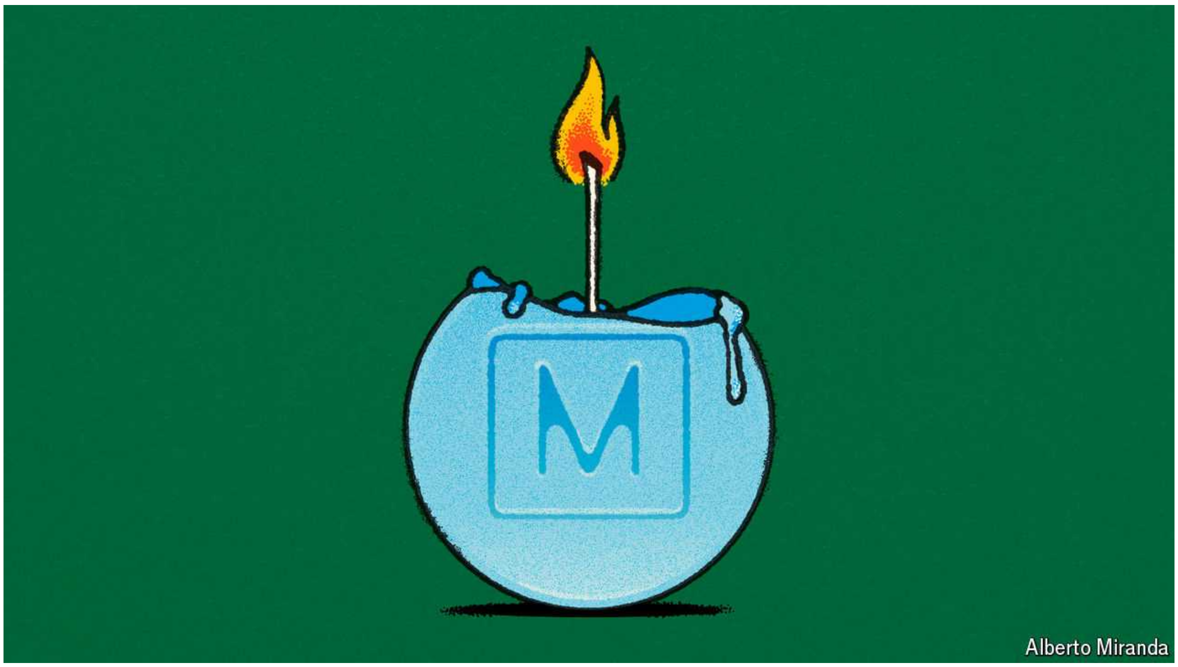
United States

United States | Through the eye of the needle

Is the opioid epidemic finally burning out?

Overdose deaths are falling steadily

December 15th 2024



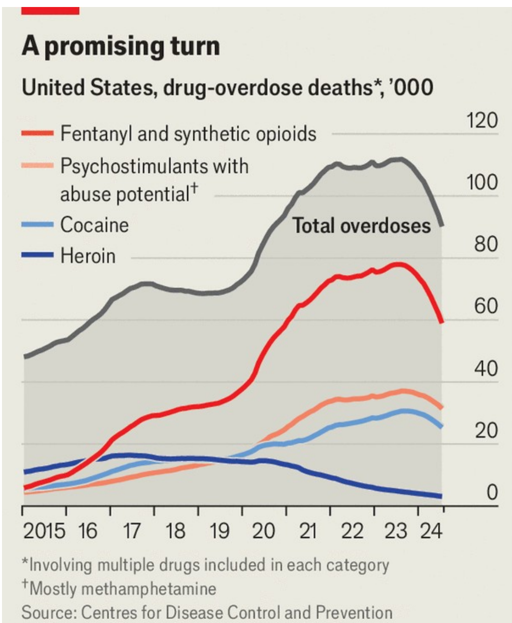
Alberto Miranda

Standing in the bitter cold outside the DeCoach Recovery Centre, a drug treatment clinic on the edge of an ocean of car parking in Hamilton, Ohio, Scott Weaver explains where his life went off track. First, he says, about ten years ago he was in a car wreck. “I started taking pills”, he explains—they were prescribed. “But I wasn’t hooked on them at that time.”

Then his mother got cancer and, in his depression, he began taking her pain pills. After she died he turned to heroin. Then came fentanyl. He lost a girlfriend to an overdose. “It messed me up pretty bad,” he says. Now Mr Weaver is clean and he is taking Suboxone, a drug that is meant to reduce cravings. “It works,” he says. “People will tell you it don’t because they don’t want to take it, ‘cause they ain’t done yet.”

Mr Weaver's story reflects America's opioid crisis. Having begun in earnest two decades ago with the overprescription of pain pills, it escalated through heroin and now to fentanyl, a synthetic opioid so potent that 0.2% of a gram can kill. Over a million Americans have died from overdoses since the turn of the century; 108,000 of those deaths were in 2022 alone.

And yet there is reason to think that the tide may be turning. Data published by the Centers for Disease Control and Prevention, a government agency, suggest that nationally, deaths peaked around August last year. In the 12 months to July this year, there were 90,000 deaths—still an appalling total, but a reduction of around a sixth (see chart). Could America be nearing the point where it is, as Mr Weaver might put it, "done" with opioids?

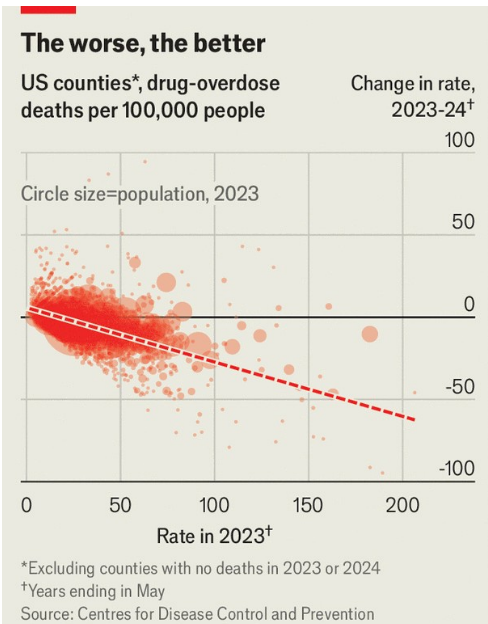


The Economist

No one is exactly sure why deaths might have started falling. "We're all speculating at this point," says Daniel Ciccarone, a professor in addiction medicine at the University of California in San Francisco. Data on the number of fentanyl users are scarce, as are data on prices and purity.

Addiction treatment has been expanding for years. But the drop in deaths is too sudden and too widespread (almost all states have experienced it) to be primarily down to this. There has been no dramatic increase in prescriptions of anti-addiction drugs, either. More naloxone kits (an injection which can reverse an overdose, first approved under the brand name Narcan) are being distributed. That must be helping, but also cannot fully explain the drop.

One possibility is a supply shock. According to the Drug Enforcement Administration, which polices drug smuggling, the amount of fentanyl in pills they intercept has fallen. Some reports suggest the Sinaloa cartel, a huge Mexican organised-crime group, has stepped back from smuggling fentanyl because of American pressure. In July two high-ranking members, including the son of El Chapo, one of Sinaloa's founders, were arrested. Experts however say it is far too early to be sure.



The Economist

Another possibility is that the decline represents a return to pre-pandemic norms. When covid-19 hit, opioid overdoses soared. It is hard to say why, but feels intuitive: hospitals were full of covid patients, many treatment centres had shut, and more people were experiencing the sort of traumatic losses that can make them turn to drugs. If this is the primary reason, the current decline will level off, and seems unlikely to keep falling.

If this is instead a sustained drop, look to a third explanation. Though deaths have fallen in most of the country, the steepest improvements have been in places that were hit especially early, particularly in Appalachia and the Midwest. In Ohio, which covers both regions, the number of deaths dropped by a quarter in the year to July, the second biggest improvement of any state (North Carolina's was even steeper).

The epidemic may simply be "burning out", suggests Professor Ciccarone. The theory is that the most vulnerable have already died, that those left behind understand the danger from fentanyl, and so new addicts do not replace them.

For a sense of why this is plausible, a visit to Butler County, Ohio—of which Hamilton is the seat—is instructive. The county (where J.D. Vance, the vice president-elect, grew up) is a sprawl of farmland and industrial towns north of Cincinnati. It was also early to the opiates boom (in the 1990s Mr Vance's mother, who worked as a nurse, was among the first to get addicted to pain pills). Now, it is among the places improving fastest in America.

So far this year, there have been 88 suspected overdose deaths in the county, down from 130 last year. In 2017, the county's worst year on record, there were 236. "We never thought we would see this drop this fast," says Jordan Meyer, an epidemiologist at the county's health district, which distributes Narcan kits and fentanyl testing strips. That must have helped. But the biggest change in Butler county is how drug users are behaving.

"It's fear", says Dave Hawley, the clinical supervisor at River Rocks Recovery, a treatment centre in Middletown. In a place like Middletown, almost everybody will know somebody who has died of an overdose recently, he says. With the rise of fentanyl, "It's not about riding the edge anymore". Even hardened addicts are taking more precautions than they used to.

A few years ago the main way to take fentanyl was by injecting it. Now addicts are taking pills or smoking it, which is less risky. Xylazine, a veterinary sedative, is also increasingly mixed with fentanyl into a potent cocktail known as "tranq". Tranq comes with awful costs—injecting it can lead to flesh-rotting infections—but curiously it may be helping some users to avoid taking too much fentanyl.

According to Mr Hawley, many fentanyl addicts have switched to taking methamphetamine. This is used either as a straight substitute or to help ease withdrawal or overcome cravings. Meth is extremely unhealthy. But in the short term, it is cheap and lasts a long time, and the overdose risk is smaller; if you are in opioid withdrawal, it can give you the energy to go to work. Of the fentanyl overdoses still happening in Butler county, half now also include methamphetamine.

Drug epidemics can be depressingly persistent. Deaths have recently risen in Scotland, one of very few other places to suffer an overdose death rate comparable to America's. But in most of Europe, the 1980s heroin boom faded away. Memories last longer than funding streams or police successes. At the treatment centre in Hamilton, Mr Weaver says he too thinks people have learned from the awful experience of the past few years. "It's just more people who want to get their lives back together", he says. Drugs offered an escape from the monotony and trauma of daily life. But fentanyl was, perhaps, just too much. ■

Stay on top of American politics with The US in brief, our daily newsletter with fast analysis of the most important political news, and Checks and Balance, a weekly note from our Lexington columnist that examines the state of American democracy and the issues that matter to voters.

United States | Gas without light

The Biden administration pursued a mistaken policy on LNG exports

It will be reversed eventually, but not before the courts have had their say

December 19th 2024

"WE CAN NOW assess the future of natural gas exports based on the facts." So declared Jennifer Granholm, America's outgoing energy secretary, in a statement published on December 17th. It accompanied a research report from the Department of Energy (DOE) on the implications of increased exports of American liquefied natural gas (LNG). Despite her reassuring tone, this was a sharp-elbowed effort to place an obstacle in the way of the incoming Trump administration.

Boosting LNG exports ought to have been a point of policy agreement between Messrs Trump and Biden. The former had championed such exports during his first term as "freedom gas" that could help liberate Europe from the tyranny of piped Russian gas. When Vladimir Putin cut off supplies as punishment for Europe's support for Ukraine, Mr Biden heartily supported American LNG exports, which rose to a record high (and will go higher). Projects already approved are set to propel American exports to a level 50% above those of Qatar, a gas superpower, by 2030.

The trouble began when Mr Biden bowed to election-year pressure from the subset of environmentalists hostile to LNG. On January 26th he unveiled a controversial "temporary pause" on pending LNG-export projects so that the DOE's boffins could scrutinise their environmental, security and economic impact. Though not an export ban, it cast a shadow over proposed long-term projects that would benefit countries lacking free-trade agreements with America (including important ones in Asia and Europe). The move rattled the industry's financiers and upset those American allies who import LNG.

The DOE study, released this week, examines various scenarios for export growth and their potential impacts. Though the boffins' language is muted, Ms Granholm paints a stark picture in her letter (which was leaked in advance to the *New York Times*). Further "unfettered" expansion of exports would, she suggests, raise consumer prices, support an adversarial China and contribute to global warming. All three claims are worth examining.

The government's analysis suggests the "unfettered" boom would boost wholesale domestic gas prices by more than 30% and increase costs for the average American household by over $100 a year by 2050. This claim is politically combustible, but open to challenge. An analysis by S&P Global, a research firm, was also published this week. Looking at plausible export levels up to 2040, it finds no big price increase likely. It notes that LNG exports and overall gas production have skyrocketed since 2010 but real gas prices in America have fallen by two-thirds. Abundant shale resources and continued innovation are likely to add to supply and keep prices in check.

As for the claim that increasing American LNG would help China, it is politically clever, playing as it does on anti-China sentiment in Washington, DC, but energetically dumb. Daniel Yergin, a Pulitzer-winning historian of oil markets and vice chairman of S&P Global, notes that globally-traded molecules of frozen gas are fungible, and cargoes are regularly rerouted to the highest bidder. This became apparent during Europe's energy shock when cargoes destined for Asia were resold to European bidders desperate to replace lost Russian gas. America gains no extra security by discouraging exports to China as it will simply get its LNG from eager suppliers in Qatar, Australia or elsewhere.

The third argument is more plausible. If exported gas is produced in ways that are reckless, as happened previously in America's shale patch, a lot of climate-warming methane is released through needless venting and flaring, as well as via leaky pipes and shoddy LNG kit.

The Biden administration has introduced a fee on methane emissions from the hydrocarbon industry, as well as strong rules restricting those emissions. There is little chance of that fee surviving in a Republican-controlled Congress. If Mr Trump scraps those tough methane rules too, then future LNG exports could indeed become a big climate worry.

But that may not happen. Paul Bledsoe of American University points to new methane standards imposed by the European Union that provide an incentive for American exporters eyeing that huge market to cut their emissions of the gas. Giants like ExxonMobil and Chevron already have made investments to do so and support such regulation to avoid being tarnished by smaller and dirtier rivals. Also, if LNG is made with low methane emissions, it is a much cleaner alternative to the coal burning in the developing world.

So will the last-minute gas gambit keep Mr Trump from his promise to lift the LNG pause? Not a chance, especially given that Chris Wright, his designated replacement for Ms Granholm at the top of the DOE, is himself a shale boss. Even so, reckons Kevin Book of ClearView, an energy research firm, the move looks likely to delay the new administration's decision. The study has probably provided enough fodder for LNG opponents to slow things down for a while by bringing lawsuits. ■

Stay on top of American politics with The US in brief, our daily newsletter with fast analysis of the most important political news, and Checks and Balance, a weekly note from our Lexington columnist that examines the state of American democracy and the issues that matter to voters.

United States | Progressive MAGA

Donald Trump's DEI assessment

The Economist has been handed a confidential memo by a consultancy with way too much time on its hands

December 19th 2024

TO: **Susie Wiles**

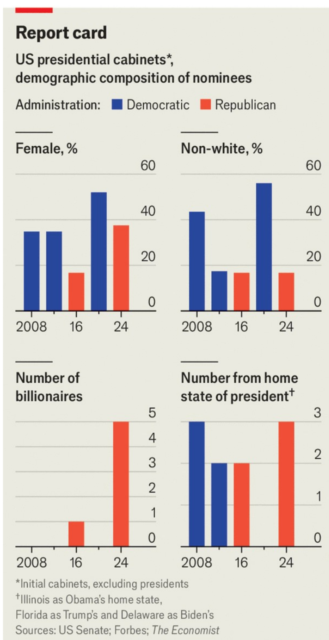
FROM:——**Human Progress Values (a B-corp)**

CC: **Howard Lutnick**

DATE: ——**December 2024**

DONALD (HE/HIM) has made significant strides in enhancing the diversity of his team this year. Although there are of course opportunities for improvement, he can point to several diversity, equity and inclusion (DEI) metrics by which his performance has demonstrably improved. Having previously expressed reservations about the virtues of DEI (notably by calling a former competitor a "DEI candidate"), Donald should be commended for using his privilege to become a more active ally this year.

Donald's proposed cabinet contains several significant firsts. His appointment of [Susie Wiles], the first ever female chief-of-staff, will serve as an inspiration to young girls around the world. [Scott Bessent], nominated as Treasury Secretary, would be the first openly gay person to hold that coveted post, beating Joe Biden's record for the most senior cabinet position held by a member of the LGBTQ+ community. Secretary of state Marco Rubio would become the highest-ranking Hispanic cabinet member in American history: a big win for the Latinx community.



The Economist

Donald has been criticised for putting together a less diverse cabinet than his predecessors, with *Newsweek* berating him for being on track to pick "the least diverse cabinet this century". The HR department thinks such criticisms are mean-spirited and unconstructive. Sure, when looking at cabinet and cabinet-level nominees, the second Trump administration looks as white as his first (see chart). But by the metrics that we have decided to focus on, Donald has in fact outdone his targets.

He has a higher share of women on his team than Barack Obama did in his cabinets. He has also made huge strides in the representation of one of the most marginalised, underprivileged groups in American politics: young people. If they are all confirmed, his Big Four (secretary of state, defence secretary, attorney-general and treasury secretary) would be the youngest line-up for at least the past five administrations. Ten out of Joe's 25 original picks were aged 60 or older when they started the job. The figure for Donald's second term, should they be confirmed, is just seven out of 24. His pipeline includes the youngest ever press secretary, aged 27, and the third-youngest vice-president, aged 40. His cabinet is set to include three millennials, a 300% increase over that of his Democratic predecessor.

Donald is aware that despite all this, he has room for personal growth. In the year ahead he should focus in particular on the "I" in DEI. Referring to certain ethnic groups as "bad hombres" is not conducive to an inclusive work environment. He does, however, reject the idea that the over-representation of billionaires (five compared with Joe's zero) and people from Florida should subtract points from his DEI score. Donald argues that positive discrimination in such cases can be justified to make up for historic wrongs.■

Stay on top of American politics with The US in brief, our daily newsletter with fast analysis of the most important political news, and Checks and Balance, a weekly note from our Lexington columnist that examines the state of American democracy and the issues that matter to voters.

United States | Lexington

How the Democrats wandered away from America’s workers

A pro-labour Democrat’s career traces the party’s erratic path

December 19th 2024

David Simonds

“Free trade’s just a dandy concept/Advertisers tell us so/Don’t you question, don’t you doubt it/You’re so stupid. You don’t know.” So goes a song Sherrod Brown composed on his guitar back in 1993, when he was a freshman congressman from Ohio helping lead the fight against ratifying the North American Free Trade Agreement. The new president, Bill Clinton, was a Democrat, too, and he had agonised during his campaign over the trade deal, negotiated by his Republican predecessor. He eventually came out in support of it while promising to strengthen its protections for workers and the environment. The new protections did not go nearly far enough for Mr Brown, and his song expressed his aggravation with what he saw as a blinkered and patronising uniformity of elite opinion. In the end Mr Clinton rallied enough Democrats to join with most Republicans to ratify the treaty.

Mr Brown went on to serve seven terms in the House and then three in Senate, earning a reputation as one of labour's best friends on Capitol Hill. Rather than wear the official Senate lapel pin, he wears a golden pin given him by a steelworker that depicts a canary in a cage, meant to evoke the days miners had to rely on sudden silence from the birds to alert them to lethal gases. The only trade deal he ever voted for was Donald Trump's renegotiated version of NAFTA. But eventually the leadership of his own party swung back in his direction. As a senator Joe Biden voted for NAFTA, but he turned out, in Mr Brown's view, to be the most pro-labour president since Lyndon Johnson, if not Franklin Roosevelt.

Yet now Mr Brown finds himself in the role, for his party, of sacrificial canary. In his Senate race in Ohio, he ran more than seven points ahead of the Democrats' presidential nominee, Kamala Harris. But he still lost to Bernie Moreno, a businessman, in a state that not long ago went for Barack Obama twice. Democrats' leftward lurch on economic policy did not stop Donald Trump from gaining ground with working-class voters. A national post-election poll by YouGov found that Americans without college degrees saw Democrats as more out of touch and extreme than Republicans, and as less likely to "fight for people like me".

Mr Brown has no patience for the argument that working-class Americans who supported Republicans voted against their own interests. "I shoot people on my staff who say that," he says, laughing in his Senate office, where surviving staff have been packing up mementoes accumulated across his 32 years in Congress. "It is insulting to people to say, 'You're too dumb.'" Mr Brown thinks Democrats' problem started with NAFTA. Over the past 30 years, the party alienated working people, the base of its coalition for generations, by not fighting harder to protect their jobs and return to them the rewards of rising productivity. "Workers have understood that the Republican Party is the party of the rich, and Democrats were supposed to be the party of workers," he says, so they had higher expectations of it. Now, "off the coasts, they just think that we're a bi-coastal elite party. And that's hard to shake."

Mr Clinton had reason to advocate freer trade, having witnessed its power to spread prosperity as governor of a poor southern state, Arkansas. But over time Democrats' attention drifted away from those who were swamped rather than lifted by the rising tide. "I won the places that represent two-thirds of America's gross domestic product," Hillary Clinton said proudly in 2018, looking back on her loss to Mr Trump in 2016. From Roosevelt up through Mr Clinton himself, that would have registered within her party as more of a lament than a boast.

Despite their embrace of industrial policy and unions, Mr Biden and Ms Harris could not overcome the party's image in one term, Mr Brown says, and the president's own policies often got in the way. His decision to suspend tariffs levied by Mr Trump on Chinese solar panels delighted the party's environmentalists but undercut domestic manufacturers, including in Ohio. For Mr Brown the Biden administration went too far in regulating power-plant emissions, and not far enough in restricting imports of Chinese electric cars.

Labour's love lost

Mr Brown also thinks the White House failed for too long to empathise with Americans' dismay at rising grocery prices, and that in general Democrats do not realise how condescending their approach to non-professional workers can seem. "They think we see them as a sort of charity case," he says. Beyond the rumpled hair and raspy voice, hallmarks of a style that seems unpractised even after decades of execution, Mr Brown's own approach has been to log countless hours in union halls and to emphasise "the dignity of work". He likes to quote Martin Luther King: "No labour is really menial unless you're not getting adequate wages". He tells stories about the pride blue-collar workers take in having helped build a stadium or a bridge and wonders why Democrats do not make more effort to celebrate those sorts of contributions.

In previous elections, Mr Brown's record of fighting for pension rights or the Earned Income Tax Credit helped protect him against concerns he was to the left of his constituents on gun control or gay rights. "People are complicated, and people can hold a variety of different, contradictory ideas," he says. Even in 2024, Mr Brown felt he weathered attacks over transgender athletes and illegal immigration. "The ad that beat us," Mr Brown says, was one that declared a vote for Mr Brown to be a vote against Mr Trump. "There was no really good answer for that," he says.

Mr Brown believes Democrats can fight their way back, because Republicans will not deliver in the end. "Are they going to be protecting the right to organise?" he scoffs. Probably not. But given the Democrats' erratic record, it was neither stupid nor dumb to give Republicans this chance to prove themselves. ■

Subscribers to The Economist can sign up to our new [Opinion newsletter](), which brings together the best of our leaders, columns, guest essays and reader correspondence.

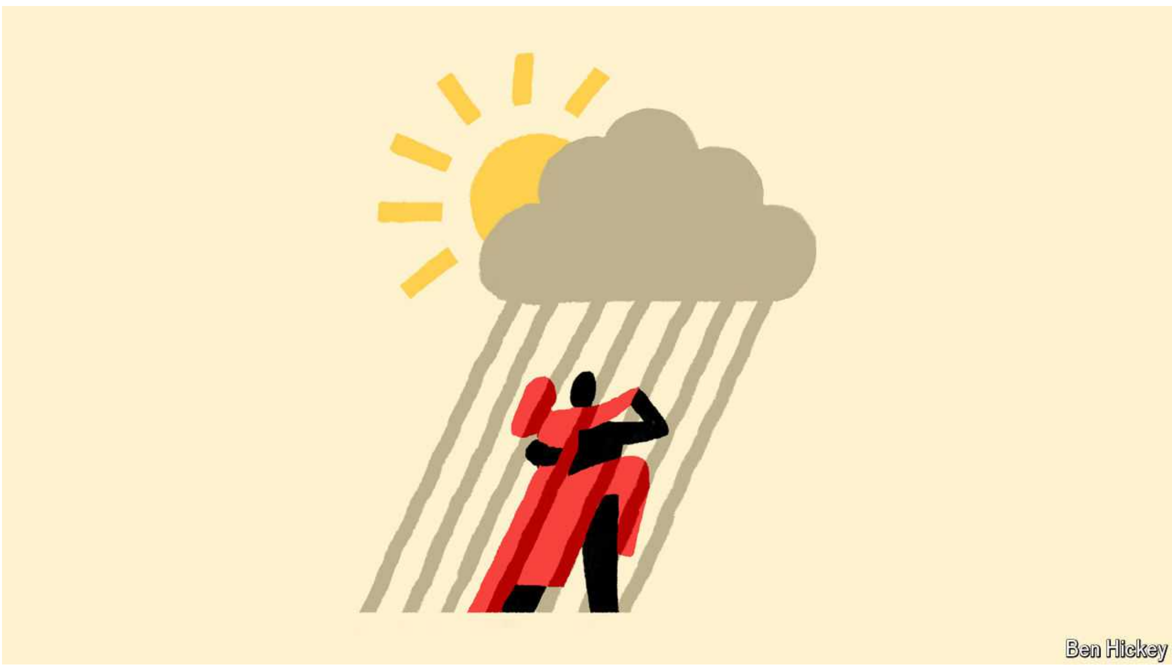
The Americas

The Americas | Attitudes to democracy

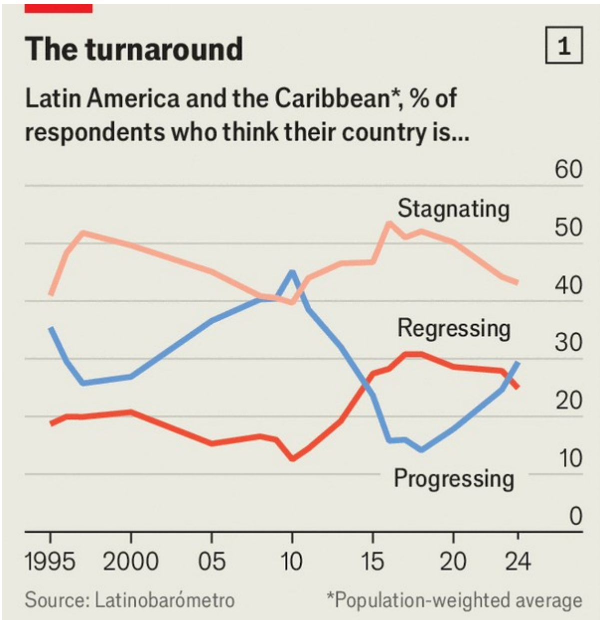
Latin Americans are worryingly relaxed about authoritarianism

The Latinobarómetro poll shows a region that is happier with its democracies, but at ease with illiberalism

December 18th 2024

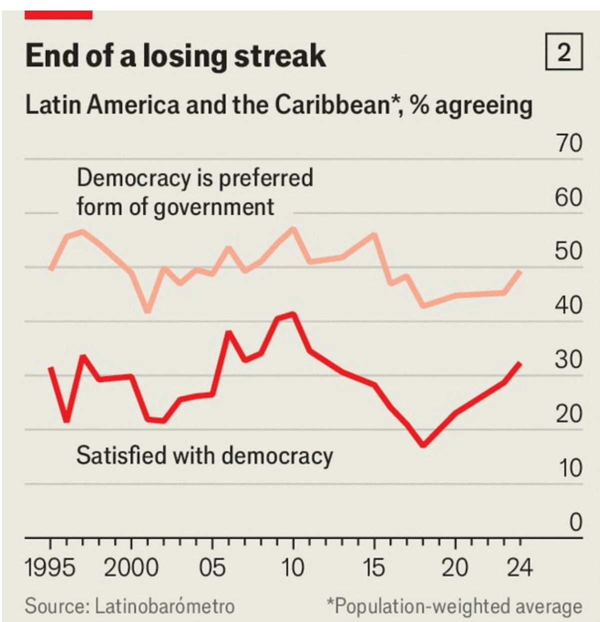


For the first time since 2015 there are more Latin Americans who think their country is progressing than those who think it is moving backwards, though almost half see stagnation (see chart 1). Only a bare majority think that democracy is preferable to other modes of government, but that is still a small increase on recent years. Though scathing about their politicians and institutions, Latin Americans are a shade less dissatisfied with the way their political systems work in practice. Nayib Bukele, the elected autocrat who runs El Salvador with an iron fist, continues to be by far the most admired leader in the region.



The Economist

These are some of the findings of the latest Latinobarómetro poll, taken in 17 countries and published exclusively in *The Economist*. Because the poll has been taken regularly since 1995, it does a good job of showing how attitudes in the region are evolving. Although Latin America has suffered years of economic stagnation, political turmoil and the terrifying advance of organised crime, this year's survey data point to a degree of resilience.

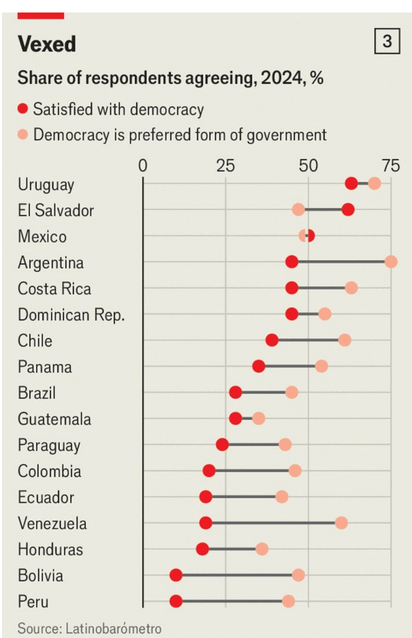


The Economist

Support for democracy has nudged up since the 2023 survey, though it still sits below the level usually maintained before 2017 (see chart 2). Importantly, Latin Americans still believe in voting; as in the past, the survey shows that new presidents provide a boost to democracy. That applies in Argentina, which elected Javier Milei as president last year, as well as in Mexico, where the new president, [Claudia Sheinbaum](), is a protégée of [Andrés Manuel López Obrador](), the popular ruler from 2018 until this year. Elections in Ecuador, Guatemala and Panama also revived faith in democracy. Support for it has fallen in Peru, which is saddled with a frivolous president, [Dina Boluarte](), and a self-serving Congress, and in Bolivia, where decision-making is paralysed by a power struggle between the president, [Luis Arce](), and his former political mentor, Evo Morales. This year's poll reveals widespread discontent in both places.

Unopposed democracy

Satisfaction with the way democracy works has also ticked up, though two-thirds of respondents remain discontented (see chart 3). Back in 2009, at the height of the commodity boom that lifted many of the region's economies, almost as many were happy with their democracies as were not.

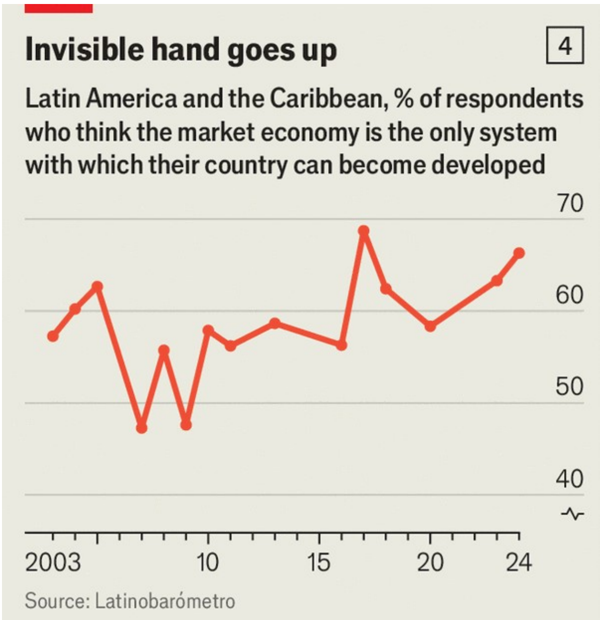


The Economist

Dig a little deeper and attitudes to democracy become ambivalent. More than half—and 61% of those who define themselves as upper-class—say it would not worry them if an undemocratic government took over, so long as it solved their country's problems. "The greatest weakness of Latin American democracy is that around four out of ten think it can work without political parties, parliament or an opposition," says Marta Lagos, Latinobarómetro's director. The rise in support for democracy in Mexico, even as its new president is concentrating power in the executive, is symptomatic of that contradiction.

In a region scarred by extreme inequalities of income and wealth, 72% think their country is governed by powerful groups for their own benefit, though that is down from 79% in 2018. El Salvador and Mexico buck this trend, with 62% and 47% respectively agreeing that their countries are governed for the good of all. Though 76% think the distribution of income in their country unfair, 89% believe so in Chile and 85% in supposedly socialist Venezuela.

In the years before the covid-19 pandemic, Latin America saw several social explosions, with sometimes violent mass street protests led by frustrated young people. The mood is more patient now. Only 26% say their society needs radical change, down from 30% last year, and 35% say it can improve with small changes. But the majority reject the status quo.



The Economist

There is little confidence in institutions. Although the Catholic church remains the most trusted of the bunch, it has lost the confidence of around one in ten. In contrast, trust in the police has risen. That reflects a demand for security in the face of crime. Even so, almost twice as many respondents think that the economy, rather than security, is the biggest problem in their country.

Despite the region's generally mediocre economic growth, 60% say that they and their family have made progress in the past ten years. And 48% now define themselves as middle-class, up from 41% last year and 32% in 2020. On the other hand, 25% say they lack sufficient food either some or most of the time. Access to a mobile phone is enjoyed by 92%, access to the internet by 69% and 35% have access to a car. Support for the market economy has increased steadily, from 47% in 2007 to 66% today (see chart 4). That chimes with a slight tilt towards the right in underlying political attitudes.

West still best

If they had to choose, Latin Americans would prefer closer ties with the United States than China. But that was before Donald Trump's election victory, and they have a more positive view of President Xi Jinping than of

Mr Trump. Even so, and unlike some other parts of the global south, Latin Americans tend to identify with the West more than the east. ■

Methodological note: Latinobarómetro is a non-profit organisation based in Santiago, Chile, which has carried out regular surveys of opinions, attitudes and values in Latin America since 1995. The poll was taken by local opinion-research companies in 17 countries and involved 19,214 face-to-face interviews conducted between August 23rd and October 9th 2024. The average margin of error is around 3%. The poll is no longer taken in Nicaragua since its dictatorship does not allow pollsters to work safely there. Full details at: www.latinobarometro.org

Sign up to El Boletín, our subscriber-only newsletter on Latin America, to understand the forces shaping a fascinating and complex region.

The Americas | Canadian politics

A crushing blow for the Justin Trudeau show

His most powerful minister, Chrystia Freeland, quits

December 16th 2024

***Correction (December 17th 2024)**: An earlier version of this article stated that Mr Trudeau's handouts and tax cuts had contributed to increasing the 2024 budget deficit. In fact the handouts were promised after the period for which the 2024 budget is calculated. This has been changed.*

POLITICALLY SPEAKING, the resignation of a finance minister may be tolerable. When she is also the deputy prime minister, her departure cuts more deeply. And when the quitter was once your most trusted ally, and resigns suddenly, just before she is due to deliver a vital economic update, it may well be a sign that your political spark has finally been snuffed out.

On December 16th this fate befell Justin Trudeau, Canada's prime minister, when Chrystia Freeland left his cabinet. In a scornful note she accused Mr Trudeau of resorting to "costly political gimmicks" to shore up his popularity through tax breaks and handouts. Ms Freeland's resignation tosses Mr Trudeau's government into disarray just as Canada faces a possible economic battering from the tariffs proposed by Donald Trump, president-elect of the United States. Ms Freeland had dealt with Mr Trump before, steering the negotiations that led to the renewal of a North American trade pact between Canada, Mexico and the United States in 2018.

On the morning she resigned, Ms Freeland had been due to brief the House of Commons on Canada's latest economic prognosis. Speculation had already been swirling that Mr Trudeau was about to give her job to Mark Carney, a former governor of the Bank of England and of the Bank of Canada before that. Mr Carney guided both central banks during crises; his experience of right-wing populism during Brexit would have helped handle Mr Trump.

The prime minister's efforts to woo Mr Carney into Ms Freeland's post were not kept private (Mr Carney had resisted quieter pleas by Mr Trudeau in 2019 and 2021). Mr Trudeau also compromised his deputy by overruling her to announce a temporary reduction of Canada's value-added tax, and to send C$250 ($175) to the 18m Canadians who earned less than C$150,000 in 2023. Her credibility was damaged further when it was announced that Canada's budget deficit for 2024 had widened far beyond Ms Freeland's avowed limit of C$40bn, to C$62bn, some 2% of GDP. Mr Trudeau has had two finance ministers during his nine years in power. Both were driven out by a torrent of leaks from his office which undermined their authority.

The offence to Ms Freeland seems to have been for nought. Mr Trudeau's next finance minister will not be Mr Carney (who maintains utter public silence) but Dominic LeBlanc, who has been the minister for public safety. He is a childhood friend of Mr Trudeau who often shields him from political heat, and who recently accompanied him to Mar-a-Lago to meet Mr Trump.

Now he must shield him again, since Mr Trudeau faces challenges from his cabinet and his caucus. The number of Liberal MPs calling publicly for him to step down is growing. Fewer than a quarter of Canadians think Mr Trudeau deserves re-election, according to Ipsos, a pollster. In Mr Trump he will face a president who feasts on weakness and seems intent on bullying him and Canada into trade concessions. Canada's federal elections are scheduled for October 2025. The country may be best served by a prime minister with a fresh mandate, to face mounting challenges at home and across its southern border. ■

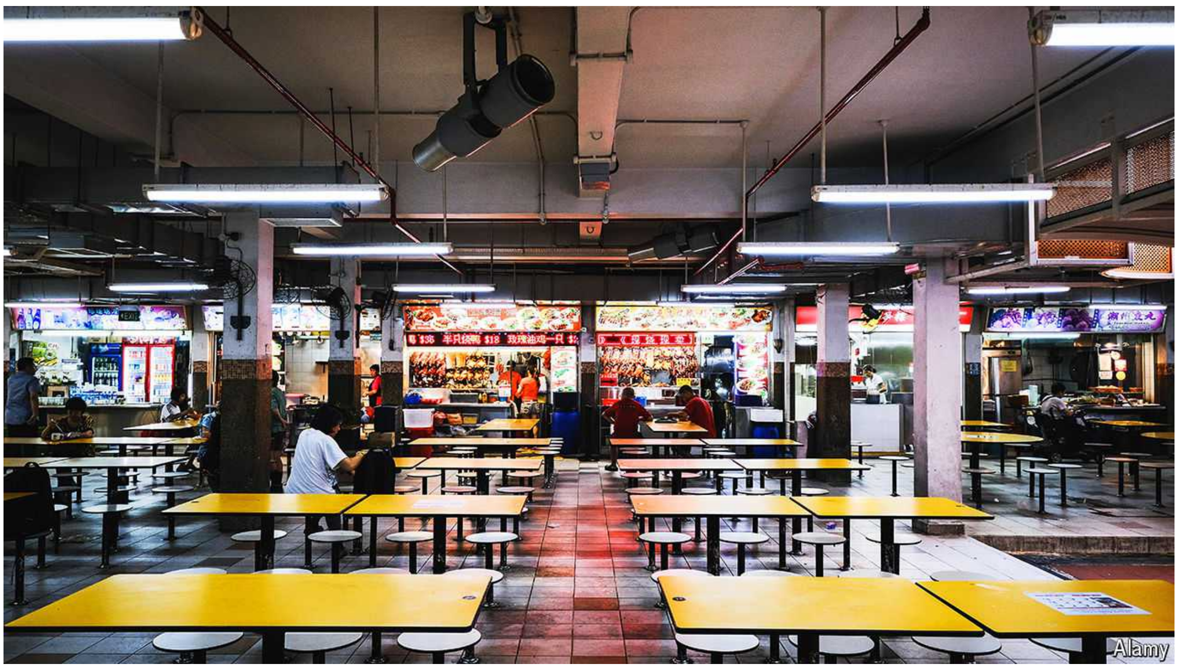
Asia

Asia | Food fetish

Singapore's government is determined to keep hawker centres alive

Why is the city-state's bare-bones government running a bureaucracy of stir-fries?

December 19th 2024



Welfare is "a dirty word" in Singapore—or so a past prime minister, Lee Hsien Loong, once approvingly declared. What the city-state prizes, he explained, was not handouts, but self-reliance. Workers do not receive a state pension, but pay instead into individual retirement accounts. Health care, too, must be purchased from mandatory savings, not dispensed by a spendthrift state. There is no minimum wage, and no subsidies for staples such as rice or electricity. Oddly, though, there is one aspect of everyday life that almost no other governments get involved in but that the Singaporean authorities are not willing to leave to the vicissitudes of the market: eating out.

Singapore’s government operates an island-wide network of 121 “hawker centres”, which together house more than 6,000 tiny, privately operated stalls. These state-run food courts are not mere vestiges of a more interventionist era: the government has built 14 new ones in the past nine years. The latest opened in September. The authorities take a minute interest in what the hawkers serve (there must be a mix of different cuisines, including halal options for Singapore’s Muslims), how much the food costs (some hawkers are obliged to offer at least one dish for around S$3.50, or $2.59), who cooks it (only Singaporeans or permanent residents may work in hawker centres, and no one may lease more than two stalls) and so on.

This being Singapore, there are also strict rules for how customers should behave. Parliament recently approved a new law obliging them to clear their trays and litter from the communal tables, or risk a fine of S$300. Politicians have since debated why the tray and crockery return rate (TCRR) remains perplexingly stuck at about 90%.

Why maintain this vast bureaucracy of stir-fries and soups? Hawker centres were originally conceived in the 1960s and 1970s as a way to get food vendors off the streets, to reduce disruption to traffic, littering and poor hygiene. More recently the authorities have come to see hawker centres as “community dining halls”, providing an essential service by giving hard-up Singaporeans access to tasty meals at low prices.

Shrimp-paste patriots

The government also describes hawker centres as embodying the national spirit, because cooks and customers of many different races and creeds rub shoulders in them harmoniously. As the UN put it in 2020 when, at the government’s request, it added “hawker culture” to its catalogue of world heritage, “Hawkers and hawker centres have become markers of Singapore as a multicultural city-state.” (Hawker centres also reveal the limits of this integration: mixed groups at a single table are rare.)

Whatever hawker centres’ purpose, the government is determined to keep them going. That is not easy. Hawkers work long hours in hot and cramped conditions. Their average age is about 60. Singapore’s rapid development in recent decades has lifted the median income to more than $48,000 a year—higher than in Germany or Japan. Although vacancies in hawker centres are low, officials fret that younger people will not want to go into the trade, and that hawking will gradually die out unless the state intervenes.

The government's response has been a smorgasbord of programmes and grants intended to entice young people to become hawkers. There is the "Incubation Stall Programme", which gives new hawkers discounted rent on fully equipped stalls for 15 months, to try their hand at the business without incurring big upfront costs. There is the "Hawkers Succession Scheme", which pairs veterans hoping to retire with neophytes learning the ropes, to allow successful stalls to keep operating when the stallholder stops working. There are "Hawkers' Productivity Grants", which reimburse hawkers for 80% of the cost of new labour-saving equipment, to make the job less gruelling.

School of hard woks

The most ambitious scheme is the "Hawkers' Development Programme", which provides training, an apprenticeship and mentoring to new hawkers, to help them find their feet. At a five-day course that seeks to convey the basics of running a business as well as cooking, an instructor pauses, wok sizzling, ingredients chopped, to explain how to give *hokkien mee*, a staple of hawker centres, a proper depth of flavour. The key is the braising of noodles in flavoursome stock, he confides, before he tosses in beansprouts, fish sauce, spring onions and prawns to complete the dish. Twenty students look on, rapt, some taking notes, others filming on their phones.

One of the students, Margaret, works in logistics for a furniture company. She has happy memories of cooking with her grandmother, and would love to do her bit to preserve Singapore's own brand of culinary fusion, Nyonya cuisine, which blends Chinese and Malay techniques. She likes the idea of being her own boss and is willing to accept a reduced income—but she is worried about how low her earnings might sink if she takes the plunge and becomes a full-time hawker.

The family of another student, Kevin, has a business making fishballs, for a type of soup that is another staple of hawker centres. As a child, he used to help his parents by scraping scraps of fish off bones. Having worked for a fancy chef in Australia, he thinks he could freshen up old recipes with new techniques, such as brining protein before cooking. But he, too, is uncertain that he can make a lifelong career out of hawking.

The fundamental problem, argues Wee Ling Soh, a food blogger whose mother ran a fishball-soup stall for 20 years, is that the assistance the government is offering is not nearly enough to compensate for a lifetime of back-breaking work for low pay. The piecemeal incentives, she says, remind her of the various schemes the government has adopted to persuade Singaporean women to have more children. They are all helpful, but insignificant when weighed against the cost and difficulty of raising a child. (This year, for the first time, the number of children the typical Singaporean woman is expected to have over her lifetime fell below one.)

The statistics bear Ms Wee out. The Hawkers' Development Programme has been running since 2020. By the end of April some 566 would-be hawkers had attended the week's training course. Of those, only 120 had gone on to complete an apprenticeship with a hawker. A mere 29 had started a stall of their own, of which only 16 remained in operation.

The usually hard-headed Singaporean government would not normally persist with a scheme that yields a success rate of less than 3%. But then the authorities seem strangely conflicted over hawker centres. They want to preserve them, but not to coddle hawkers, most of whom must pay market rents determined by independent surveyors. By the same token, although the government is a big believer in market forces, it does not think Singapore's 8,000-odd private food outlets and hundreds of thousands of culinary businesses should be allowed to make state-run hawker centres redundant.

City-state on a plate

"Singapore" declared Lawrence Wong, the current prime minister, in his most recent National Day address, "is like a plate of Hainanese curry rice". The city-state, like the meal, he explained, is the product of many different cultures—Western, Chinese, Malay and Indian—all blended together. "Such a unique dish," he continued, "can only be found in our inclusive and multicultural society." Never mind that Singapore's sizable Muslim minority does not really see itself in a dish whose main ingredient is a pork chop. Never mind that Hainanese curry rice is an obscure enough dish that the *Straits Times*, Singapore's biggest English-language newspaper, felt obliged to publish an article explaining what it is and where it can be bought. Singaporean politicians, it seems, like hawker-centre metaphors even more than Singaporeans like hawker-centre food. ■

Asia | Systemic failure

South Korea’s president is impeached

Yoon Suk Yeol’s declaration of martial law destroyed his presidency. For the country the reckoning has just begun

December 14th 2024

THE DAY of reckoning finally arrived for Yoon Suk Yeol, South Korea’s president. The country’s National Assembly voted on December 14th to impeach him for his short-lived attempt to [impose martial law] earlier this month. Outside the assembly, crowds of tens of thousands erupted into cheers and applause when the results were announced; demonstrators embraced and shed tears. “Into the New World”, a hit K-pop-song-turned-protest anthem, rang out from the speakers: “The end of wandering that I was longing for.”

The impeachment indeed ended ten extraordinary days. Late on December 3rd, Mr Yoon declared martial law—only to pull back early the following morning in the face of opposition from the parliament, the public and his own party, the People's Power Party (PPP). But the PPP boycotted a first impeachment motion on December 7th. Following that disappointing result, "I was sad, so I went drinking," says Kim Seong-nam, an electronics-company employee who has protested four times since the martial law declaration.

Mr Yoon's defiant stance in the ensuing week turned even some in his own party against him. The PPP took part in the second impeachment proceeding, with 12 of its members voting in favour. That pushed the motion over the required two-thirds threshold, with 204 of 300 lawmakers voting to impeach the president. Mr Kim, like many of his compatriots, was thrilled: "I am happy, so I'll go drinking!"

Yet the turbulence is far from over. The vote triggered Mr Yoon's immediate suspension from office. The prime minister, Han Duck-soo, a career technocrat appointed by the PPP, is now acting president. He has sought to project calm to allies, investors and his own people, pledging to allow "no vacuum in state affairs". His mandate, however, is limited and his political authority weak.

Mr Han will remain in charge of the country until the constitutional court issues a final ruling. The court has up to 180 days to do so but, given the urgency of the case, the proceedings may move more swiftly: justices took 92 days to uphold the impeachment of Park Geun-hye, a former president, in 2017; the impeachment of Roh Moo-hyun, one of her predecessors, in 2004, was overturned in just 64. The first public hearing in Mr Yoon's case will be held on December 27th. "I hope they'll rule quickly," Mr Kim says. "The longer the uncertainty lasts, the more damage it does."

The case is hardly straightforward. Following the retirement of three justices in October, only six of the nine seats are currently filled. Six affirmative votes are necessary to rule on impeachment; one of the justices is a conservative appointed directly by Mr Yoon. (The remaining seats may be filled before the case is heard.) Mr Yoon pledges to "never give up". He will try to argue to the court that imposing martial law was within his authority as president, and that he followed proper constitutional procedures for doing so.

The court tends to take public opinion into account. Mr Yoon's approval ratings have fallen to as low as 11%; some 75% of South Koreans believe he should be impeached. "The justices know where the South Korean people stand—just look at this crowd," says Park Song-mi, a screenwriter, gesturing to an impromptu dance party that broke out near the National Assembly in the wake of the impeachment vote. If the court does uphold the impeachment, new presidential elections must be held within two months.

Mr Yoon also faces a possible separate criminal trial for treason. Investigators have already put him on a no-fly list and have tried to search the presidential office. He has thus far refused summons to appear for questioning. Ms Park, the former president, was first impeached and then convicted on corruption and abuse-of-power charges. In fact, Mr Yoon, a former prosecutor, made his name in part by leading the case against her. She served nearly five years of a 20-year sentence in prison, before being pardoned by Moon Jae-in, Mr Yoon's predecessor.

For many Koreans, the sense of déjà vu is unsettling. "We didn't quite work out the kinks last time," Ms Park, the screenwriter, laments. Calls for more fundamental political reform are growing. When South Korea brought in democracy in the late 1980s, the country adopted a political system with a powerful president limited to a single five-year term and checked by a unicameral legislature. A more straightforward parliamentary system or introducing multiple but shorter presidential terms could help improve accountability and decentralise power.

The current system "has reached the end of its lifespan", Yoon Young-kwan, a former foreign minister, argued in a recent column in the *JoongAng Ilbo*, a South Korean daily, noting that in the past four decades, four presidents have been imprisoned and now two impeached. "How long will we tolerate this kind of political situation?" For South Korea as a whole, the reckoning has only just begun. ■

Asia | Grandmaster flash

Dommaraju Gukesh’s win will accelerate India’s chess ambitions

The world’s youngest-ever grandmaster is part of a bigger country-wide trend

December 19th 2024

On December 16th throngs of fans waited outside Chennai airport to cheer Dommaraju Gukesh, the 18-year-old world chess champion, on his return to his home city. Mr Gukesh is the youngest ever person to win the title. His triumph demonstrates India’s growing ambitions in chess—and is being seen as a symbol of its growing geopolitical clout. This month Narendra Modi, the prime minister, will meet Mr Gukesh, whom he praised for inspiring “millions of young minds to dream big and pursue excellence”.

Chess champions are often young. But Mr Gukesh has established a new benchmark: he is younger than Russia’s Garry Kasparov and Norway’s

Magnus Carlsen, who were both 22 when they gained the title, and Mikhail Tal and Anatoly Karpov, both of the then Soviet Union, who were 23. Mr Gukesh's final match was striking for another reason. It was the first between two Asian competitors, with the youngster prevailing over the reigning champion, Ding Liren of China. Mr Gukesh and Mr Ding split the prize money between them, taking home $1.3m and $1.2m, respectively.

The competition, held in Singapore, was nail-biting. Mr Gukesh lost his first game against Mr Ding. He only won overall after Mr Ding blundered on the 55th move in the 14th game. Inevitably, the conclusion has drawn volumes of analysis tied not only to how the tournament was played but also how the players reflect the current state of their countries. Mr Ding's rise encompassed the defeat of Mr Carlsen, who many considered unbeatable. Mr Ding's victory in 2023 over a European opponent came at a time when China's economy appeared to have eclipsed Europe's. Mr Ding's stumble came after he had discussed facing depression and sleeplessness. It may well be seen in the context of China's own recent struggles.

More broadly, however, Mr Gukesh's win reflects a growing pool of chess fanatics in India. Chennai is packed with chess academies. He is the second champion from the city, following Viswanathan Anand, who became the first Indian chess grandmaster in 1988. The country now has 64 grandmasters, according to the global chess body, up from just two in 1994 and 36 in 2014. By contrast China has 48. (Russia has 256 and America 101.) On chess.com, a popular website, Indians account for the largest number of users.

From an early age, Mr Gukesh was coached by another grandmaster, Vishnu Prasanna. But his ascent has not been easy. His father stepped away from his own work as surgeon to accompany his son to global tournaments, with the family relying on his mother's earnings as a microbiologist. When those were insufficient, friends of the family stepped in to provide support. Mr Gukesh trained for a gruelling ten to 12 hours each day.

Despite the growing popularity of chess in India, it does not yet have the same mass appeal as cricket. As a result, just a handful of participants get corporate sponsorship, Mr Gukesh among them. That may change soon, however. Indian aspirational middle-class parents already place a premium on their children achieving intellectual, not athletic, trophies. Winning at chess will probably be next. ■

Stay on top of our India coverage by signing up to Essential India, our free weekly newsletter.

China

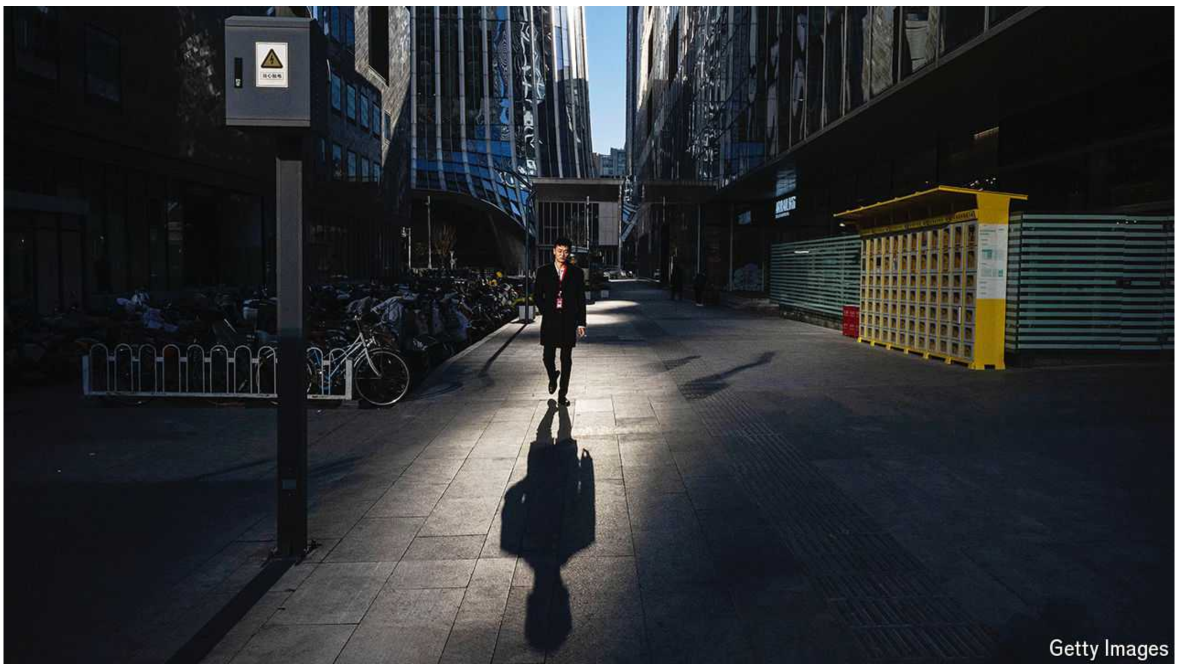
- China’s economy is in for another rough year
- How to get a free meal in China

China | The difficult path ahead

China's economy is in for another rough year

Bold action is needed to turn things around

December 17th 2024



EACH DECEMBER China's rulers gather for their Central Economic Work Conference, where they review the past 12 months and preview the tasks they face in the year ahead. It is a useful exercise, even if you are not a member of the Communist Party's ruling Politburo.

This year the view in both directions looks bleak. Retail sales in November were 3% higher than a year ago, below expectations, even before adjusting for inflation. Not that there was much of that. Consumer prices rose by only 0.2% over the same period. Both stats reflect the chronic caution of households. Consumer confidence has never recovered from its collapse during the covid-19 lockdowns of spring 2022.

That is the rear view. What about the future? Exports and manufacturing investment, which have helped prop the economy up in 2024, face the prospect of a new trade war with America. On the campaign trail, Donald Trump threatened China with tariffs of 60% or higher. Since his victory, he has said he will impose an extra 10% if China does not do more to curtail the flow of fentanyl, a synthetic opioid made from chemical precursors that often originate in the country. Some commentators in China hoped the 10% threat superseded the earlier, bigger one. But Mr Trump has said the fentanyl penalty will supplement "additional tariffs", not substitute for them. Back-of-the-envelope calculations by Citigroup, a bank, suggest tariffs that high could cut 2.4 percentage points off China's growth rate, if the government did nothing to cushion the blow.

All of this leaves the folk at the Central Economic Work Conference with a lot of economic work to do. They must revive spending in advance of the trade war and soften the blow to demand, if and when tariffs rise. The past offers some encouragement. In 2008, during the global financial crisis, China's export markets in the West collapsed. But its economy still grew briskly, thanks to the government's rescue efforts. China back then was a stimulus superpower, able to mobilise vast amounts of demand by calling on state-owned banks to lend and state-owned enterprises to spend. It was also helped by a bubbly property market, which was hard to bottle up, but easy to uncork.

Unfortunately, China's stimulus efforts for much of this year were tardy, cautious and ineffectual. It has gradually cut interest rates, mortgage costs and banks' reserve requirements. But credit demand has remained weak. To restore faith in the property market, the state has urged banks to lend to a "white list" of supposedly viable homebuilding projects. Banks, though, remain wary. In May the central bank offered up to 300bn yuan ($41bn) in cheap refinancing to state-owned enterprises willing to buy unsold property and convert it into affordable housing. Take-up has been paltry: less than 15% by November 23rd, according to Huatai, a securities firm.

One reason why stimulus has fallen short in this downturn is that it overshot in the past. The credit boom after the global financial crisis left China with high debts, overcapacity and millions of unsold flats. Xi Jinping, China's ruler, came to power in 2012 determined not to repeat the mistake. When the economy faltered in 2015, he coined a new slogan, “supply-side structural reform”, which emphasised cutting industrial capacity, reducing property inventories and lowering corporate debt—including the liabilities of quasi-corporate vehicles sponsored by local governments. A similar spirit motivated his later policy known as the “three red lines”, which imposed strict borrowing limits on property developers, pushing many of them into bankruptcy after 2021.

Whatever its virtues, this mindset has hampered China’s efforts to resuscitate the economy in 2024. Although the central government increased its borrowing, it continued to impose financial discipline on many indebted local governments, which were forced to tighten their belts. Banks are also cautious about lending to white-listed developers because they worry they will take a hit if the loans turn sour. Under supply-side structural reform, for example, lenders were urged to take equity stakes in corporate borrowers that could not repay their loans.

To cope with the risks of the year ahead, China’s rulers will have to prioritise encouraging demand over enforcing discipline. There are signs they now accept that fact. In November the Ministry of Finance said it would allow local governments to issue additional bonds to replace 10trn yuan in “hidden” liabilities, mostly held by financing vehicles set up to evade borrowing limits. That will lower their borrowing costs. And, as Adam Wolfe of Absolute Strategy Research has pointed out, in 2025 it will free up about 1.2trn yuan they previously devoted to refinancing this debt.

The policy pivot was also evident at the Central Economic Work Conference. The need to “vigorously boost consumption” and expand domestic demand was listed as the first of nine tasks the government must tackle, elevated above Mr Xi’s signature goal of industrial upgrading. And after appearing in every official conference report since 2015, the term “supply-side structural reform” was this year conspicuous by its absence.

The Economist

Policymakers have therefore identified the right priority. But how do they intend to achieve it? They may be helped by a nascent stabilisation of the housing market. Sales of new residential properties rose a little year on year in November, the first increase in over three years excluding a surge in early 2023 after covid controls were abandoned (see chart). Prices also seem to be flattening out. That may give some measure of confidence to consumers whose wealth is tied up in housing.

To prise open their wallets, cities may experiment with electronic-shopping coupons of the kind that Shanghai has distributed in recent months. These give people a discount on meals, films, hotels and sports if they spend above a threshold amount. The government also seems bent on expanding its trade-in programme, which encourages households to upgrade their cars, fridges, air-conditioners and other gizmos to newer models. This policy succeeded in raising retail sales of household appliances by over 22% in November compared with a year earlier. (Overall retail sales were nonetheless weak, thanks to an early start to the "Singles' Day" shopping festival, which brought forward many purchases to the previous month.)

In a further effort to get people to save less and spend more, China's leaders have promised to increase pensions and subsidies for health insurance. Goldman Sachs thinks the government's broad fiscal deficit could rise by almost 2% of GDP in 2025. In the year ahead China needs to lift domestic spending using measures it has in the past neglected. You could call it demand-side structural reform. ■

Subscribers can sign up to [Drum Tower], our new weekly newsletter, to understand what the world makes of China—and what China makes of the world.

China | Charitable cooking

How to get a free meal in China

As the economy slows, more restaurants are offering food to those in need

December 19th 2024

CHINESE PANCAKES, pepper-beef stir-fry, fish with pickled mustard greens: to the average diner in China, these must sound like normal food orders. But to the staff at some restaurants they represent something else. These are code words that customers can use to signal that they would like a free meal. Such charitable schemes are becoming more common, as the Chinese economy sags. And restaurant owners report that an increasing number of people are using the code words.

Huang Ming has offered free bowls of noodles or dumplings since he opened his restaurant in the south-western city of Chengdu eight years ago. Back then, he says, only a few free bowls were claimed each month. Now his restaurant hands out dozens, usually to people in their 20s and 30s, says Mr Huang. China's youth-unemployment rate has been over 16% since July.

Most of the restaurant owners offering free meals appear motivated by compassion. Mr Huang recalls his own experience nearly a decade ago. Hungry and struggling, he walked into a restaurant he could not afford and left with a full stomach. The cost of such kindness tends to be manageable. And today there is also a marketing benefit. Users of Dianping, a restaurant-review app, and Xiaohongshu, China's answer to Instagram, share photos of signs advertising free meals. Commenters often vow to frequent benevolent eateries.

Most people in China do not need a free meal, but many are spending less on food. Young people are going to canteens for senior citizens, where they can buy tasty dishes at discounted prices. Cheap food courts beneath malls and office buildings have become lively lunch spots. Some eateries promote inexpensive options called "poor man's meals". Users of delivery platforms are making their orders more affordable by choosing an option that allows them to share costs with other users nearby.

The food industry, like other sectors of the economy, has suffered from the public's thriftiness. National restaurant chains report lower average spending per customer. Beijing's big food and beverage companies saw their profits fall by 88.8% year on year in the first half of 2024, according to city statistics. Mr Huang says his restaurant may have to close because of declining revenues. That danger will not stop him from offering free meals, though.■

Subscribers can sign up to Drum Tower, our new weekly newsletter, to understand what the world makes of China—and what China makes of the world.

Middle East & Africa

Middle East & Africa | Meet the boss

Everyone wants to meet Syria's new rulers

But a flurry of diplomatic meetings in Damascus points to the obstacles ahead

December 19th 2024

IT WAS A very social week for a man with a $10m bounty on his head. Foreign diplomats rushed to Damascus to talk with Ahmad al-Sharaa (pictured), the rebel commander who led the offensive that ousted Bashar al-Assad. His Islamist faction, Hayat Tahrir al-Sham (HTS), is blacklisted as a terrorist group by America, Britain, the European Union and the United Nations. That did not prevent him from meeting Geir Pedersen, the UN special envoy for Syria, or delegations from Britain, France, Qatar, Turkey and other countries.

After more than a decade of civil war, Syria is emerging from isolation. But Mr Sharaa's meetings this week point to the challenges ahead: sceptical foreign powers, uncertain politics and a worsening conflict in the country's north-east.

An interim government, dominated by HTS, is meant to rule until March. One of its priorities is to persuade Western governments to lift the sanctions imposed during Mr Assad's reign. America has broad restrictions aimed at Syria's energy and construction sectors, both of which will be vital for post-war reconstruction.

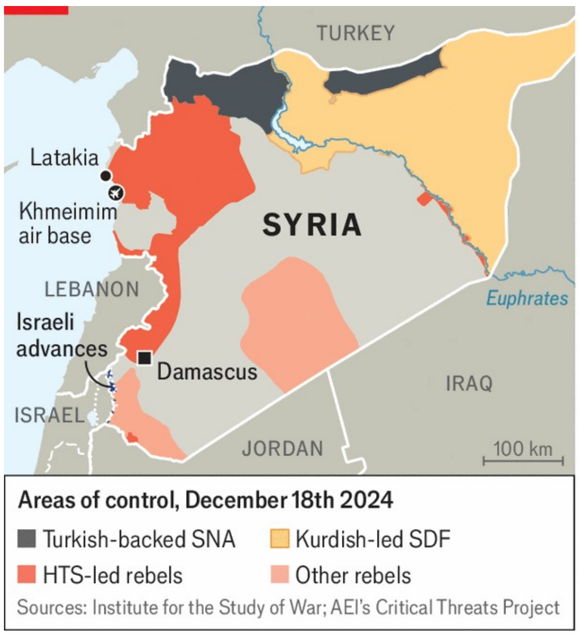
In a letter to Joe Biden, the lawmakers who wrote one of America's sanctions bills urged the president to move quickly in removing the restrictions. "The fall of the Assad regime presents a pivotal opportunity," they argued. But other members of Congress seem inclined to wait. So do European governments. Kaja Kallas, the EU's foreign-policy chief, said the bloc would only start lifting sanctions once HTS has taken "positive steps" towards creating an inclusive government.

Early signs of that are mixed. In recent days Mr Sharaa has met representatives of minority groups, including the Druze, and rival rebel groups, like the faction that led the uprising in southern Syria earlier this month. Meeting them is one thing, though; giving them a role in a post-Assad government is another.

The road map for Syria's political transition has long been Resolution 2254, approved by the UN Security Council in 2015, which calls for an 18-month process that culminates in new elections. On December 14th a group of Western and regional powers met in Jordan and reiterated their support for the resolution.

But when Mr Sharaa met Mr Pedersen a day later, the HTS leader said it was time to reconsider the plan. On some level, he is right. The resolution's call for dialogue between the Assad regime and the opposition is clearly no longer relevant. Talk of discarding the resolution, though, leaves some Syrians fearing that HTS may eschew dialogue altogether—and that it will seek to monopolise control.

Wrangling with foreign powers is hardly easier. Mr Sharaa has condemned Israel for carrying out hundreds of air strikes and seizing territory in southern Syria. On the northern border Turkey is building up forces, both its own troops and members of a Syrian mercenary outfit. It seems to be planning a larger offensive against the Syrian Democratic Forces (SDF), a Kurdish-led militia that controls much of north-east Syria. Turkey considers it a terrorist group because of its ties to Kurdish rebels.



The Economist

This would not be the first time Recep Tayyip Erdogan, Turkey's president, has threatened such a move. But this time he may be serious: the Assad regime's overthrow has left the SDF vulnerable. On December 17th a spokesman for America's State Department said Turkey had agreed to extend a ceasefire with the SDF until the end of the week—a very brief respite.

Meanwhile, some European countries want to withhold sanctions relief unless Russia is forced out of its military bases in Syria. According to Ms Kallas, "many foreign ministers" believe "it should be a condition for the new leadership that they also get rid of the Russian influence."

HTS is negotiating with Russia about the bases. A source close to the group says it wants to be pragmatic. For now, though, Russia is scrambling to withdraw hundreds of troops and military vehicles from other parts of Syria, consolidating its forces at Khemeimim air base near the coast.

Russia's leverage is limited. It could threaten to block efforts to lift UN sanctions on HTS—but if the group eventually dissolves itself, as Mr Sharaa has promised, those sanctions will be moot. It could also offer humanitarian aid to Syria, though it might find itself in a bidding war. Ukraine has already offered to supply wheat.

Syria will soon have a pressing need for basic commodities. Iran had been shipping as much as 80,000 barrels of free oil per day. Those deliveries have been halted. Syria could buy oil on the spot market, but that requires hard currency, which is scarce. Foreign reserves are believed to have fallen as low as $200m, down from $17bn before the war. Mr Assad and his cronies are thought to have stolen billions.

After more than a week of silence, on December 16th a statement attributed to Mr Assad appeared on a social-media account he previously used. He claimed he never wanted to flee Syria—"the only course of action was to continue fighting"—but that his Russian backers forced him to evacuate. Though it could not be authenticated, the missive sounded like Mr Assad. It was widely mocked by Syrians, and then forgotten: another sign of how quickly the former president, who loomed so large over Syrian life for decades, has faded into irrelevance. ■

Sign up to the Middle East Dispatch, a weekly newsletter that keeps you in the loop on a fascinating, complex and consequential part of the world.

Middle East & Africa | Prospects of a ceasefire in Gaza

Israel and Hamas look close to some kind of deal

Lebanon, Syria and Donald Trump have all been important

December 19th 2024

A SERIES OF meetings in Cairo and Doha have led to renewed optimism about the prospect of a deal between Israel and Hamas, the Palestinian Islamists in Gaza, ending the war there after over 14 months. A number of factors, including a ceasefire in Lebanon and the fall of the Assad regime in Syria, which have isolated Hamas, and pressure on Israel from Donald Trump, who would like to take credit for a deal, have brought new flexibility on both sides. But Israel's military presence in Gaza and the question of the release of 100 Israeli hostages remain obstacles. A truce of some weeks will probably precede a longer-term ceasefire.■

Sign up to the Middle East Dispatch, a weekly newsletter that keeps you in the loop on a fascinating, complex and consequential part of the world.

Middle East & Africa | A deal in the Horn?

Ethiopia and Somalia claim to have settled a dangerous feud

But there are reasons to be sceptical

December 19th 2024

For months a spat between Somalia and Ethiopia had been creeping towards a crisis. In June Somalia threatened to expel all of Ethiopia's troops from its territory, where they have long spearheaded the regional fight against al-Shabab, a jihadist group. By October Somalia had formed a military alliance with Egypt and Eritrea, Ethiopia's bitterest foes, as Ethiopia's army chief mused openly about arming groups hostile to the Somali government. Many feared the tensions could set off proxy wars and draw in other powers in the vicinity or create a security vacuum in Somalia that al-Shabab might exploit.

Perhaps they need not have worried. In a surprise announcement on December 11th Ethiopia and Somalia appeared to make up. After negotiations in Ankara, brokered by Turkey, a joint declaration was signed by Abiy Ahmed, Ethiopia's prime minister, and Hassan Sheikh Mohamud, Somalia's president, agreeing to "leave behind differences and contentious issues". Recep Tayyip Erdogan, Turkey's president, called it a "historic reconciliation". But there are reasons to be sceptical.

At the heart of the crisis is a memorandum of understanding (MOU) signed on January 1st between Ethiopia and Somaliland, a self-governing statelet in northern Somalia. Under that agreement Ethiopia had offered to become the first country to recognise the breakaway republic, in return for a long-term lease of a strip of its coastline. This enraged Somalia, which considers Somaliland a renegade province and thus regarded the MOU as a violation of its sovereignty.

The Economist

According to the joint declaration, Ethiopia will now seek "access to and from the sea, under the sovereign authority of the Federal Republic of Somalia". It has also agreed to respect Somalia's "territorial integrity". Somalia argues that this implies the end of the MOU. It will provide Ethiopia with an outlet to the sea for trade; in return, Ethiopia has rescinded its offer to recognise Somaliland. "The MOU is retracted," says an official in Somalia.

Not everyone agrees. The vaguely worded declaration does not mention the MOU and Ethiopia has not confirmed it has cancelled it. Somaliland, the other party to the MOU, has greeted the news from Ankara with a shrug. Senior Somaliland officials say they have heard nothing from Ethiopia to suggest that the deal is off the table.

Some experts suspect that Mr Abiy is still committed to the MOU and is simply playing for time. Under President Joe Biden both Ethiopia and Somaliland have been under heavy pressure from America to kill the deal. But both expect Donald Trump's administration to be more accommodating. "From what I understand, Abiy is not deterred by international pressure, and is determined to pursue the MOU by any means necessary," says Abel Abate Demissie, an Ethiopia-based analyst for Chatham House, a British think-tank.

There is a darker possibility. Mr Abiy may not be satisfied with sea access for commerce, as promised by the deal with Somalia. What he may really want is a naval base. The MOU would have allowed him to build one on Somaliland's coast. Another option would be somehow to take back Assab or Massawa, Eritrea's Red Sea ports, over which Ethiopia lost control when Eritrea seceded in 1993.

Just over a year ago, Mr Abiy suggested that Ethiopia could try to take the Eritrean ports back by force. His language was subsequently toned down. But recently the idea of reclaiming Assab has resurfaced on Ethiopia's tightly controlled state media. Last week it was suggested that ceding the port to Eritrea had been unconstitutional and that Ethiopia was being "suffocated" as a result. Add other ominous signs that the two countries are preparing for a conflict, and the outlook looks bleak. "The MOU was just an appetiser," says an observer. "Assab is the main meal." ■

Sign up to the Analysing Africa, a weekly newsletter that keeps you in the loop about the world's youngest—and least understood—continent.

Middle East & Africa | When the oil stops

South Sudan’s economic crisis threatens its fragile peace

It shows what happens when a petrostate’s lifeline disappears overnight

December 19th 2024

SOUTH SUDAN could have been off to a good start. Thanks to its oil riches, the world’s youngest country qualified as a middle-income one when it got independence from Sudan in 2011. The new country also had minerals, livestock and timber for export. As it was near the bottom of most global development indices on health and education, it received more aid per person than almost anywhere else on earth.

Yet 13 years on, things in South Sudan have not gone to plan. The country is experiencing perhaps its worst economic crisis since independence. The malaise is partly the result of years of civil war and woeful economic management. The more immediate reason is the shutdown of its main oil pipeline following fighting in Sudan, to the north. The crisis is threatening to destabilise the government, which may jeopardise the country's fragile peace.

South Sudan's bad times started soon after independence. In 2013 civil war broke out between the two main ethnic groups, costing perhaps 400,000 lives and forcing around a third of the country's 11m people to flee. The worst of the fighting stopped after a power-sharing deal in 2018, but key terms have long been ignored. The army has not been unified. The country has never had an election, with a poll originally due in 2024 now planned for 2026.

Civil war in Sudan has made things worse. It has forced nearly 1m refugees to flee south and diminished cross-border trade in almost everything except guns and mercenaries. Yet the damage inflicted on South Sudan's oil sector may prove the most significant consequence. Oil exports make up at least 85% of government revenue. Since February, a 1,400km-long pipeline that used to carry two-thirds of the oil north to Sudan's Red Sea coast has been out of action, in part due to fighting in areas it crosses (see map).

That has tanked the government's finances. The IMF estimates that the economy shrank by more than a quarter in 2024. The local currency has fallen to an all-time low against the dollar. "There's no money, no business," fumes Peace Mary, a mother of six who sells smoked fish at a market stall in Juba, the capital. Because South Sudan imports almost everything from wheat to fuel, inflation this year rose to about 120%, one of the highest rates in the world. The owner of an upmarket restaurant says a customer recently paid for dinner with a crate full of banknotes.

Salaries for most civil servants and soldiers have not been paid for the best part of the year. Schools in Juba have closed as unpaid teachers stopped showing up for lessons. At the finance ministry, people are waiting in long queues to plead with officials for financial support. "They're supposed to look after me," complains Wisley John, a blind army veteran clutching a letter from the ministry of defence requesting money for his medical treatment. "But they say there's nothing in the bank."

Violent crime appears to be rising. Each night unpaid soldiers in the capital erect makeshift checkpoints to extort cash from passers-by. In the countryside, aid agencies report a spate of armed robberies and kidnappings for ransom.

The government says it is trying to ease the squeeze. "The past nine months without oil money has highlighted the importance of restructuring the economy," says Marial Dongrin, the finance minister. This means boosting exports of minerals and agriculture, collecting more tax and printing less money. Faced with a balance-of-payments crisis, the government has said it is seeking a $250m emergency loan from the IMF. To reduce its reliance on Sudan, it has floated the idea of teaming up with China to build an alternative oil pipeline through Ethiopia to the port of Djibouti.

The government, however, has had more than a decade to diversify the economy. Yet there are still barely any non-oil exports. The state had been failing to pay civil servants and contractors long before the oil stopped flowing. At the same time, members of South Sudan's political elite have amassed vast wealth since the country became independent.

Even if the pipeline were turned back on tomorrow, the troubles in the oil sector would hardly disappear. Production peaked at more than 350,000 barrels per day in 2011 and has been in steady decline ever since. In August

Petronas, a Malaysian firm, announced it was selling its 40% stake in the oilfields after 14 years, in part due to rising costs resulting from the broken pipeline. The company has since launched legal action against the government for blocking a proposed $1.25bn takeover by a British energy firm.

The biggest worry is that the crisis could lead to more fighting. For all the failings of Salva Kiir, Sudan's first and only president, he has been using oil money to keep the peace between fractious elites. Civil war erupted just months after the end of a previous pipeline shutdown.

Some South Sudanese fear history may be repeating itself. In November the army exchanged fire with security personnel loyal to the former national-security chief, whom the president had sacked the previous month. Mr Kiir has since fired more officials, including the army's chief of staff and the police chief. "When you remove the glue, it can all break down," warns Daniel Akech of the International Crisis Group, a Brussels-based think-tank.

South Sudan's government wants the warring parties next door to accept a buffer zone around the pipeline where fighting would be off-limits. Yet without a ceasefire in Sudan, guarantees will be elusive. All the more reason to find a source of revenue other than oil. ■

Sign up to the Analysing Africa, a weekly newsletter that keeps you in the loop about the world's youngest—and least understood—continent.

Europe

- German politicians are talking tough, but offering little
- Ukrainian troops celebrate a grim Christmas in Kursk
- France’s new prime minister faces a looming mess
- Police brutality is not stopping Georgia’s protests
- We need to talk about Europe’s Kevins

Europe | Fiery talk, low ambition

German politicians are talking tough, but offering little

Sparks fly as the election campaign kicks off—but the parties are scaling back their ambitions

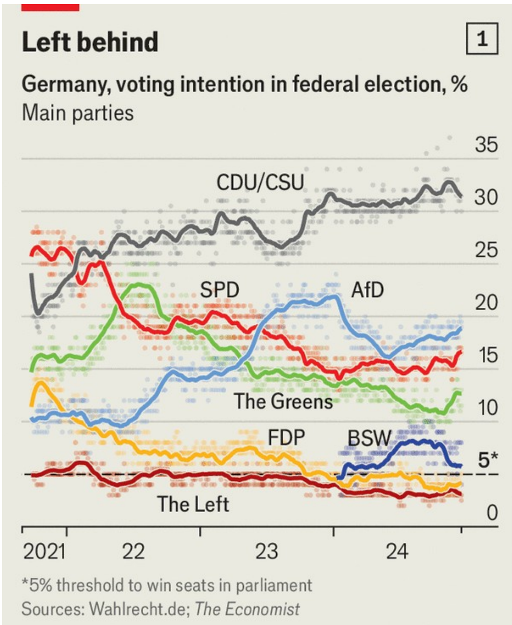
December 19th 2024

ONE WEEK ago the leaders of Germany's mainstream parties solemnly pledged to wage a fair-minded campaign in the run-up to the election due on February 23rd, triggered by last month's premature collapse of the three-party coalition. Days later, they were tearing each other to shreds. Olaf Scholz, the chancellor and candidate for the Social Democrats (SPD), said his opponents lacked "moral maturity". Deploying the demotic of his home town of Hamburg, he dismissed Friedrich Merz, his rival from the conservative Christian Democrats (CDU), as "*Fritze*, who likes to talk *Tünkram* [nonsense]".

Fritze gave as good as he got. The chancellor was displaying “sheer impertinence” and “living on another planet”, said Mr Merz. Worse, Mr Scholz was an “embarrassment” among his EU counterparts, unequal to the stature of his office. Accusations of dishonesty and duplicity flew back and forth like tennis balls. Germany’s election, only the fourth early vote in the post-war republic’s history, thus promises to be a rather livelier affair than usual.

The flurry of insults gave some high-minded German commentators a case of the vapours. Their nerves might be settled by a glance at the leading parties’ humdrum manifestos. Most were published on December 17th, the day after the Bundestag launched the mudslinging season by officially declaring that it had no confidence in Mr Scholz’s chancellorship. The programmes do offer competing visions for Germany’s future. But largely absent is any serious thinking about the country’s untold challenges: its flailing industrial model, its relations with China or its creaking pension system, which already gobbles up a quarter of federal spending in a rapidly ageing country.

Instead the scene is set for what, so far, looks like a traditional campaign focused on bread-and-butter concerns: jobs, taxes, prices and welfare. Precisely, in fact, the issues that German voters tell pollsters they care about. On the left sit the SPD and the Greens, both of them promising an investment bonanza and tax increases on the wealthy. (The Green manifesto has more to say about the cost of living than about climate change, in sharp contrast to the previous election, in 2021.) On the right, the CDU (along with its Bavarian sister party, the Christian Social Union) and the pro-business Free Democrats (FDP) urge cuts to taxes and spending, and welfare reform. All parties call for slashing red tape, as they always do. None has funded its pledges properly, but the SPD and Greens have more wiggle room because they pledge to loosen the constraints of Germany’s constitutional debt brake, which restricts government borrowing.

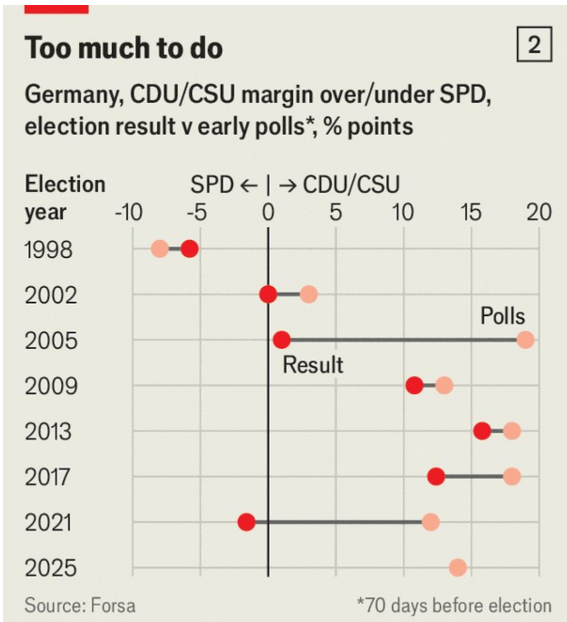


The Economist

“My hope is that the campaign will focus on the big questions we are facing,” says Ricarda Lang, who until recently co-led the Greens. “So far, it’s not what I see.” That could change when things kick off in earnest after the new year, especially once Donald Trump takes office on January 20th. Should he slap tariffs on EU exports, or demand European troops police a settlement in Ukraine, German politicians will have to respond. The top two candidates both think they are better placed to weather such a February surprise. Mr Scholz believes German voters will value his equanimity under pressure; Mr Merz, a more assertive figure, reckons they will regard him as a better match for Mr Trump.

Yet another danger arises. In Germany, party manifestos are less programmes for government than opening gambits for post-election coalition negotiations. In politically simpler times, Germany’s left- and right-wing camps might hope to get majorities that made ideologically coherent coalitions possible. Today, politics is so fragmented that seven parties hope to enter the Bundestag, making that job harder.

The hard-right Alternative for Germany (AfD), also campaigning on a message of economic recovery, is polling in second slot and hoping for its best-ever result. No other party will work with it. And even if the three parties hovering close to the 5% threshold (see chart 1) fail to qualify, the only possible two-party coalitions are likely to include Mr Merz's CDU/CSU and either the SPD or the Greens. The risk is of a split-the-difference coalition agreement that is inadequate to meet Germany's challenges. Populists will then position themselves as honest tellers of hard truths ignored by the mainstream.



The Economist

CDU insiders insist that cautious messaging should not be mistaken for a failure of ambition. Talk too tough on Ukraine, and they drive risk-averse German voters into Mr Scholz's arms. At times the conservatives have hinted at a willingness to modify the debt brake, and most observers expect them to make an offer in coalition talks, albeit at a price; but spell it out, and they lose votes to the fiscal dogmatists of the FDP. Immigration, on which the CDU/CSU proposals are especially tough, is a favoured AfD talking point. "Merz can't win on Ukraine, and he can't win on migration, so he has to focus on the economy," says Wigan Salazar, a CDU member and head of MSL, a political consultancy.

The recent tumult is not shifting the opinion polls much; the CDU/CSU retains the big lead it has long held. The SPD usually improves its standing during election campaigns. Yet number-crunching by *The Economist* shows that, ten weeks before the vote, the party faces a polling deficit relative to the CDU/CSU larger than any it has ever overcome since reunification, including in

Mr Scholz's naysayer-defying win in 2021 (see chart 2). The chancellor's aides continue to insist victory is possible, especially if they can goad the irascible Mr Merz into losing his cool. "It's certainly going to be a rough, tough campaign," says Tilman Kuban, a CDU MP. Expect more fruity language as Germany's election kicks into gear. ■

To stay on top of the biggest European stories, sign up to Café Europa, our weekly subscriber-only newsletter.

Europe | Ink and blood

Ukrainian troops celebrate a grim Christmas in Kursk

A local paper braves Russian bombs to deliver news on the front line

December 16th 2024

THE NEWSPAPER round in Velyka Pysarivka can be sketchy. Barely 3km from the Russian border, the village is stalked by death. Oleksiy and Natalia Pasyuga, the husband-and-wife duo behind the *Vorskla* (the weekly takes its name from the local river) have a survival algorithm. Oleksiy, 56, drives. Natalia, 53, listens out of the passenger window for the drones that grow stealthier with every day. They say they are careful, though they know they are kidding themselves. Delivering the paper to the last remaining residents of the village is not a rational exercise, but a love affair. The tears of subscribers make it worth it, Ms Pasyuga says: “They grab the paper and hold it to their nose to smell the fresh newsprint.”

For its 2,500 readers, the *Vorskla* is more than a news source; it is a connection to the outside world. Most of Ukraine's border villages now have no electricity or mobile connection. When televisions work, they pick up Russian channels. The Pasyugas say they feel obliged to stay to debunk the propaganda, though they evacuated their offices from Velyka Pysarivka in March after a glide bomb smashed their car and half the building. Six months later the Russians destroyed the other half, during attacks that coincided with Ukraine's advance into Russia's Kursk province just to the north. Now the *Vorskla* is put together in a library in the nearby town of Okhtyrka. It is printed and hand delivered to front-line villages in a car the couple borrow from their son.

[*Read more of our recent coverage of the Ukraine war*]

When your correspondent calls, the Pasyugas are preparing a special Christmas issue. They already know what they want: uplifting stories to raise the morale of their weary readers. For once, there will be no obituaries of the local boys lost in battle. The Kursk offensive will be left out too, though that is less unusual. The Pasyugas say they know "too much" to accept the official celebration of the offensive as "Ukraine's great and only triumph of 2024". They choose silence instead.

The Economist

At a command post to the north, Major Ivan Bakrev is candid about Ukraine's troubles in the salient. The artillery commander in the 82nd Air Assault Brigade says Vladimir Putin's men are tightening the screws, and that was so even before North Korean soldiers began to join the battle. The Russians enjoy a "massive" advantage in almost everything—men, artillery, machines—and switch between mechanised and infantry assaults to powerful effect. Ukraine has already lost "about half" of the territories it once controlled. The reverses began when Ukraine swapped out elite units for less hardened ones in late September; that was a mistake, the major reckons. Now the Russians are trying to choke off their main grouping from Ukraine proper by attacking on their east and west flanks. "Every unit in Kursk has switched to defence," he says.

The urgency of Russia's counter-attack appears tied to Donald Trump's impending inauguration. Mr Putin wants Kursk to be a done deal by January 20th, rather than an embarrassing topic for discussion. Volodymyr Zelensky seems equally determined to retain the pocket as a bargaining chip. The Ukrainians are holding on, though the conditions on (and under) ground are getting grimmer. "Rain, slush, snow, cold, mud, beetles, worms, rats and glide bombs," says Ruslan Mokritsky, a 33-year-old non-commissioned officer in the 95th Air Assault Brigade. The Russians can drop as many as 40 glide bombs on one position in the space of a few hours, he says. "In Kursk, death is always close; it practically holds your hand."

Mr Mokritsky, whose elegant handlebar moustache is a reminder of his more comfortable civilian life as a restaurateur in central Ukraine, is surprisingly unfazed. Ukraine has so far found ways to respond to new challenges—even Russian chemical attacks, he says. "If the Death Star showed up above us, we'd figure a way out." He admits to only one fear: what would happen to his two young children if he were "two-hundreded", the military code for being killed in action. The kids are never far from his mind. He splashed out on iPads to slip under their pillows for St Nicholas Day, the traditional family celebration on December 5th and 6th. The same night, he placed twigs under his comrades' pillows, a punishment usually dished out to naughty children. The joke brought a rare moment of laughter in the dugout.

Four and a half months in may be too early to judge the Kursk operation. Born at a moment of desperation for Ukraine, whose commander-in-chief, Oleksandr Syrsky, was facing the sack, the incursion did not achieve its goal of diverting troops from Russia's main effort in Donetsk province. It has cost Ukraine some of its elite troops. But it did ease the pressure elsewhere, and offered Ukraine a rare political fillip in a bad year. The soldiers seem to believe the counter-invasion was worth it, if only for giving the Russians a dose of their own medicine. "When I stepped foot in Kursk, I understood what they felt when they entered Ukraine," says Sergeant Mokritsky. "Let them die and rot on their own lands, and the more of them the better."

Back in Okhtyrka, Oleksiy Pasyuga says that the soldiers' struggle puts his own worries into perspective. His five hryvnia ($0.12) margin on the 15 hryvnia cover price is enough to keep his team in business, he says. He is determined not to be the man who ends the *Vorskla*'s 95-year history. There is not much of a cushion, no adverts, no excess, so the paper's Christmas edition will be the same lean eight pages as usual. They have decided to lead with a feature on the soldiers' New Year: how they will mark it, what they might eat. For Major Bakrev, the answer is simple enough. On New Year's Eve he will be at work; he will not be celebrating while his men freeze in the trenches. "Maybe I'll mark it with a couple of volleys of our guns," he quips. Officer Mokritsky, who is likely to spend the night underground, shrugs. The soldiers on the front line will celebrate as best they can. “Maybe we’ll have Coca-Cola.” ■

To stay on top of the biggest European stories, sign up to Café Europa, our weekly subscriber-only newsletter.

Europe | French politics

France's new prime minister faces a looming mess

François Bayrou has an emergency budget but no government yet

December 19th 2024

France STUMBLED into the holiday season with its fourth prime minister this year, no new government and only an emergency rollover budget to get it through the first months of 2025. François Bayrou is a wily veteran, a 73-year-old fellow centrist whom President Emmanuel Macron appointed to form a government on December 13th. He hopes to broaden the coalition formed by Michel Barnier, his conservative predecessor, who was toppled by parliament on December 4th. Even if Mr Bayrou manages to recruit more widely, however, he will struggle to put in place what France really needs: a stable, lasting government that can begin to get its dismal public finances under control.

The circumstances of Mr Bayrou's appointment were downright bizarre. A tractor-driving part-time farmer from a town at the foot of the Pyrenees, the new prime minister was a centrist decades before Mr Macron transformed centrism into a powerful electoral platform. A three-time presidential candidate, Mr Bayrou stood down in 2017 to allow his junior to carry the centrist banner alone, with astonishing success. Yet their bonds have at times been strained. Mr Macron seems to have had others in mind for the job, including two loyalists, Sébastien Lecornu and Roland Lescure. In the end, says Mr Bayrou's camp, the older politician forced the president's hand by threatening to pull out of the centrist alliance, setting up an unconventional power dynamic.

Upon his appointment, Mr Bayrou referred to a "Himalaya" of difficulties ahead, the first being the budget. This was underlined by Moody's, a ratings agency, which on December 14th downgraded France's sovereign debt one notch to Aa3. It considers that the country's public finances "will be substantially weakened over the coming years, because political fragmentation is more likely to impede meaningful fiscal consolidation". Mr Barnier's previous budget, which he tried and failed to force through parliament, was designed to curb the budget deficit from over 6% of GDP in 2024 to 5% in 2025. The emergency budget law, passed on December 18th, rolls over current measures, but contains no further effort at fiscal consolidation. Mr Bayrou's new government will need to start afresh in the new year.

It is unlikely to be any simpler. The parliament remains split into three deadlocked blocs. Fresh elections cannot be called before July 2025. Jean-Luc Mélenchon's radical left says it will seek to vote Mr Bayrou down. The Socialists, beginning to free themselves from Mr Mélenchon's grip, sound more co-operative—but say they will not join the government. The conservatives are likely to take part, if they, in turn, get what they want.

The hard-right Marine Le Pen, who was pivotal in Mr Barnier's downfall, has at times sounded warmer towards Mr Bayrou, but now says she is preparing for an early presidential election. Mr Mélenchon has been demanding Mr Macron's resignation for months. The president retorts that he has no intention of leaving office before the end of his term in 2027. Perhaps Mr Bayrou's best hope of survival is that, apart from the political extremes, no party has an interest in putting the sort of political pressure on Mr Macron that might, just, bring the presidential vote forward. ■

To stay on top of the biggest European stories, sign up to Café Europa, our weekly subscriber-only newsletter.

Europe | How to beat protesters

Police brutality is not stopping Georgia's protests

Pro-EU demonstrations continue, despite little help from abroad

December 19th 2024

THE FACE of the woman in the courtroom was covered in green and yellow bruises. She was being fined 500 lari ($178); police had arrested her at an anti-government protest. They had also, she said, shattered her orbital bone. Many of the demonstrators filing through Tbilisi's courts have such wounds: bandaged skulls, splints on broken noses. They target the face, says Tamar Oniani of Georgia's Association of Young Lawyers. It creates a public signal that "if you're gonna come here again, then you receive this."

Georgians have been demonstrating for three weeks, since Georgian Dream, the Russia-friendly ruling party, suspended efforts to join the European Union. For the first week, police tried to brutally suppress the protests. Then they changed tack, letting the demonstrations go ahead but arresting participants at home or work. They are subjected to physical violence or threats while in custody, says Ms Oniani, often including threats of rape.

The repression is not yet working. Every night thousands flood the streets of Tbilisi. Vocational and hobby groups organise their own marches: health-care workers, rock climbers. There are protests in smaller towns too. The government has raised fines and made arbitrary detention easier. “They are losing the propaganda battle,” says Shota Utiashvili of the Georgian Foundation for Strategic and International Studies, a think-tank in Tbilisi. Some broadcasters at pro-government channels have quit, and there are rumours of defections in the civil service.

The international response has been muted. Kaja Kallas, the EU’s foreign-policy chief, wants sanctions against Georgian Dream leaders. Those were blocked at a summit of EU foreign ministers on December 16th by Hungary and Slovakia, the Kremlin’s best friends in Europe. An American package is reportedly in the works.

“Not everyone can afford to stand here every day,” says Tamar Makatsaria, who is at the protests every night waving an EU flag. The government hopes to intimidate the demonstrations’ leaders and let anger fade away over the holidays. It may succeed.■

To stay on top of the biggest European stories, sign up to Café Europa, our weekly subscriber-only newsletter.

Europe | Charlemagne

We need to talk about Europe's Kevins

How an American name became a European diagnosis

December 19th 2024

As families in Europe wind up the year, a few seasonal traditions will feel familiar, from Brussels to Bucharest. After awkwardly lugging an overpriced Christmas tree up an apartment staircase and dashing out for a panicked bout of gift-shopping, exhausted parents will plop the kids in front of the telly in search of a little yuletide peace. French youngsters will watch a film whose title translates as "Mummy, I missed the plane", Hungarians one called "Tremble, burglars!" while Poles enjoy "Kevin alone in the house". Beneath the dodgy dubbing lies the same film, "Home Alone", an American flick from 1990. Its cultural significance in Europe is not so much its ubiquity in Christmas programming, nor the film's cinematic merits (the highlight of the sequel is a cameo by one Donald Trump). Rather, sociologists point to the story's young hero Kevin, a rascally type played by the then nine-year-old

Macaulay Culkin. In the late 1980s, before the film came out, the most popular names given to baby boys in western Europe were local variants of ancestral ones: Julien in France, Jan in Germany, Johannes in the Netherlands. By 1991 Kevin was the most popular name in all three countries, and stayed so for many years.

To grow up with the name in Europe has not been an altogether easy experience. Being a Kevin came to be seen as a sign that one hails from the great cultural unwashed, at least in the eyes of sophisticated types who claimed to be more familiar with the names of characters in Victor Hugo or Hermann Hesse than those in American pop culture. (Kevin is of Irish origin but is more common across the Atlantic.) Now in their 30s, Europe's Kevins have put up with a torrent of bourgeois snootiness. Was it the kid from "Home Alone" they were named after? Or Kevin Costner, whose hit film "Dances with Wolves" was also out at that time? Or perhaps one of the Backstreet Boys, early 1990s heart-throbs? (Or elsewhere: the French had discovered the name by 1989.)

Whatever the reason, in England "Kev" has become a synonym for working-class wastrel, a denigration as severe as being a Karen in America. Germans speak of *Kevinismus*, or the plight of prejudice felt by those bearing the name; a Kevinometer app helps parents avoid giving their kid a name that sounds great today but will come to be seen as a marker of poor parental taste come 2040. So bad is the name's reputation there that a German wag once summarised the existential angst of bearing it: "Kevin is not a name, it's a diagnosis." Studies that seek to establish whether employers or potential dates discriminate against certain types of job applicants often focus on two male names, Muhammad and Kevin. Bigotry against Muhammads is considered poor form these days. For Kevins, it remains open season.

The urbane pomposity towards European Kevins is in part a reaction to the upper classes having themselves been snubbed. Tradition in many parts of the continent once dictated that names should cascade down the social ladder: blue-bloods would innovate with newfangled forenames, which the merely well-heeled would then adopt before the plebeian underclass was allowed to recycle them. But in the 1980s, those at the bottom of the totem pole started to balk at such nomenclaturic hand-me-downs. To plump for

Kevin was a mark of social emancipation, of the downtrodden refusing to play the role elites had ascribed to them.

Many European countries long required names to come from an approved list (mainly of Christian saints). The easing of such strictures allowed parents to draw inspiration from farther afield. Proclaiming their cultural independence, many looked to America. Kevin's rise was the most visible result. But the countryside and poorer suburbs of western Europe have their fair share of 30-something Jordans, Dylans, Jessicas and Cindies too, often coinciding with characters' debuts in imported TV series.

The European curse of the Kevins *et al* fell mainly on boys, and not in all countries. Italy in the 1990s stuck with its Marcos, and Spain with Josés. Poland had its share of English-sounding names, often dubiously rendered (sorry, Brajan). One place had adopted the Anglo monikers early, for its own reasons. In East Germany in the 1970s, before the fall of the Berlin Wall, to be born a Mandy, Percy or Ronnie was a sign that one's parents had cosmopolitan aspirations, and television sets capable of receiving (banned) Western programmes. Naming a kid after a character in "Dallas"—there are a few ageing Sue Ellens in the Berlin hinterland—was an act of quiet rebellion against the communist state.

We also need to talk about Dylan

Some Kevins have found fame and fortune, often in fields the elites consider beneath them. A Dutch rapper born in 1994 defiantly goes by his first name alone. The Kevins Behrens and De Bruyne, both born in 1991, are star footballers for Germany and Belgium respectively. Since 2022 two Kévins, accent and all, sit in the French parliament, the subject of much sniggering at the time. They are MPs for the National Rally, a party whose migrant-bashing rhetoric has attracted plenty of blue-collar voters (its leader is himself a Jordan, born in 1995). Whether in hardscrabble northern France or Saxony in Germany, Kevins are most prevalent in the "left behind" places where the hard right has thrived.

Given how its popularity cratered in the 1990s, Kevin is itself a "left behind" name. Having topped the charts in France until 1994, it is no longer in the top 500 given names. But visit a European registry office today and you might conclude Kevins were merely forerunners. Anglo-Saxon names are everywhere. Noah, the English spelling of a biblical name, is the most common boys' name in Germany today. Liam, a Britpop staple, is popular in France and Spain. Polish parents are naming kids Alan or Amelia, while Emma is ubiquitous from Spain to the Netherlands. For decades Europe has mocked its Kevins. It may be they will have the last laugh. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Britain

Britain | Here we go again

Britain prepares for its third defence review in four years

Does it want to remain a serious power on land or sea?

December 15th 2024

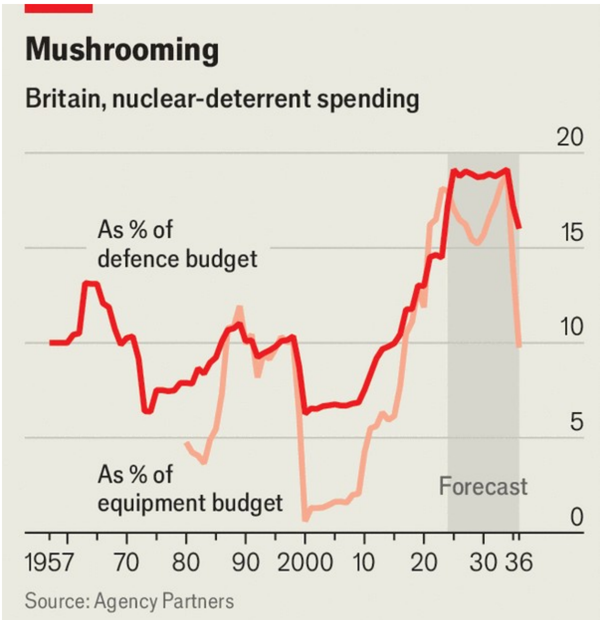
IN WHITEHALL THERE is no pastime taken up with greater enthusiasm than a good policy review. At least a dozen are under way in the Foreign Office alone. China policy is going through an "audit". The AUKUS submarine deal is being assessed. The crown jewel among all these is the strategic defence review—Britain's third in four years. As it reaches its denouement, Britain's armed forces are staring down the barrel of dramatic change.

The review has been entrusted to three outsiders. George Robertson, a former Labour defence secretary and NATO secretary-general, is chairman, reprising a duty he performed in 1998. He is joined by Sir Richard Barrons, a retired general, and Fiona Hill, a British-American expert on Russia policy who served on Donald Trump's National Security Council. That trio is supported by six defence bigwigs, among them a former Conservative junior defence minister, and a secretariat which includes American, French and German officers. They are expected to finish and submit their recommendations in early 2025, but it is up to the government to decide whether to follow them. Months of internal wrangling probably lie ahead.

Sir Richard, appearing in front of the House of Commons Defence Committee alongside Lord Robertson on December 3rd, described two priorities for reform. One was the primacy of digital technology—cloud computing, artificial intelligence, virtual environments—as the backbone of the armed forces. The second was the role of vehicles, planes and ships without humans in them and the eventual dominance of autonomy. ("The thing about robots", Sir Richard told your correspondent in 2019, "is that they don't have pensions.")

These are not settled issues. The Royal Air Force says that autonomy will not be reliable enough to replace humans in the cockpit completely by 2040. Others retort that this is too conservative. But the review will "chart that path", promised Sir Richard, "with at least a 20-year horizon". He added that the team would also make "powerful recommendations" on how to solve the skills crisis in defence, and tackle areas from logistics to homeland resilience.

Then there is a more profound fork in the road. The reviewers have been told that their recommendations must be affordable "within the trajectory" from spending 2.3% of GDP on defence, the present level, to 2.5%, the target. Yet in Kafkaesque fashion, that trajectory might not be set until a spending review in June.



The Economist

Moreover, the nuclear deterrent increasingly cannibalises all else. Its cost has risen from 5-6% of the defence budget a few years ago to at least 19% by next year, notes Sash Tusa of Agency Partners, an equity-research firm (see chart). That, plus two other big projects—the AUKUS pact to build submarines with Australia, and GCAP, a scheme to build a next-generation warplane with Italy and Japan—appear to be set in stone. That leaves precious little to plug other holes.

For the past decade Britain's solution to this problem has been to continue doing everything, decreasingly well. The result is an army that cannot produce a combat-capable division, an aircraft-carrier strike group without a fully resourced air wing or complement of escorts and an air force without the munitions it needs. Many insiders hope that the new review will at last identify priorities and trade-offs. By definition, that means winners and losers.

One vision in the Ministry of Defence, backed by many in senior positions, is that Britain's natural strengths lie in air and maritime capabilities, rather than in heavy ground forces that might be provided by others, such as Germany and Poland. "Does [NATO] want an alliance of 32 'mini me's?" asked Admiral Sir Tony Radakin, the chief of the defence staff, rhetorically, in a lecture on December 4th. “Or can we use NATO’s size to be able to take more risk and constantly search for a winning edge?”

In this view, the defence of NATO on land is impossible without dealing with Russia’s northern fleet, which is largely unscathed from the war in Ukraine. China’s navy is increasingly active in the Atlantic and Arctic. Air and naval forces are flexible instruments of statecraft that could be used in the Middle East and Pacific. “NATO first”, the government’s mantra for defence policy, need not mean “NATO only”.

The alternative to this maritime-air vision is one focusing on land-air. Russia is on the front foot in Ukraine. Its army is larger than it was at the start of the war there. And Britain has big holes to fill in this area. Army generals acknowledge that NATO’s formal demand—a “strategic reserve corps” with nine brigades and a bevy of supporting capabilities—is unrealistic at current levels of spending. Their aim is not to expand the army. It is to show that a more modest force, one explicitly modelled on Ukraine’s way of war, fuelled by intelligence from America and other members of the Five Eyes spy pact, could still do the same job.

The idea is that, through technology, a British brigade of 7,000 or so soldiers could defeat a Russian “combined-arms army” triple the size. Naval power matters, in this view, but should be focused on specific areas, such as anti-submarine warfare in the North Atlantic, rather than carriers.

It is tempting to frame these debates as inter-service bunfights. In fact, they are as much if not more about differing visions of the threat, how to counter it and, crucially, the timeline over which it will unfold. “The defining political choice of this strategic defence review will be the degree to which the government invests limited resources in these long-term projects,” notes Justin Bronk of RUSI, a think-tank, referring to AUKUS and GCAP, “as opposed to plugging the capability gaps in the current force [for] Russian aggression this decade.” The air force says that the expense of GCAP is necessary because no other system will be able to destroy Chinese and Russian air defences and long-range missiles by 2040. To critics, that is impossibly far away and risks swallowing resources needed to keep Russia at bay in the next five years.

Lord Robertson, Sir Richard and Ms Hill are confronted with a stark set of options. Defence spending would have to rise to 3% of GDP to meet all these goals. If it rose to 2.5% immediately, Britain might be able to preserve front-line air, land and naval forces but would need to accept greater shortfalls in areas such as munition stockpiles and training. If the Treasury only signs up to hitting that level by the end of the decade, something has to give.

Your money or your life

That would come with political and diplomatic costs. Formally quashing the army's ambition to field a division would provoke a backlash in NATO even as Donald Trump is demanding that allies step up. Mothballing a carrier would invite derision on a party that authorised their construction when it was last in government.

John Healey, the defence secretary, is said to have balked at the binary choice between land- and sea-focused forces. The trade-offs will be hotly debated in Whitehall. American officials are also weighing in. On December 10th Kathleen Hicks, America's deputy secretary of defence, when asked what the Pentagon wanted to see in the review, singled out the nuclear deterrent and maritime capability—"the ability to be expeditionary, to operate throughout the world". The tension between continental and maritime commitments has been a leitmotif of British strategic debates for centuries. But after years of slicing away capability across the board, Britain will find itself at a moment of reckoning, unless the fiscal taps open. ■

For more expert analysis of the biggest stories in Britain, sign up to Blighty, our weekly subscriber-only newsletter.

Britain | Huel tide

Why meal-replacement drinks are shaking up the British lunch

They are being rebranded as aspirational as well as efficient

December 19th 2024

Britons love a sandwich. But rather than eating their lunch, a growing number have started to drink it. Once a niche product for dieters and convalescents, meal-replacement drinks are moving into the mainstream.

Six years ago less than one in ten British adults told YouGov, a pollster, that they would consider buying such a thing. Soylent, an American brand, found the going hard when it launched in Britain. But Britons are now taking to a food fashion with a global market worth some $14bn, by one estimate. The choice for consumers has grown. Huel, a Hertfordshire-based startup whose profits have nearly tripled in the past year along with record sales, is now available in seven in ten supermarkets across the country.

Efficiency is part of the appeal. According to a survey by Compass Group, a food-services firm, British employees spend less than 33 minutes on lunch. But given that the average sandwich is scoffed down in less than five minutes, saving time can't be the only draw.

Economy is another. Huel's powdered formula, and those of rivals such as Myprotein and yfood, provide meals at a cost of between £1.30 ($1.65) and £1.80 each. By comparison, an egg-and-cress sandwich at M&S costs £3.25.

Huel and its peers claim to be a healthy choice, too (because of the balance of nutrients they contain). They have dropped the "meal-replacement" label. "It's not a term we use because it implies something that's inferior," says Huel's CEO, James McMaster, "whereas our product is vastly superior." Nu26, another brand, calls itself a "nutritionally complete" shake; yfood dubs itself "smart food".

Clever marketing has helped shed the dour image of being diet drinks. Huel's monochromatic look has drawn a cult following among gym rats and girl bosses. Slogans about efficiency and empowerment rather than weight loss or restriction aim to position the products as both practical and aspirational. "If everyone had Huel, the world would be a much, much better place," Mr McMaster claims. But it's still hard to beat a tasty sandwich.■

For more expert analysis of the biggest stories in Britain, sign up to Blighty, our weekly subscriber-only newsletter.

Britain | Marley’s ghost

How to get money from Ebenezer Scrooge

Get him to leave a gift in his will

December 18th 2024

THOSE with exquisite taste in Christmas films will be familiar with the scene in “The Muppet Christmas Carol” in which Dr Bunsen Honeydew and his sidekick Beaker solicit Ebenezer Scrooge for a donation to the poor. Scrooge refuses and is then haunted by three ghosts who remind him of the importance of having a charitable heart.

British fund-raisers are experiencing similar difficulties to Muppets. The Charities Aid Foundation, which tracks charitable giving in Britain, reported that 58% of people donated in 2023, down from 69% in 2016. Businesses are also giving less. Although profits from Britain’s top companies have grown by 13% over the past decade in real terms, their charitable giving has declined by 34% over the same period. And yet the need, if not quite

Dickensian, remains great. A study published in early 2024 by the Joseph Rowntree Foundation, for example, suggested that more than one in five adults, and 30% of children, in Britain lived in poverty.

Charities may find some hope in demography. Baby-boomers (those born between 1946 and 1964) have amassed wealth and been stingy with it during their lifetime. In the next three decades those boomers will leave behind an estimated £7trn. And, thanks to historically low fertility rates, a growing number of them will die childless. So there will be a lot of money with nobody obvious to pass it to. Rather than try to squeeze money from Scrooge on Christmas Eve when he's alive, charities might do well to focus more of their efforts on getting him to leave money behind in his will when he's dead.

Many are already doing just that. A survey published in April 2024 found that marketing investment in legacy giving had increased by one-third over the previous year, resulting in a 40% increase in the number of charitable gifts left in wills. Legacy Futures, a consultancy that helps charities understand the potential of legacy giving, has found that gifts in wills have quadrupled since the early 1990s to around £4bn expected in 2024, and it predicts that this will rise to £10bn by mid-century. Britain's top 1,000 charities now receive 28% of total donated income from legacy gifts.

However, although legacy giving is rising, relatively few gifts are going to the poor. Health charities receive the bulk of legacy gifts, followed by animal and conservation ones respectively. Charities providing end-of-life services are also benefiting. "Catastrophe clauses" in wills can produce a bonanza for some causes. In 2018 a catering boss, Richard Cousins, died in a tragic helicopter crash with his two sons. With no heirs left his will stipulated that £41m of his fortune should go to Oxfam, which focuses on famine relief.

Modern Scrooges have a choice should they wish to change their ways. They could give generously in their lifetime—like the donors in west Belfast, an area in Northern Ireland where over a quarter of children live in poverty, who in 2023 gave four times more to charity as a proportion of their income than the far wealthier residents of Kensington in west London. Or they can go to a probate solicitor before, as Charles Dickens put it in the opening lines of his novella “A Christmas Carol”, they are dead as a doornail. ■

For more expert analysis of the biggest stories in Britain, sign up to Blighty, our weekly subscriber-only newsletter.

Britain | Point of slow return

Britain’s Labour government is keen on deporting illegal migrants

But its efforts will run into roadblocks

December 16th 2024

“Mark my words, this government will turn the page,” Sir Keir Starmer promised in a recent speech. It is the sort of thing the prime minister says about many areas of policy. This time the topic was one near the top of voters’ concerns: immigration. Labour has pledged to expand detention centres, “smash” people-smuggling gangs and, above all, return more illegal entrants. Yvette Cooper, the home secretary, boasted on December 16th that the government is on course to send home more in its first six months than in any six-month period in the past five years. Days earlier Britain carried out the first removal flight to Pakistan since 2020.

Removing people with no right to be in Britain seems an obvious way to improve on the Tories' dismal record. Voluntary returns (migrants who leave of their own accord, sometimes with the encouragement of cash) and enforced returns fell by a third since Labour was last in power (see chart), even as the numbers entering Britain soared. Although there is a legal duty to remove foreigners sentenced to over a year in prison, 18,000 such people remain, four times the number a decade ago.

The Economist

The Conservatives blamed an obstructive justice system, particularly since the courts blocked their plan to send asylum-seekers to Rwanda. In truth, it was mainly their own bungling. The *Windrush* scandal, in which the government hounded and deported law-abiding British citizens, and reports of woeful mistreatment at removal centres made matters toxic. Immigration officers complain that Atlas, the computer system brought in by the Conservatives, is broken and time-consuming. The decline in returns coincided with an 11% real-terms budget squeeze between 2015 and 2020.

But there are few simple fixes. Atlas needed a painful three-year handover, during which officers had to enter everything twice: once in the new system, once in the old. Replacing it will not be cheap or quick. The Home Office admits it hasn't tried to count how many illegal migrants there are in Britain since 2005 (when it estimated the number at 430,000).

Legal hurdles do, as the Tories claimed, make removals harder. In 2019 half of the Home Office's attempts to enforce a return failed, often due to last-minute appeals on the planned day of departure. The courts tend to be reluctant to approve the removal of those who have married or had children in Britain. In two recent cases judges ruled that paedophiles could remain in part because it would be unduly harsh on their families, despite one being convicted of raping his stepdaughter.

Returning failed asylum-seekers, which Sir Keir has promised to do, is really hard. Nearly seven in ten of those refused in 2015 were still in Britain in 2022, according to the Migration Observatory at the University of Oxford. People are rarely sent back to very poor countries like Iraq or Somalia. The longer claimants stay, the likelier they are to build lives and family ties in Britain of the sort the law and courts value.

Deportations appeal to the public. According to More in Common, a pollster, Labour's removal flights are more popular with voters than flagship schemes like creating GB Energy, a planned public energy company. But a zeal for expulsions risks uncomfortable comparisons to another deportation enthusiast, Donald Trump, and anger on the Labour left. Sir Keir may turn the page on immigration only to find that it makes for difficult reading. ■

For more expert analysis of the biggest stories in Britain, sign up to Blighty, our weekly subscriber-only newsletter.

Britain | Bagehot

The eternal Bossman

Britain's corner shops will never die

December 18th 2024

For a few weeks every December, Denmark Hill Food & Wine is transformed from a corner shop in south London into Santa's grotto. About 250 parcels are scattered about the poky shop, beneath Pulp Riot hair dye, bottles of Ribena, tea bags and condoms. Big packages are stuffed into overflowing sacks; small ones are arranged neatly in requisitioned shopping baskets. It is mid-morning. Another 250 packages are due at 1pm.

Becoming a gonzo post office is only the latest shift in the evolution of Bossman, a name (originating in London slang) for those who run a small shop in Britain. Corner shops have become the high street of last resort. Post offices and banks have retreated, leaving the fiddly tasks of paying in cash and collecting parcels or benefits underserved. Bossman has filled the gap.

It is these services that have helped Britain's 35,000-strong independent corner shops stay alive. Parcels are only one part. Customers of online-only banks, such as Monzo, can deposit cash wherever there is a PayPoint, a British payments company that works with corner shops. Benefits can be paid out in cash via corner shops in the same way. About 4m households—roughly one in seven—are on pre-payment gas and electricity meters, meaning they have to schlep to a shop whenever it runs out. Bossman is happy to offer almost any service, provided enough customers buy a can of Diet Coke on their way out.

Corner shops have always moulded themselves to fit British society. When supermarkets first emerged in the 1950s, they began to steamroller small shops. They were kept alive by arrivals from Punjab and Gujarat, who leapt at the opportunity to swap factory work for the chance to work for themselves. Corner shops went from producing politicians such as Margaret Thatcher, a former prime minister, to politicians such as Priti Patel, a former home secretary. Strip out race and the story of the *petit bourgeois* made good is a corner-shop constant.

What Bossman stocks tells a story, too. Corner shops thrive via a cocktail of convenience and vice. Once the staple business of corner shops was cigarettes, alcohol and newspapers, alongside pornographic magazines, with black dots delicately placed over nipples. Now, amid the ramshackle piles of parcels that adorn every other shop, adverts for vapes have replaced posters of the Marlboro Man. American-style candy does well. So does Monster, an energy drink that competes with Red Bull via the ruse of selling itself by the half-litre. At the same time, fresh produce now takes up more shelf space. Bossman will provide whatever someone needs whenever they need it, whether milk and pornography back then or a lump of ginger and a pint of Monster today.

Bossman is in the right part of the market. Convenience commands a premium. Trip frequency is growing (now just under three times a week) as is basket size, says Lumina Intelligence, which researches the sector. The "treat mission"—a fantastic piece of jargon—is on the up. Forget the lipstick effect, when women splash out on affordable luxuries in a downturn. Bossman benefits from the Tony's Chocolonely effect: if people cannot afford a night out, they will splurge £4 ($5.10) on the lurid Dutch chocolate to eat in front of the telly instead.

Parcels will become only a more significant driver of footfall, and not just at Christmas. Evri, a delivery company, now drops 180m parcels a year into shops, or 22.5% of all its deliveries. Each packet earns a shop 30p or so. The hassle is worth it. Some handle a few hundred a week; others manage thousands. A lot of people have to run a calorie gauntlet at the till.

Shoplifting may be at a 20-year high. Yet inside any corner shop is a testament to man's better nature, with thousands of pounds' worth of parcels, containing everything from children's toys to subtly packaged iPhones left unstolen. The Post Office has become a byword for bureaucratic malfeasance, wrongly accusing hundreds of sub-postmasters of theft, as well as poor service, with package collection available for a few hours per day, whereas Bossman is open from dawn until the dead of night. Bossman Britain is a vision of a high-trust society.

For years, the big grocers have attempted to muscle into the convenience sector. Bossman has held almost steady. Independents still account for 71% of all convenience stores. About half of them have their own brand. The other half are franchises such as Nisa, owned by the Co-op, or Londis, owned by Tesco. If you cannot beat Bossman, join him. After all, Bossman has tools that Tesco does not. Encouraging staff to work overnight can be expensive; cajoling family members to do the 4am shift, or doing it yourself, is cheap. Bossman economics are different.

Cornering a market

The life of a Bossman is not all rosy. Rises in the minimum wage and employer national-insurance contributions will hurt. Government is increasingly fussy. A ban on the sale of cigarettes to anyone born from 2009 onwards will in time cut an already depleted moneymaker. Single-use vapes, another cash cow, are to be nixed. A ban on teenagers buying energy drinks is mooted. From this perspective, the future looks grim.

Yet Bossman will prevail. To see how, pop down on Christmas Day. Bossman will be busy. Searches for "convenience store" peak during the festive week. Parcels must be returned (one year, PayPoint clocked a parcel return at 6.30am, suggesting an emotional start to festivities in a corner of Merseyside). Perhaps the money in the boiler has run out. Maybe *someone* forgot to buy milk. Bossman will be there. Someone has to be. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Christmas Specials

Christmas Specials | Around the world in 50m paces

A journalist retraces humanity's journey out of Africa—on foot

The Economist tries "slow journalism" with Paul Salopek

December 19th 2024

In 2013 PAUL SALOPEK, an American journalist, began a trek around the planet. His aim was to follow *Homo sapiens*' first migration, out of Africa, across the Middle East and Asia, by boat to Alaska, then down to Tierra del Fuego at the southern tip of the Americas, the place humans arrived last, around 8000BC. He called it the "Out of Eden" walk. He guessed it would take seven years. Eleven years later, he is still walking.

Mr Salopek has trekked across deserts and mountains, river plains and cloud forests, along pilgrim paths and ancient trade routes, in the footsteps of Alexander the Great and Mao Zedong. He has been shot at in the West Bank, held up by Kurdish gunmen, detained for two days and deported from

Pakistan, and stopped by police so often that he logs these encounters on a "freedom of movement" map. He has led camels and mules and pack horses across the Arabian sands and Central Asia's endless steppe. He buried caches of water at 25km intervals to traverse the Kyzyl-Kum desert in Uzbekistan, got caught in a snowstorm in the Pamir mountains and helped a man who had severed his leg in a rockslide. "The man was so cheerful, he was making jokes as we tied a tourniquet."

Mr Salopek halts often to write and explore. He waited eight months in Georgia for an Iranian visa that never came and ended up falling in love and marrying a documentary-maker. He was marooned for over a year in Myanmar by covid rules and then had to leave when the besieged junta became too threatening.

The Out of Eden walk is backed, in large part, by *National Geographic*, which oversees the project's website, where Mr Salopek posts dispatches. Now 62, tall and rangy ("My hair turned white in China"), he says his walk "is not an expedition", but a way of slowing down to collect stories, "like beads on a string". He has written several hundred thousand words so far, about archaeological digs and vanished civilisations, about industry and craftsmen, pollution and conservation. He has done what many journalists would envy: invented his perfect job. He calls it slow journalism. *The Economist* joined him in Japan.

Paul Salopek's Out of Eden walk

Walk · Motorised · Gap · Planned

Completed, no detailed route available

Source: *National Geographic*

We set off from Fukuoka, a city on the southernmost of Japan's four main islands, at 7am on a Tuesday. It was mid-September, but the temperature was broiling. Your correspondent shouldered a small pack, "no more than 5-6kg", Mr Salopek advised, containing notebooks, a rain jacket, a change of clothes, two pairs of underpants and minimal toiletries, but no laptop, make-up or spare shoes. We were accompanied by Koriyama Soichiro, a photographer who doubled as a translator, interlocutor and guide. In our hiking gear we stood out among the neatly dressed commuters.

Mr Salopek is an ascetic; he owns almost nothing but the clothes on his back and the tools of his trade: laptop, mobile phone, camera. He has no home and little money. Out of Eden is a non-profit; his "salary" goes into a back-up account for operational expenses. "We are often in the red." His manner is calm, humble, almost saintly, as he bends his head to listen intently to the people he meets along the way. But his mildness belies a certain steel. He is the kind of person who always takes the stairs over the escalator, never mind the weight of a pack, climbing two at a time.

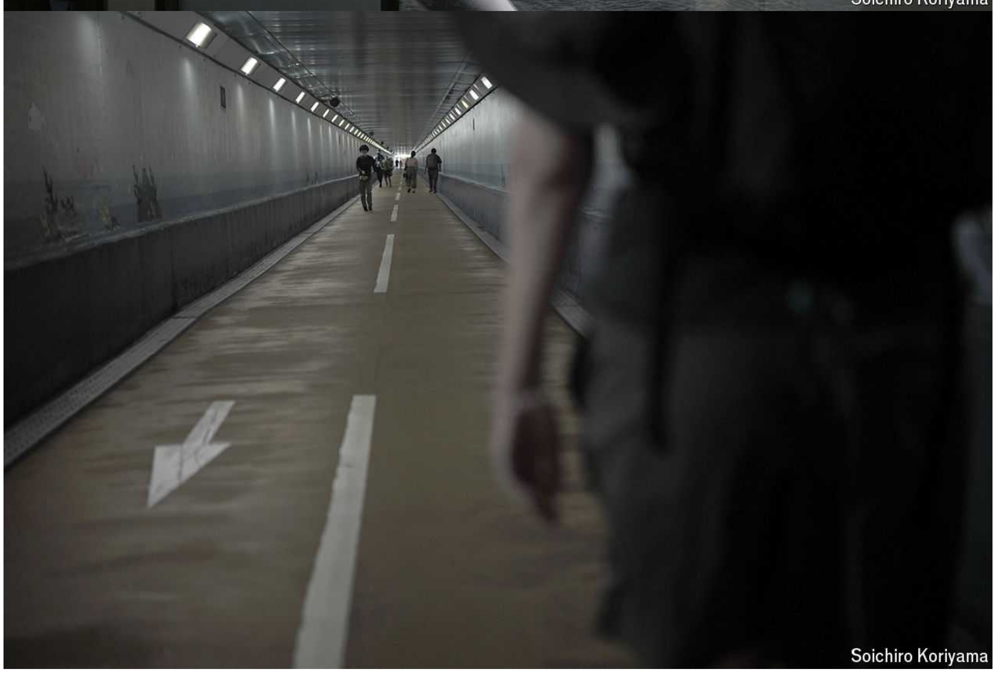
Born to ramble

His wanderlust was inculcated in childhood. In 1968, when he was five, his father moved the family to a small village near Guadalajara in Mexico. He and his four older siblings grew up among poor farmers and went to local schools. “My Dad was a bit like the father in ‘The Mosquito Coast’,” he says, referring to a novel and film about an American who grows disillusioned with consumerism and seeks a simpler life in Latin America. After graduating from the University of California, he did various jobs: farm hand, cowboy; shrimper, gold miner. Still in his 20s, he was working two jobs in Roswell, New Mexico, when his landlady, a former magazine editor, persuaded the local newspaper to hire him as a police reporter.

People everywhere share similar genetics and concerns

He went on to win two Pulitzer prizes. One was for writing about the human genome. (“Basically, we are all the same,” he concluded.) The other was for covering a gigantic war in Congo, where combatants firmly believed we are not all the same; that the tribe next door are the enemy. After a decade in Africa he decided to change the way he wrote about the world; to focus on ordinary people who live away from the headlines but whose stories illustrate big issues.

Soichiro Koriyama



Soichiro Koriyama

He is walking through "a golden age of migration", he says. Almost everywhere, he has seen people on the move. He stumbled over the bones of migrants in the desert on the Ethiopia-Djibouti border; met Syrian refugees picking tomatoes in Jordan; noted the numbers of Punjabis who have left their villages. Today, he points out, one in seven people live or work far from their birth places, and "the push-pull factors for human movement remain basically the same as back in the Stone Age": scarce resources, changing weather patterns, the search for greener pastures.

It is partly by looking at genetic evidence that scientists have been able to map early migration routes, to show how humans colonised the planet after leaving Africa between 60,000 and 90,000 years ago. When he gives talks about the project, Mr Salopek likes to remind people that we all share very similar genetics and concerns: Why am I not loved enough? I hate my boss! I worry about my children.

We walked 12-25km a day in 35-degree heat, past a banal parade of car dealerships, shopping centres and *pachinko* (pinball) parlours. There were few trees and little shade. We stopped often for water from the many vending machines and to cool off in convenience stores. “I feel like my head is in the mouth of an animal,” said Mr Salopek after a few days. When your correspondent developed blisters, he bought her sticking plasters. “Every culture has their blister cure,” he said, “chacha liquor in Georgia, camel fat in Saudi Arabia.”

Walking with someone is very intimate. You become friends quickly

We trudged on, sweaty, sticky. Cars went by, trains went by; there were almost no other pedestrians. People travelled from air-conditioned boxes to air-conditioned boxes in air-conditioned cars. We were, literally, outsiders. The heat kept people inside, precluding the chance encounters that Mr Salopek relishes.

In Fukuma, a dormitory town, we arranged to meet Tone Shiori, a local activist running for mayor (“I am the only female candidate!”), at a tempura restaurant. Ms Tone was impassioned, bemoaning Japanese conservatism and the lack of women in public office.

Soichiro Koriyama

Bias against women is “one global thing we share”, says Mr Salopek. Women wake up early to do chores, and go to bed late. Men dominate public spaces, own most property and bully their wives. Several times, in remote parts of Central Asia, a woman would wait for Mr Salopek on the road outside her village and tell him, weeping, of the injustices she endured. Such women “entrusted us with their secrets because we were walking away”. In South Korea, where an unprecedented number of women are opting out of marriage and children, he found the casual misogyny—the way men talked about women when they were sitting around a table with some beers—“breathtaking”.

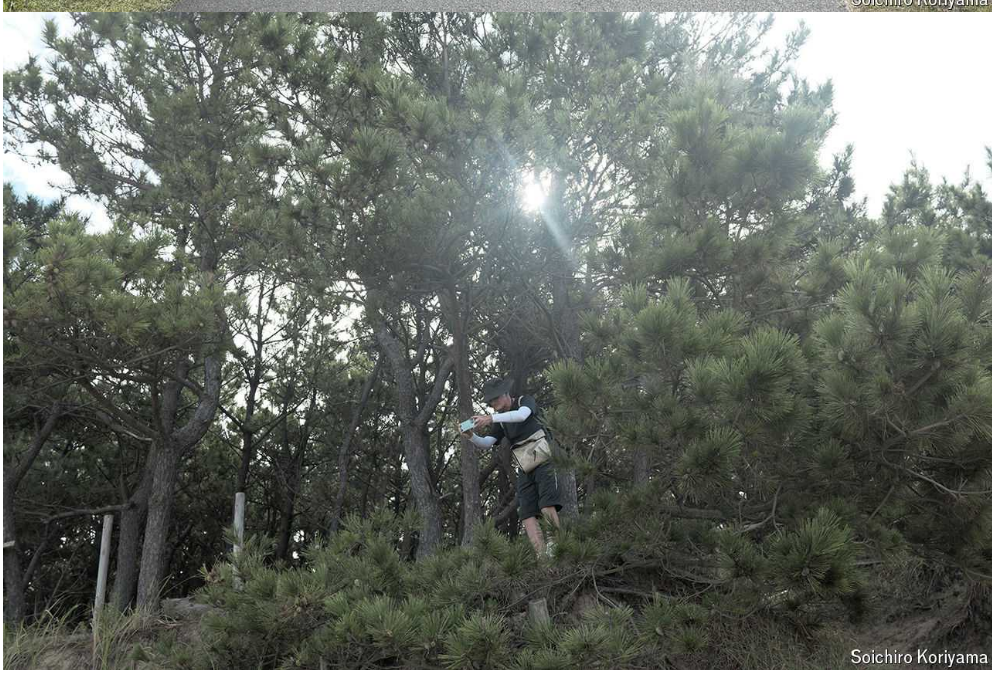
It has been hard to find female walking partners, Mr Salopek laments. He has walked with more than 100 people: journalists and jihadis, camel herders, biologists, historians, artists and a judge who had been sacked for graft. In Korea he walked with an expert on frogs. Some people join him for a few days, others for weeks. His wife meets him on the road, as do friends and family. “Walking with someone is very intimate,” says Mr Salopek. “It unlocks something in your heart; you become friends very quickly.”

Over the years, a network has grown up around Out of Eden. Mr Salopek encourages his walking partners to contribute their own stories to the website. Several have garnered *National Geographic* and other grants for projects. A Saudi walking partner has become an online storyteller with hundreds of thousands of followers; an Indian walking partner has set up a charity to fund conservation. One woman he walked with is trying to establish a national hiking trail in China.

Slow down and listen

Along the way, Mr Salopek often gives workshops on slow journalism. Don Belt, a journalism professor at Richmond University in Virginia and friend of Mr Salopek, sends his students walking in poorer parts of Richmond to discover different kinds of stories. The Harvard Graduate School of Education, a sponsor of the project, has developed a six- to eight-week curriculum called “Open Canopy” for schools. Over 70,000 children in 30 countries have followed Mr Salopek’s progress, written up their own projects and shared their work with classes in other countries.

Over time and distance, Salopek’s dispatches have evolved, from journalistic to more impressionistic. “It’s like layers on a pearl, with my memory and my experience, the stories get deeper.” Themes recur and overlap. “A story about health is connected to ecology which is connected to education which is connected to economics. The water crisis in India, where half the population doesn’t have access to clean sufficient water, is connected to a story I wrote about women working in a brick kiln because they have had to leave their homes because of the water shortage."



On our sixth day together, a sweltering Sunday, we stopped, exhausted, at a McDonald's to mainline sugar and sodium. A man at the next table was wearing a puffy shirt, fitted with fans that inflated it and kept him cool. Suddenly it dawned: all along we had been walking through the story. The story was the heat.

It had been Japan's hottest summer ever recorded. More than 50 people had died, thousands had been hospitalised. Globally, 2024 is predicted to be the hottest year on record.

"I've walked through climate change," said Mr Salopek. "Here in suburban Japan, it's just an inconvenience for most people, but in many places, it is already existential." In Ethiopia, where he began his odyssey, he had to skirt fighting over dwindling pasture between Afar and Issa tribesmen. In Kazakhstan he saw the steppe bloom after unusually heavy rains with grasses unknown even to the oldest locals. In Georgia he watched a whole neighbourhood of Tbilisi slide into the river. In Afghanistan he found villagers enjoying bumper apricot harvests, because the summers had become warmer and the glaciers were melting. He couldn't make them understand that in a few years the glaciers would be gone and their land would become desert. Everywhere, Mr Salopek said, farmers are worried; the weather is getting weirder.

On our last day together, we talked to farmers tending pocket-handkerchief fields girded between roads and tower blocks. "Every year it's getting hotter," said Takami Tsunehiro, 81 years old, who had been farming the same land with his wife for over 50 years. He paused digging up sweet potatoes and laid his scythe on the ground. "There used to be four seasons, now there is just summer and winter. There is either too much sun or too much rain." Other farmers concurred; the heat was hard on rice plants, and working outdoors was becoming increasingly perilous.

Walking for days had tattooed the sensation of an overheating world into our consciousness. "Of course I know about climate change intellectually," said Mr Salopek as we stopped in a Joyfull diner to rehydrate. "But I hadn't felt it in my body, the way I have over the past three months. Walking through the summer in South Korea, there was no one on the streets. It was like a ghost landscape. There were cooling stations, with mist; and I thought, for the first time, OK this is really dystopian. I thought it would be cooler in September in Japan but it's not, and now I can feel it's affecting me. It's hurting me."

At the end of the day, we ditched our packs and went for a stroll among the rice paddies. The sun was low and gold. Egrets stalked the verges, squadrons of dragonflies flitted "like glitter", said Mr Salopek, and we walked beside an irrigation canal full of fish, turtles and ducks. The fizz and crackle of cicadas coming from a bamboo forest was ferocious. It was the only countryside we walked in.

All the local hotels were full, so we slept in cubicles in a cyber-café, an ingenious and impeccably clean gaming facility often used by homeless people, with a gym, showers and a giant manga library. The next morning, I took the bullet train back to Fukuoka, where we had started eight days earlier. The train sped past a blur of grey-block suburbs, through black tunnels. It took just 30 minutes. ■

Christmas Specials | Mammon and merriment

How much happiness does money buy?

Your answer determines not just how you should live, but how you should invest

December 19th 2024

IMAGINE A GAME in which you roll a six-sided dice and win a number of dollars equal to the score. So a one gets you \$1, a two gets \$2 and so on. How much should you pay to play?

Those who paid attention in probability class already know the answer. The potential outcomes are \$1, \$2, \$3, \$4, \$5 or \$6, each of which has a one-in-six chance of coming up. Your expected winnings are the sum of each result multiplied by its odds of occurring. Add it all up and this comes to \$3.50. And so you have your price: if you can play for anything less than \$3.50, you should. If you can pay \$3 to play, for example, then on average you will make a net gain of \$0.50.

Nice, but hardly enough to set anyone's pulse racing. After all, there is a 50% chance of making either nothing or a loss and you can't do much with a few dollars anyway. But suppose you are instead offered 10,000 rolls. This is a lot more interesting. Your intuition says you are now bound to average close to $3.50 per throw, since repetition will smooth away the effects of luck. A mathematician would confirm your instincts: with that many throws, the odds of the average falling far from $3.50 are near zero. If each roll costs $3, in other words, you are virtually guaranteed a profit of around $5,000 (or 10,000 lots of $0.50). You would be a fool to turn down such a deal—so much so that, if you lack the $30,000 needed to play, you should borrow it.

Now consider a final variation: instead of 10,000 rolls, you are back to just one. This time, though, your winnings will be $10,000 times the score on the dice and the cost to play is $30,000. How keen are you now? The expected profit is still $5,000, but the risk of losing at least $10,000 (by rolling a one or two) has risen from almost nothing to one in three. In spite of the expected profit, most people would probably walk away.

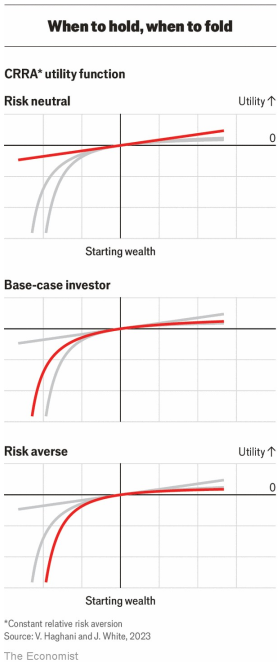
What unites all three games is the ratio of expected gain to initial outlay. In each case it is 17%, or $0.50 divided by $3. Why, then, do they prompt such different responses? The answer is that they involve different amounts of risk. Betting $30,000 on a single roll is clearly riskier than betting $3. But spread the $30,000 over 10,000 rolls, make the odds of a loss negligible, and the bet is a no-brainer. For gamblers and investors alike, the lesson is clear. It is not only expected returns that matter, but the risk you must take to get them.

Such contrived games may seem silly. In fact, armed with little more than the principles behind them and some maths that has been solved for half a century, you can build an entire theory of how to invest your hard-earned savings. It tells you how much you should risk on the stockmarket, how much you should keep safe and what you can spend in retirement. It requires just a few facts about financial markets and some of the simplest, cheapest investment funds that asset managers offer. What is more, it was first formulated by a Nobel-prizewinning economist and is today almost universally accepted by his successors as the "correct" approach to investment and spending. Yet outside academia, almost no one has heard of it.

The tendency that explains why each dice game triggers a different response is known as the “diminishing marginal utility of wealth”. This is a fancy way of saying that the more money people have already, the less they enjoy getting even more. For someone who cannot afford food, $1m will be life-transforming. But a second million will raise their living standards by far less, and a third will simply make them a bit richer.

To see the connection to gambling, consider how eager our newly minted millionaire might be to stake it all on a coin toss. Winning might mean a bigger house—but the resulting pleasure would be far outweighed by the pain of losing, which would mean a return to hunger. Even if the stakes were halved, most would dodge the gamble. This follows from the diminishing marginal utility of wealth. A 50/50 risk to a big chunk of your savings, even if you might win the same amount, is not worth it. The dollar amounts are equal but the impact of the loss would be greater.

The corollary is less obvious: that the rate at which your enjoyment of new wealth declines as you get richer and your aversion to risking large sums are two sides of the same coin. The two can be represented by a single parameter in a family of “utility functions”, which describe the pleasure derived from different amounts of wealth. Researchers have found that these “constant relative risk-aversion” (CRRA) utility functions fit most people’s attitudes to wealth fairly well. The parameter, known as “risk aversion”, can be calibrated to any individual’s level of daredevilry. Chart 1 shows CRRA utility functions for a range of risk aversions.



That explains why risk matters in the dice games. But what does any of it have to do with investing? This is what Robert Merton, who later won a Nobel prize for economics, set out in a paper in 1969. His snappily titled “Lifetime Portfolio Selection Under Uncertainty: The Continuous-Time Case” showed how a CRRA utility function, calibrated to any individual’s risk aversion, could be translated into a portfolio with an optimal split between high-returning but risky assets, such as stocks, and safe ones such as bonds. In Mr Merton’s procedure, “optimal” means balancing the individual’s desire for returns with their aversion to risk in such a way as to maximise their expected happiness.

Don’t risk the necessary...

Maximising happiness sounds good. And Mr Merton’s procedure has some even neater features. The most common advice to retail investors for splitting savings between stocks and bonds can seem arbitrary. This is the “60/40” rule, which advocates 60% stocks and 40% bonds—but why 60/40 rather than 70/30 or 50/50? More intuitive rules tell those saving for retirement to gradually reduce their stockmarket exposure as they age, since this gives them less time to top up their savings after a crash. You could, say, keep a percentage of your portfolio equal to your age in bonds, and the rest in stocks. But why should it be your age rather than, say, your age plus or minus five?

Maximising happiness sounds good

By contrast, the "Merton share" calculates the proportion of a portfolio to place in risky assets from factors that are obviously relevant. It says that the share in risky assets should be equal to their excess expected return over that of the safe alternative, divided by both the investor's risk aversion and the square of the risky assets' volatility. Mr Merton originally showed this for a two-asset portfolio (risky and safe). A real-life example would be a portfolio comprised of a global equity-tracker fund and a long-term government-bond fund.

If the Merton share's definition seems like a mouthful, consider what it implies. Should the safe asset's yield fall, perhaps because interest rates are falling, but shares' expected return remain the same, you should put more into the stockmarket. This makes sense: the opportunity cost of holding bonds over stocks has just risen. Conversely, if the stockmarket's volatility is soaring, say because a banking crisis is under way, you should sell some shares to buy bonds. As with the $30,000 dice roll, the odds of big gains or equivalent losses have just increased—but the pain of the losses would outweigh the pleasure of the gains.

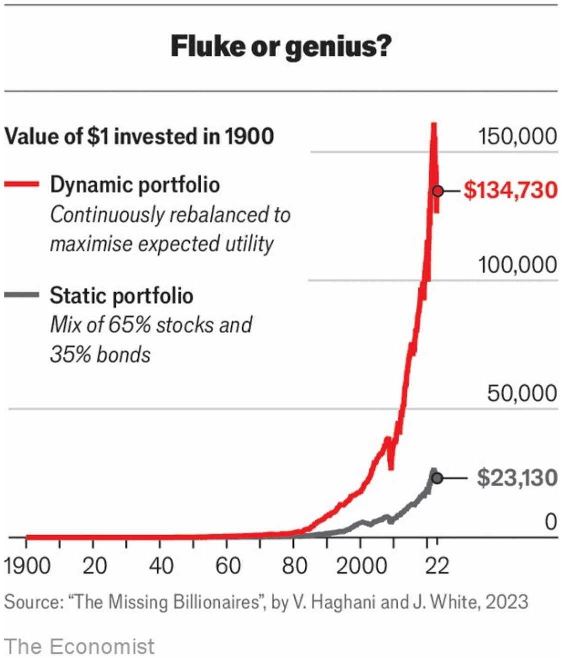
The Merton share is even more instructive for the broad lessons it imparts about investment. Except in rare circumstances, everyone with savings should buy at least some stocks. Provided their expected return is greater than the risk-free yield on bonds, the Merton share is always greater than zero. The flipside is that, very rarely, no one should own stocks. The late 1990s, during the inflation of the dotcom bubble, is an example. Share prices had risen so astronomically relative to underlying earnings that the expected return of the stockmarket was below that of government bonds, putting the Merton share below zero. Investors who took heed and sold their stocks before the subsequent crash would have ended up feeling rather smug.

How well does the theory work in practice? Very well...

John Campbell, a professor of economics at Harvard, points out that the Merton share also counsels against "reaching for yield". This idea was in vogue when interest rates were near zero, and involved cramming portfolios full of risky assets to juice returns. But another lesson from the Merton share is that, in deciding your allocation to risky assets, it is the gap between their expected returns and the risk-free rate that matters, not the absolute level. Low yields imply low returns, not that you should suddenly load up on risk.

So much for the theory. How does it work in practice? Going by long-run historical returns, very well indeed. Victor Haghani and James White, co-authors of "The Missing Billionaires", which seeks to popularise Mr Merton's ideas, have crunched the numbers. They took an index of American shares as the risky asset and inflation-protected Treasury bonds as the safe one, using data from 1900 to 2022 (using a proxy for the bonds for before 1997, when they were first issued). They then compared the Merton-share portfolio with one split 65/35 between stocks and bonds.

The results are shown in chart 2. Not only would the Merton portfolio have beaten the 65/35 one, generating an annualised return of 10% compared with 8.5%. Even more remarkably, it would have outperformed the strategy of being 100% in stocks, despite involving 40% less risk. Past returns, of course, are not a perfect guide to future ones, and perhaps the Merton strategy has simply been lucky. But with both theory and history pointing in the same direction, this seems unlikely.



Possibly the most attractive feature of the Merton share is its prescription for responding to changing market conditions. An investment strategy that adapts in light of new information—such as a plunge in prices that has raised expected returns—is one that many will find easier to stick with. This helps avoid the snare of continually switching strategy, which makes investors vulnerable to wealth-sapping instincts such as the impulse to sell everything during a crash. Instead, they can follow a set procedure and avoid such traps.

All this poses a puzzle. Virtually anyone who studies postgraduate finance, says John Cochrane of Stanford University, will learn about Mr Merton's framework. Yet among practitioners, and especially wealth managers, it is astonishingly poorly adopted and often unknown. Mr Haghani epitomises this divide, having worked with Mr Merton in the 1980s before co-founding a hedge fund, Long-Term Capital Management (LTCM), with him. In spite of this, says Mr Haghani, it was not until after LTCM had blown up in spectacular fashion—wiping out a personal stake the Merton share would have told him was much too large—that he understood this aspect of his former colleague's work.

...in the hope of winning the superfluous

One reason for this, argues Mr Cochrane, is that the calculations required are highly sensitive to their inputs, which in turn are hard to estimate. An example is the volatility term in the Merton share. This is not directly observable from the market and, since the calculation involves its square, a small error changes the prescribed allocation a lot. Similarly, estimating expected returns on stocks, or correlations between risky assets, can be nightmarish.

Nevertheless, fudges are possible. Your risky asset can simply be a fund tracking a broad share-price index. Volatility can be estimated as a composite of its long-run historical level (about 20% for America's stockmarket) and the shorter-term VIX index, which measures how much traders pay to insure against big price swings. An imperfect, but reasonable, forecast of shares' expected returns is the inverse of the cyclically adjusted price-earnings ratio popularised by Robert Shiller of Yale University. If your "safe" asset is government bonds, the expected return is simply the yield.

A bigger problem is that the Merton share's prescription is sometimes bonkers for retail investors. Harvard's Professor Campbell notes that it occasionally suggests a short position, which individuals often cannot take and which can lead to unlimited losses. If it is to be calculated rigorously, it also requires an estimate of the individual's human capital, or the sum of their expected future earnings. For youngsters, this might be the vast majority of their total capital, and reasonably "safe". As a result, following the Merton share's allocation for risky assets might require them to borrow to buy shares. Again, many are unable to do this. And even if they can, they would risk bankruptcy if prices swung abruptly. Avoiding such dangers means imposing limits, such as setting the share to 0% or 100% if it ever falls outside that range.

Mr White, who with Mr Haghani runs a wealth-management outfit that puts Mr Merton's ideas into practice, offers a plausible explanation for their poor adoption: it is not in wealth managers' interests. It takes financial sophistication to understand this framework and buy into it for the long run. Few money-minders wish to restrict their pool of potential clients like this. What is more, maximising risk-adjusted expected returns can be a tough sell when many customers just want the stockmarket to make them rich. Young investors particularly favour this "billionaire or bust" mentality, says Mr White. For them, the incremental improvements of the Merton framework are less sexy than trying to pick the next Apple.

This is the paradox of Mr Merton's ideas. Though purportedly based on investors' attitudes to risk and wealth, they do not match what many real-life investors say they want. Another example is a spending rule implied by the framework, which says that in retirement savers should spend a set percentage of their wealth each year, rather than a fixed dollar amount. This reduces the risk of depleting your portfolio too quickly, but also means your spending must fluctuate in line with the prices of your assets. Few people are thrilled by this prospect, yet they still invest in stocks, the prices of which can fluctuate a lot.

The problem, in other words, is people's unwillingness to accept the Merton framework's trade-offs. But these trade-offs are unavoidable, and what investors say they want is often unachievable. Hotheads in search of the next tech superstar will mostly pick the wrong one, and "billionaire or bust" sounds less seductive once you have actually gone bust. Refusing to link spending to your portfolio's performance is simply a denial of reality. The strength of Mr Merton's half-century-old ideas is that they force investors to confront such facts head-on, while shooting for the best returns they can realistically hope for. Despite their unpopularity, they are surely worth another roll of the dice. ■

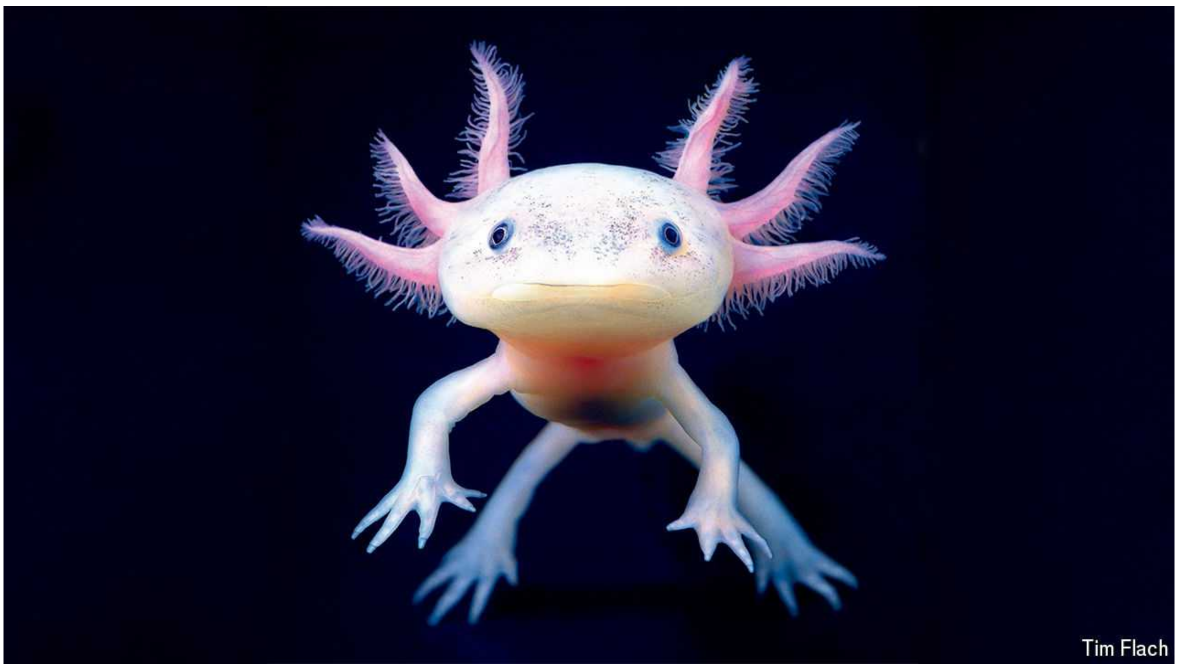
ILLUSTRATION STEPHAN DYBUS

Christmas Specials | The tadpole that conquered the world

How the axolotl rose from obscurity to global stardom

A tale that unites Alexander von Humboldt, Diego Rivera and Pokémon

December 19th 2024



The smog and noise of Mexico City feel a world away as flotillas of *trajineras*, brightly decorated wooden gondolas, glide up and down the cool canals of Xochimilco. The quiet network of waterways, on the southern edge of Mexico's hectic capital, was built by the Aztecs long before the Spanish conquest. Farmers still grow kale, tomatoes and chillies on Xochimilco's islands, though these days most Mexicans know the area as a weekend party spot to escape the heat of the city. Some boats carry troupes of mariachi with trumpets and guitars; others serve as floating cafés.

The peaceful neighbourhood is home to Mexico's perhaps most famous, and most reclusive, celebrity. The *Ambystoma mexicanum*, or axolotl, has lived a quiet life in the dark waters of Xochimilco since before the Aztecs established their empire in the Valley of Mexico. With its sludgy-brown, gelatinous little body and dislike of noise, the species of salamander seemed destined for a life of watery obscurity.

Yet the axolotl has become an improbable global megastar. Shops are crowded with cuddly axolotls. Toy axolotls fall out of McDonald's Happy Meals. Axolotl-themed clothes, jewellery and Christmas decorations flood the pages of craft sites such as Etsy. Real and cartoon versions of the creatures rack up tens of millions of views on YouTube and TikTok and star in video games. How did the axolotl emerge from Mexico's canals to become a worldwide celebrity?

The comeback of the axolotl has been 200 years in the making

Axolotls lived happily for a long time in Lake Texcoco, overlooked by the smouldering volcano, Popocatépetl. In around 1300 the Aztecs showed up, looking for a new home. According to myth, a prophecy had told them to set up camp at the place where they saw an eagle perched on a cactus with a snake in its beak. Inconveniently, they eventually sighted such a scene on an island in the middle of Lake Texcoco. Undaunted, the Aztecs built a series of causeways and established the seat of their empire there.

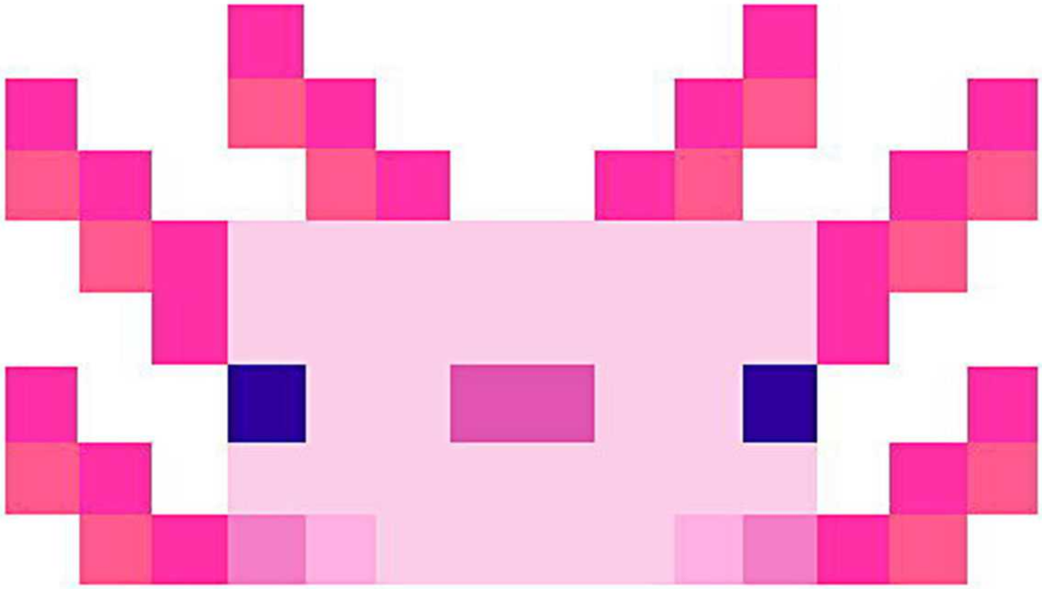
Aztecs got on swimmingly with axolotls, which they named after Xolotl, their god of fire and lightning. True, axolotls sometimes made their way into Aztec meals (they are fatty and rich in protein) and medicine (they are said to make a good cough syrup), but broadly they thrived. This changed with the arrival of the Spanish conquistadors, in the 16th century, who considered the strange-looking axolotl—four fingers, five toes, funny gills—to be a creature that God created on an off day. Worse, the Spanish colonists considered Lake Texcoco dirty and flood-prone and drained most of it, consigning the axolotls to Xochimilco, the one neighbourhood where the old waterways survived.

The comeback of the axolotl has been 200 years in the making. They stealthily began to work their way back into the popular imagination in the 19th century, when they charmed explorers such as Alexander von Humboldt, a German geographer who stopped off in Mexico City and sent axolotl specimens back to Europe. Scientists marvelled at their weird and wonderful attributes. Although the axolotl is a species of salamander, it remains in a state of perpetual tadpolehood, never losing its gills to become a full-time land-dweller. Most prized is its ability to regenerate. If an axolotl loses a limb, it grows the whole thing back; it can even rebuild lost parts of brain tissue.

Having won over natural scientists, axolotls next inspired social ones. Roger Bartra, a Mexican sociologist, used the forever-young creature as a metaphor for Mexican national identity: trapped in a "violated limbo" between a lost past and unfulfilled future. Octavio Paz, another public intellectual, featured them in his poetry. Diego Rivera worked them into a mural. Yet the creature was still not famous outside Mexico. Disney invented a cartoon character in the 1990s called Dr Axolotl—but he was a villain and, in fact, a lizard.

The Japanese, connoisseurs of *kawaii*, or cuteness, seem to have first spotted the axolotl's potential as an A-list celebrity. In 1999 Pokémon, a video-game and card-collecting franchise part-owned by Nintendo, introduced an axolotl-based character called Wooper. (In Japan axolotls are known as "wooper loopers", after an axolotl character in a 1985 TV ad for instant noodles. The name caught on partly because "axolotl" sounds similar to the Japanese for "stupid old person".) Slowly, the axolotl seeped into Western popular culture. Wildlife documentaries came first. Then the main character of "How to Train Your Dragon", one of the highest-grossing films of 2010, was modelled on one. "Fortnite", a video game, added "Axo", an axolotl, in 2020.

The event that turned the animal into a household name—or at least a school-playground one—came in 2021, when "Minecraft", another video game, added the axolotl to the ranks of its digital characters. "Minecraft" holds the Guinness world record for the greatest number of copies sold by a video game; today more than 100m people play it every month. In 2021 it was about to launch a new "cliffs and caves" environment and needed an amphibious animal. The axolotl, which gives players regenerative powers if they capture it, embodies the "Minecraft-cute aesthetic", says Ingela Garneij of Mojang Studios, the game's publisher.



Minecraft

The “Minecraft” effect was instant: searches for “axolotl” on Google trebled, making the animal almost as searched for as “unicorn”. Today searches for axolotls are four times more frequent than a decade ago, making it probably the most sought-after Mexican.

The creature’s new fame has been noted at home. In Mexico City, the national zoo in Chapultepec park has promoted its axolotls to live in three storeys of splendour in what used to be the elephant house. Their new home, which opened last year, receives 30,000 visitors a month. At the nearby “zoovenir” shop, axolotls are the star product: customers can buy axolotl cuddly toys, key rings and tequila-shot glasses. Mexico has even put the axolotl on its 50 peso note, which was recently recognised as “bank note of the year” by the International Bank Note Society.

Why, of all Earth’s species, has the axolotl taken off thus? “You have to dissect it,” says Gerhard Runken, head of brand development at Jazwares, a toy-maker (speaking strictly metaphorically). Jazwares launched an axolotl variety of Squishmallow, a series of soft toys, in 2019, and had an instant hit. First, explains Mr Runken, an animal needs a unique, recognisable look: “You don’t want people to do a second take in the aisle.” Second, it needs appropriate physiognomy for a toy: rounded heads with no pointed beaks or snouts are best. Last, it needs a good back story, a box the axolotl ticks with its single habitat and weird powers. Jazwares now makes 30 kinds of axolotl Squishmallow and puts them on T-shirts, bags and bedding.

Will any of this help save the axolotl? Despite its international fame, its status in the wild is worse than ever. Although plenty of axolotls are bred in captivity for scientific research and, in some places, food, they are on the brink of extinction in Xochimilco, their only natural habitat. Their population there has diminished from an estimated 6,000 per km^2 in 1998 to just 36 per km^2 in 2014. Luis Zambrano of the National Autonomous University of Mexico (UNAM), who is carrying out a new census at the moment, believes there may no longer be any axolotls left in Xochimilco's large canals, and that the few remaining have retreated to smaller waterways too small for boats.

Some have been scared off by the noisy *trajinera* party gondolas. Others are eaten by carp and tilapia, introduced to the canals in the 1970s by the government to provide sustenance to locals, with the unintended consequence that axolotl eggs and babies became fish food. The latest threat is football. Farmers have discovered that they can make more money by renting out their flat, grassy land to amateur football players than they can by growing vegetables on it. To make a field large enough for a game often means filling in the narrow waterways that separate Xochimilco's islands, meaning still less space for axolotls.

Every lotl helps

But the axolotl's fame may rescue it from oblivion. Mr Zambrano was once pessimistic for the creature's future. "But then, about ten years ago, everybody started to think about axolotls," he says. Conservationists have latched onto this new popularity, with some success. Two years ago the UNAM launched an adopt-an-axolotl programme, where people can donate between $10 (to "buy dinner" for an axolotl) and $5,000 (to adopt a whole island refuge). In its most recent year the scheme generated $200,000, mostly from America; one girl sent all her birthday money and then visited with her family. The UNAM is nudging farmers away from football and back to vegetables, and installing filters on canals to block pollution and predator fish. At a conservation centre in Xochimilco run by the UAM, another university, axolotls are bred for release into the wild. It includes a miniature axolotl hospital, where several patients lie zonked out under anaesthetic.

Fame has pitfalls. Conservationists are wary of what they call the "Nemo effect": Disney's blockbuster, "Finding Nemo", sparked a mania for pet clownfish in 2003, but did little to protect the animal's habitat. TV and video games have stoked enthusiasm for the rare pink axolotl, a genetic mutation. Visiting children always prefer the pink ones, says José Antonio Ocampo Cervantes of the UAM. But they are sitting ducks for birds and snakes. And when pink axolotl pets are abandoned in Xochimilco they upset the gene pool, he says. Politicians' conservation efforts have also been mixed. In 2022 some Mexican mayors released 200 axolotls into the wild in Xochimilco. But in pursuit of a good photo, the creatures were left out for too long in the sun. Many are thought to have died not long after.

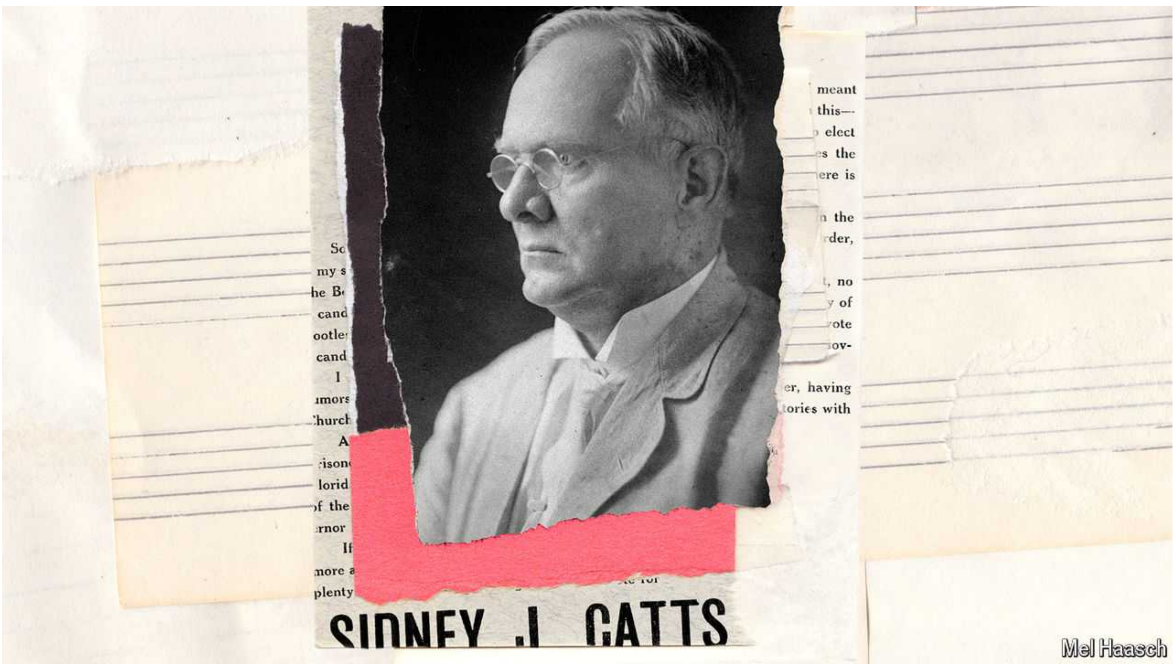
Protecting the axolotl will mean preserving its wider habitat. In that sense, there is more at stake than the creature itself. The canals where it lives protect Mexico's capital from climate change, by buffering temperatures and conserving water. "If we lose the axolotl, we lose Xochimilco. And if we lose Xochimilco, Mexico City will be vulnerable," says Mr Zambrano. The race is on to save the creature in its natural habitat. The axolotl is already as popular as the mythical unicorn. The next few years will determine whether it becomes as rare in the wild. ■

Christmas Specials | Annals of American populism

A Bible-bashing, gun-toting governor holds lessons for today

Xenophobia, disputed elections, indictments: the story of Sidney Catts is eerily familiar

December 19th 2024



BacK in Governor Catts's day, you approached Sunbright Manor on a driveway lined with magnolias. His was the first house in Walton County to have indoor plumbing, along with a bathtub said to have been made specially for his large frame. From the octagonal turret or wraparound verandas, he had a view of the pretty lake at the heart of DeFuniak Springs.

For Sidney Catts, this corner of Florida was a congenial bolthole from the maelstrom of politics. He left office over a century ago, but his style and story are eerily familiar. Catts was a man of the people who grew up in luxury. He fulminated against immigrants and reviled the media, thrilled the pious and stoked scandal and indictments. He drove his enemies nuts and supporters wild—showing that, with enough gall and gumption, the rules of political decorum could be smashed. Like others of his ilk, he embodied the turmoil of democracy. An interloper in Florida, he was born in 1863, in the middle of America's civil war, in the small town of Pleasant Hill, Alabama.

Today cotton grows once again in the fields around Pleasant Hill, glowing in the golden evening light. But otherwise it is very different from Catts's time. "The town has vanished," says Michael Vaughn Sims, a local historian, dodging a turkey buzzard that his car has startled on a verge. Next to the whitewashed Baptist church is a plot overrun by long grass and bugs. This is where the grand Catts house once stood. The governor's father, a Confederate cavalryman, is buried nearby, as is the first of his many children, Allie Catts. He had a lifelong fondness for puns on his surname.

In the late 19th century, Pleasant Hill was wealthy. Slave-owners before the war, the Catts clan held onto their plantation and servants after it; Mr Sims points out a pecan grove on what he thinks was their land. At three, Catts lost an eye in an accident (the glass replacement is still in the family). This upbringing left two contradictory impressions. The scions of plantations had expectations of grandeur: "He wanted to be somebody," says Wayne Flynt, author of "Cracker Messiah", an excellent biography of Catts. In his case, however, a taste for the high life went along with a strict Baptist faith.

Surveying his later years—not least his ties to gamblers and counterfeiters—you might conclude that religion was just a vehicle for Catts's raging ambition. But that is to read his life backwards when, like everyone's, it was lived the other way. Pleasant Hill was a devout place. "Modern dancing", declared a resolution of the Baptist church in the 1890s, "is a sin against God." As Mr Flynt recounts, Catts's first foray into politics came in a local liquor referendum. He inveighed against "demon rum", despite enjoying fortified eggnog at Christmas. (Until recently, remembers a resident of nearby Selma, bashful Baptists in this part of Alabama enlisted Methodists to buy their booze.)

Catts practised briefly as a lawyer, until, by his account, the Holy Spirit led him to a revival meeting and he took up preaching, an alternative path to renown. Ordained in 1886, he was a pastor in several then-prosperous, now faded Alabama towns, among them Fort Deposit, today a poor place rich in churches, and Tuskegee, where many palatial old homes are crumbling. But he rowed with his flocks over money—"He was the kind of guy", says Mr Flynt, "who goes to his boss every year for a raise"—and his fierce moralising.

In 1911 Catts headed south to DeFuniak Springs, in the centre of Florida's Panhandle. Follow his route today, and you pass signs affirming that "There *is* evidence for God" and adverts for all-you-can-eat catfish buffets. When Catts arrived, the town was home to an outpost of the Chautauqua movement, an education initiative that drew thousands of visitors. In 1914, after another dust-up, he quit the church for good and became an itinerant insurance salesman, underwriting mortal bodies instead of eternal souls.

From preaching to insurance may seem a leap. But the two jobs had a lot in common. Both took Catts to backwoods places where he frightened, entertained and charmed Florida's "crackers", or poor rural whites. He knew their hopes and prejudices, and they knew him, much as a stint on television might warm up an electorate today. Since Reconstruction the real political contests in the segregated South had mostly been in Democratic primaries. In 1904 Catts had entered a congressional race in Alabama, making rookie errors (a man he paid to canvass for him bet the fee on his opponent). When he stood for Florida's governorship in 1916, he was ready.

A Bible and two pistols

Catts loved the poorly educated—and persuaded them that this son of a plantation was on their side. He saw that Florida's yeoman farmers, fishermen and labourers craved protection from both social change and rapacious employers. He knew they deemed politics a plutocrats' racket, and wooed them in speeches laced with anecdotes and jokes. "He could say things that in other speakers would sound coarse and possibly offensive," an observer noted. Tall and red-haired, he trekked across the state in a white suit, cooling himself with a palmetto fan on the stump. He pledged to drain the swamp—in his case, the Everglades.

Above all, Catts sensed that Florida had an unserved market for nativism, which, like populists before and later, he mixed with promises of a fairer economy. He had imbibed white supremacy in Pleasant Hill and saw segregation as natural and necessary. In Tuskegee, home of a pioneering black university, Catts's wife, Alice May, once unwittingly invited Booker T. Washington, its first president, to do her gardening. This condescending racism had a bloody seam. Catts blamed African-Americans for provoking their own lynchings. He had once killed a black man himself—in self-defence, he insisted.

But his main bogeymen were Catholics. Anti-Catholicism in America was older than the country; a popular children's game in colonial times was called "Break the pope's neck". Especially after waves of immigration, the animosity erupted in arson, riots and allegations of depravity and disloyalty. Catts refined these age-old tropes to a hysterical pitch.

He threatened to punch, shoot or imprison his critics

The Catholics were planning a revolt, he warned, for which they were storing arms in a cathedral in Tampa (it didn't have a cathedral, but never mind). The Holy See was to be moved to Florida; a papist cabal in Apalachicola was plotting to kill him. Amid febrile speculation about goings-on in convents and monasteries, Catts proposed a law allowing the state to inspect them. His supporters dressed up as priests and tainted an opponent by praising him. Too few in number to wield political clout, Florida's Catholics made easy scapegoats. Many voters didn't know any: useful when you want to demonise a minority.

His conspiracy-mongering illustrates the enduring power of whopping lies. Invent a peril out of whole cloth, and it can be hard to disprove. The absence of evidence merely shows the conspirators' cunning. If your adversaries pooh-pooh the menace, denounce them for betraying the voters, as Catts did.

He had a taste for violent rhetoric, and flirted with actual violence. Colourful insults and nicknames were a forte, such as "Hog Island Pete", for a man who did business on Hog Island, Pennsylvania. Catts revelled in personal attacks and braggadocio, favourably comparing the size of his head, and supposedly his brain, with a rival's. He hated journalists and they reciprocated. After he predicted they would be "cast into hell", one said he feared bumping into Catts there. It wasn't just words. As well as brandishing a Bible, he toted two loaded pistols with which to fend off assassins. He spoke darkly of his supporters marching on Tallahassee, the state capital, should he be denied victory. He threatened to punch, shoot or imprison his critics.

Catts's opponents in the Democratic primary made two big and familiar mistakes. They didn't take him seriously, ignoring or deriding him until it was too late. "Every time Catts says anything," mocked an editorial, "he hits the nail on the thumb." And too many of them ran against him, splitting the establishment vote. At the poll in June 1916 Catts won—probably. It is hard to be sure, because after months of wrangling and recounts, Florida's Supreme Court dubiously declared a different primary victor. Catts may have been paranoid, but some people were indeed out to get him.

It didn't stop him. The self-anointed martyr of a conspiracy, he got on the ballot on the Prohibition Party's ticket. Previously he had to pass a hat around his crowds to pay for onward fares. Now he raised enough cash to buy a Model T Ford, mounting a loudspeaker on the roof—an innovation in Florida politics. It boosted his reach as social media do today, wowing voters who had never seen either a candidate or a car. He harped on elite skulduggery: "Kill the Rats…Vote for Catts" proclaimed a poster. The Florida cracker, it was said, had but three friends, God Almighty, the mail-order retailer Sears Roebuck—and Catts.

In November 1916 he won the governorship handily. Among other things, the result was, for its era, a triumph of democracy. An outsider and political ingénue, Catts channelled the grievances of people who felt ignored. He convinced them that attacks on him were really assaults on them; that he was, so to speak, their retribution. His voters embraced the slights directed at them. Referring to the dodgy primary, some displayed placards saying, "We may be ignorant, but we will not steal."

Mel Haasch

The history museum in DeFuniak Springs has a crepe and silk dress that it once thought Catts's wife wore to his inauguration ball. She couldn't have, however, because the couple didn't attend, on account of the sinful dancing. But he had a parade, an event captured on a jerky silent newsreel. First come Confederate veterans on horseback, then a cavalcade of cars. Catts's vehicle bears a sign: "THIS IS THE FORD THAT-GOT-ME THERE". (Evidently he had a thing for hyphens.) A ray of sunlight is said to have pierced the clouds when he spoke. "America for Americans," Catts thundered, "throughout eternity!"

Fond memories of the family's sojourn in Tallahassee have come down to his descendants. "It wasn't just a stern, militaristic life," says Nancy Catts-Tippin, his charming great-granddaughter. (The current generation, she notes, have a wide range of political views.) His children recalled playing pranks in the governor's mansion. When one married a Catholic, he accepted her warmly. Among the heirlooms is a letter in which Catts expounds his love for his wife over two pages. If home was a refuge, the governor needed it.

"He's an insurance salesman and a preacher," says Andrew Frank of Florida State University, sitting in the old Capitol building, down the hall from what was once Catts's office. "He's been in uncomfortable situations before." Tallahassee was certainly one of them. Reviling him as a turncoat and upstart, Democrats talked of impeaching him. He was criticised for purging bureaucrats who had opposed him and for nepotism (he tried to make his lawyer the state's attorney-general). Catts responded punningly: "Did you ever see an old cat that wouldn't take care of its kittens?"

In office he flogged some old hobby-horses. He signed a state prohibition bill, and pondered using martial law to enforce it in the gap before the national booze ban took effect. After America entered the first world war, he urged troops in Jacksonville to abjure prostitution and get married, offering to help any who couldn't afford the licence. "There is no record of any such requests," Mr Flynt's biography reports.

"Any man who don't like a good dog, a fast horse and a good-looking woman just ain't in my class"

But he also had positive, even enlightened achievements. He made humane reforms to the penal system and invested in education, including for girls and black pupils. He improved the state's roads and mental-health facilities. He mostly left the Catholics alone.

At least he did until, limited to one term at a time as governor, he ran for the Senate in 1920. Reviving his old themes, he railed against both immigration and American involvement in the League of Nations, warning that it would lead to foreigners inspecting Floridian women's underwear. He lost. In 1924 and 1928 he tried for the governorship again, making a stink about the supposed circulation of obscene books in colleges, another echo of today's politics.

Less adept at comebacks than some, he lost twice more. Yet the support Catts retained is as noteworthy as his defeats. Maybe because of donations from betting syndicates, the erstwhile preacher proposed to let Florida's counties legalise gambling, so its citizens could enjoy "horse-racing, dog-racing, and cat-racing if you want it". When fellow Baptists objected, he threatened to "beat hell out of them". Ridiculed as the God and gambling candidate, Catts was insouciant: "Any man who don't like a good dog, a fast horse and a good-looking woman just ain't in my class."

His fans were loyal less to specific policies or prejudices than to his personality and pugnacious style. That is often the way with demagogues. A corollary is that they struggle to transfer their mandates to their acolytes. This proved true in Florida, where an ally of Catts who tried to succeed him flopped.

Gato's ghosts

His post-political career was eclectic. Moving briefly to Atlanta, he peddled "Catts' Hog Tonic" and other quack cures for humans and animals. Back in DeFuniak Springs he grew peaches to make brandy and dabbled in real estate. Along the way he got acquainted with some shady characters (Florida was a mob haven). These links contributed to the legal troubles that are another familiar feature of his story.

Catts was accused of selling pardons, including for the murderer of a deputy sheriff, and of using convicts as forced labour on his land. And he was snagged in a lurid counterfeiting bust. He was said to have sneaked five $1,000 bills into a motel room in his shoes, operating under the alias Gato, Spanish for "cat". He acknowledged carrying money in his footwear but denied wrongdoing. The charges were politically motivated, he insisted. Perhaps they were. He was eventually acquitted of all of them. He died in 1936.

Today Catts is forgotten. Even the pastor at his church in DeFuniak Springs hasn't heard of him. But his career, at once alien and recognisable, holds lessons and, for the anxious, a muted kind of consolation. For starters, there is nothing new under the Florida sun. The ideal of America as a melting pot has always jostled with a view of it as a fortress. Facing change and complex problems, Americans, like many others, have sometimes looked for scapegoats and strongmen. Such populist irruptions are not fatal to democracy but part of it. The lightning of history illuminates a gaudy champion—and then the storm passes.

If, a century on, Catts seems reprehensible, he is also a little pitiable. Planter, lawyer, salesman, gun-toting Bible-basher, demagogue, reformer, shifty operator: throughout his rollercoaster life he seems to have been chasing a goal that endlessly receded. It is hard to work out who he really was by the end, says Mr Flynt, and he may not have known himself.

Catts lay in state in his parlour in DeFuniak Springs and was buried in Magnolia Cemetery, a serene spot shaded by cedars and oaks. His house is now a swankily restored inn. It is rumoured to be haunted; locals have seen a figure dressed in white hovering in the turret. The spectre of Catts may stalk American politics, but lately the innkeeper hasn't seen any ghosts. "If they were here," he says, "they all moved away." ■

Christmas Specials | Batswomen v bigots

The incredible story of Afghanistan's exiled women’s cricket team

The Taliban would kill them for daring to play “the gentlemen’s game”

December 19th 2024

It was a warm night in Kabul. Just days earlier, on August 15th 2021, the Taliban had seized control of the Afghan capital, and with it, the country. At around 4am Feroza Afghan, then a 17-year-old girl, crept through the silent streets, dodging Taliban soldiers. In all, it took her and her family three months to escape from Afghanistan, via nine hotels and 18 Taliban checkpoints. “If they found us, they would kill us,” Ms Afghan recalls. Her crime? She played cricket.

The Afghan regime is surely the world’s most sexist. The Taliban, an Islamist militia that swept to power when President Joe Biden ended military support for a democratic government in Kabul, bar girls from studying beyond sixth grade and women from raising their voices in public. If a woman steps outside, she must be covered from head to toe. If the morality police spot an infraction, they can punish it in any way they deem “appropriate”. All refugees tell tales of the joyless theocracy Afghanistan has become. But few are as poignant as those of its exiled women cricketers.

Around nine months before the Taliban took over, Afghanistan formed its first national women’s cricket team, with 25 players. Nearly all have since fled abroad. Now scattered across Australia, Canada and Britain, they are fighting a lonely battle to be allowed to represent their country. For them, cricket is not just a game. It is a way of showing that women can make their own choices, rather than meekly obeying the rules laid down by unelected bigots with beards.

Cricket is an unlikely weapon of resistance. Afghanistan's national sport is Buzkashi, a rugged version of polo in which horse-mounted players fight to toss a goat carcass into a goal. But it is cricket that has become Afghanistan's favourite sport.

In neighbouring Pakistan and India, cricket’s roots stretch back to the 18th century, when British colonists introduced it. Afghans did not embrace the game until much later. During civil wars in the 1980s and 1990s, millions of Afghans fled into Pakistan. In refugee camps, they saw their Pakistani neighbours playing cricket, and tried it. Raees Ahmadzai, a former player, remembers improvising with a washing paddle as a bat and a tennis ball wrapped in tape.

For them, cricket is not just a game. It shows women can make choices

In 2001 America toppled the Taliban for hosting al-Qaeda, the terrorist group that had just flown planes packed with people into the twin towers in New York. Many Afghan refugees returned home, bringing cricket with them. Over the next few years a small group formed the core of a national men’s team. Despite a paltry budget, they have become remarkably successful and wildly popular. In the most recently concluded T20 World Cup, they reached the final four.

As a young girl, Ms Afghan watched the men's team on television and asked her mother why the country did not have a women's team, too. The Afghanistan Cricket Board (ACB) had tried to set one up in 2010, but quietly shelved the plan after four years, citing a shortage of female players. In 2020 it tried again. Players for the national side were chosen from school teams—a pool of just 500 girls. By the end of the year, 25 were offered contracts.

Most of their families hesitated to let them play in public. Benafsha Hashimi, a team member, remembers her mother wishing that she would play poorly and give up on a sporting career. Roya Samim, another player, says that whenever there was a threat of an attack from the Taliban, officials would say the female cricketers had provoked them.

The gloves are off

Yet they never gave up. Tuba Sangar, an administrator for the women's team, recalls their pride when they got their first cricket gear. They showed off their kit bags in public, calling it the "best moment ever", she remembers. By 2021 they were training regularly, in preparation for their first overseas tour, to Oman. For a short while, their prospects seemed rosy.

Then the Taliban took over. The women knew their lives were at risk. Australia's government, understanding the danger, granted visas to the players and their families. Most escaped from Kabul within days, but not Ms Afghan's family. They did not have passports.

So they headed for Pakistan overland. Ms Afghan dumped her cricket kit and destroyed her treasured certificates by washing the ink from the paper. She could not risk being identified. Her coach forged medical documents for her. (At the time, Pakistan was accepting refugees who needed medical treatment.) But still, Ms Afghan and her family were turned back at several of the 18 Taliban checkpoints they approached, and had to keep trying. After three months, they at last made it to Pakistan. It took another nine months to get their papers to move to Australia—and safety.

For the men's cricket team, not much has changed under the Taliban. Their calendar remains packed. Most "home" matches are played in the United Arab Emirates or India, since few teams are willing to travel to Afghanistan.

The Taliban are in two minds about men's cricket. Hardliners want to ban it, because banning fun is what they do. Others quietly enjoy watching the game. A former player told *The Economist* that some Taliban leaders call players to congratulate them after big wins.

Afghanistan is a prison, says Ms Hashimi. Now, in Australia, she can feel the sun on her face without fear of arrest, and she can study. But her dream of playing cricket for her country is over. Or is it?

The women's team have not played together since they fled from their homes, though several keep their hands in by playing for local clubs. Yet they have a plan. They are urging the International Cricket Council (ICC), the sport's governing body, to recognise a refugee team. Under the ICC's own rules, full members like Afghanistan must have a proper women's cricket programme and allocate a portion of their funds to it. The Afghanistan Cricket Board, which depends on the ICC for most of its budget, allocates none of that money to women's cricket. So the women argue that a portion of the ICC funds earmarked for Afghanistan should instead fund a team of female exiles.

The logic of this argument makes international cricket officials squirm. A spokesperson for the ICC says that only the Afghan national body can recognise a women's team (which the Taliban won't allow). Yet some other sports have found workarounds. At this year's Olympic games, Afghanistan fielded a team of three women and three men, all chosen by the country's exiled Olympic body.

Some campaigners have called for the Afghan men's team to be banned from international cricket, just as South Africa was banned during apartheid. But most Afghan women players oppose such a move, since it would deprive their compatriots of a rare source of pride and pleasure.

Ms Samim suggests that the ICC could support an Afghan women's team based abroad. It could easily afford to do so: the ICC generates $600m a year. But so far, it has demurred. Male cricket grandees can be clueless. In September the captains of the Afghan and New Zealand men's teams posed for a photo beside a trophy veiled in a black cloth—and then "unveiled" it. Neither noticed the awful symbolism.

Globally, women's cricket is booming, with a lucrative league launched in India in 2023 and the ICC announcing in 2024 that men's and women's national teams would receive equal prize money. For the Afghan women, though, time is slipping away. Ms Samim sighs that she has lost three years of her cricketing life, with no guarantee of a reprieve before her youth and batting skills fade. Back home in Afghanistan, no new girls are learning to play cricket—indeed, the Taliban are straining to prevent girls from learning anything much besides cookery, obedience and fear.

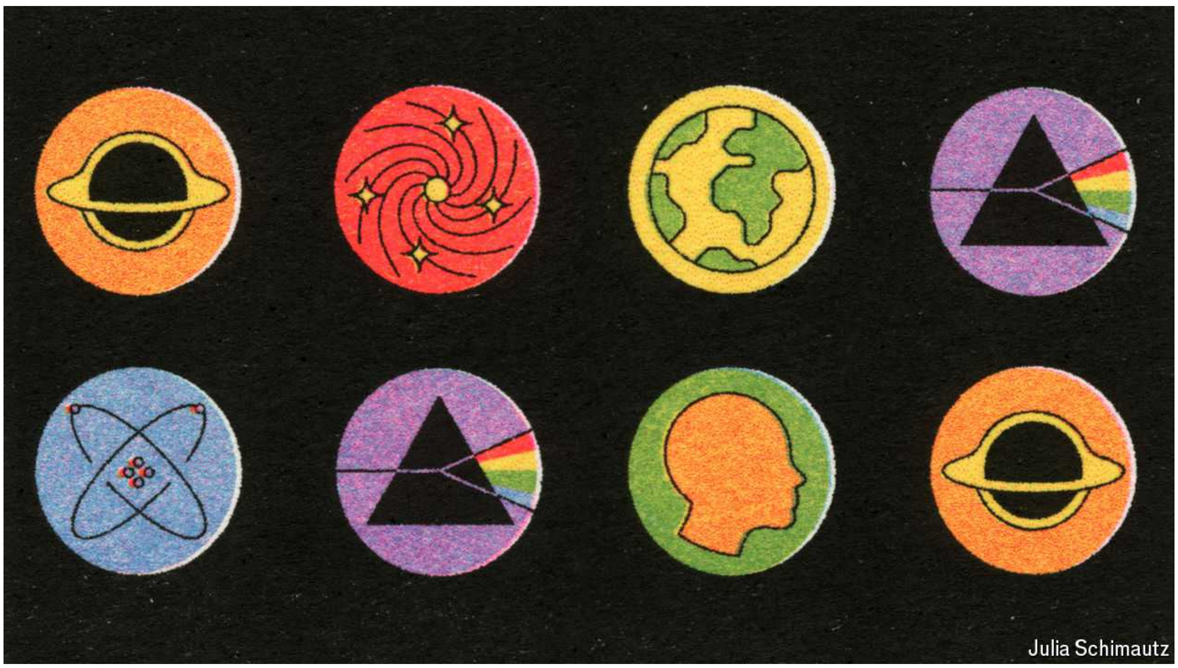
No member of Afghanistan's male team has publicly spoken up about the women's plight. In 2023, when the men's team were playing in Australia, Ms Afghan visited their hotel. She approached one of the stars and asked him why he had not said anything. He listened quietly, and after a pause, simply said, "Sorry." ■

Christmas Specials | Life, the universe and everything

A chart that shows everything that has ever existed

Could the universe itself be a black hole?

December 19th 2024



Some 13.8BN YEARS ago, the universe came into existence in the Big Bang. Its first moments were a period of pure energy with intense, possibly infinite, heat and density. As the universe expanded, it cooled and objects began to emerge, like snowflakes forming in cold air. In less than a nanosecond the elementary particles—photons, electrons, quarks and gluons—condensed from the maelstrom. As the universe cooled further, the quarks coalesced into neutrons and protons. Then these composite particles formed atomic nuclei and, pulling electrons into orbit around them, became atoms of hydrogen and helium. Over hundreds of millions of years, gravity pulled these simple atoms together to form stars; in the cores of those (and later) stars, simple nuclei fused to create the nuclei of heavier elements. Those

elements ended up in dust, planets, people, whales, galaxies, and black holes.

"The whole history of the universe can be understood as a sequence of condensations," says Charles Lineweaver, a physicist at the Australian National University. Each new class of fundamental particles was formed at a time when the entire cosmos had that specific density. At the moment when protons emerged, the entire universe was the density of a proton. Protons are still with us as distinct objects because—at roughly the same time—the strong nuclear force was able to pull quarks together. This froze protons (and neutrons) in time at a higher density than their surroundings. That is all any object is, cosmologically—something made from particles left at a higher density as the universe has become less dense around them.

Noting that, Dr Lineweaver and a fellow physicist, Vihan Patel, devised a single chart onto which every known object in the history of the universe could be plotted. They wondered what they might learn if they categorised everything in terms of its size and mass.

The solid white diagonals represent the bounds of what we know as objects. At the top, gravity imposes a limit on how dense something can get. As more mass is concentrated into the same volume, its gravity will increase until, eventually, the force overcomes everything else and the mass will collapse into a black hole. The size at which any given mass will collapse is its "Schwarzschild radius". Black holes of all sizes sit on the "gravitational limit" line. Gravity forbids anything from existing above this line **[1]**; an object of a specific size can never have more mass than a black hole of the same size.

Small, old black holes, created just after the Big Bang, sit towards the bottom section of the gravitational-limit line. Move up and right, and you find black holes that are the remnants of massive stars; farther along are the supermassive black holes that sit at the centres of galaxies, such as Sagittarius A* in the Milky Way. At the top, where the line meets the modern day **[2]**, is the largest object—the entire known universe itself. This is represented by the mass inside the Hubble radius—the distance from Earth at which galaxies are receding at the speed of light. The fact that this object fits on the gravitational-limit line raises the question: is our universe itself a black hole?

At the bottom of the chart are the fundamental particles—quarks, bosons (eg Higgs, W^+, W^-, Z), protons, neutrons, electrons and neutrinos. A particle's "Compton wavelength" is used here as a proxy for its size—the more massive a particle, the smaller its wavelength. Top quarks and protons have small wavelengths; electrons have big wavelengths, around the size of atoms; visible-light particles (photons) have bigger wavelengths still. All these particles sit along a line, the Compton limit, which is a lower boundary, determined by quantum physics, for what you can call an object.

Quantum mechanics says that the more precisely a particle's location is known, the bigger the uncertainty in how much energy it has. Albert Einstein showed that energy and matter are equivalent ($E=mc^2$), so pinpointing the tiniest particles would require so much energy that new particles would be conjured into existence from the vacuum. Below the Compton limit **[3]**, therefore, is a realm of uncertainty in which it makes no sense to talk of individual objects.

Everything that exists (or has existed) in the universe that has the same density appears on the same positively sloping, dotted line. Viruses, fleas, humans, whales, Earth and the Sun appear on the same line as atoms **[4]**, since that is what they are all made from. This line is the most populated thing on the chart because scientists know more about atoms (and the objects they create) than anything else.

Look at where the gravitational- and Compton-limit lines meet: any object here would be an instanton **[5]**, dense enough to be governed by gravity but small enough to be wholly quantum. Given its position on the map, "The instanton may be the same thing as the origin of a universe," says Dr Lineweaver.

The chart also provides pointers for the unknown. Dark matter, which makes up around 27% of the universe (normal matter makes up only 5%), is not on the chart because scientists don't know what it is. But the galaxies and superclusters at the top right might provide clues. These will be overwhelmingly composed of dark matter so—just as dotted lines of equal density connect atoms and stars—could the densities of galaxies tell us something about the place of fundamental dark-matter particles along the Compton limit?

And what of the vast triangle of emptiness **[6]** to the left of the Higgs boson? No forces or laws of physics have yet been found, which would dominate here in order to create objects. But that doesn't mean nothing could exist there. "It's a wonderful wild west of particle existence," says Dr Lineweaver. ■

Christmas Specials | Boy scouts with attitude

Inside the RSS, the world's most powerful volunteer group

Among the foot soldiers of Hindu nationalism, bored young men find purpose

December 19th 2024

It feels like a cross between a military parade and a school sports day. In the Indian city of Nagpur, thousands of members of the Rashtriya Swayamsevak Sangh (RSS), a Hindu-nationalist group, are goose-stepping into a playground, dressed in khaki trousers, white shirts and black caps. There are young men with bristling moustaches, middle-aged men with paunches bulging over belts and elderly men with glasses resting on the tips of their noses. There are no women.

All watch in silence as a small saffron flag, limp in the late monsoon air, shimmies up a mast. Then the command comes. Every man holds his right arm stiff across his chest and then straight at his sides, stopping just short of raising it in salute.

With over 5m members, all male, the RSS is the biggest volunteer group in the world. It does charity work and teaches young men discipline, say its supporters. It is a bigoted paramilitary group that persecutes India's minorities, say its detractors. Your correspondent went to Nagpur to talk to some of its members.

To be close to the RSS is to be close to power

Like other clubs, the RSS is held together by shared experiences, rituals and garb. Young boys join as soon as they can walk and talk. They go to daily meetings and training camps. Many are sent by parents who want them to make friends, do some exercise and get out of the house. All learn the RSS prayer, chants and games. The uniform is so well-known that it made headlines in India when the group swapped its khaki shorts for full-length trousers a few years ago.

The biggest event on the RSS calendar is the Hindu festival of Dussehra, which coincides with the anniversary of the organisation's founding. And this year's celebrations in Nagpur kicked off its centenary year. Once the sea of uniformed men paraded into the playground, Mohan Bhagwat, a round-faced septuagenarian who is the sixth leader of the RSS, took the stage. He talked of the threats to India from Muslim-majority Pakistan, and from domestic enemies such as the "deep state", "wokeism" and "cultural Marxists". He urged the crowd to buy local and keep traditional dress and language alive. "The world worships the strong," he said. "The weak are ignored."

To be close to the RSS is to be close to power. A former head of India's space agency was in the audience, as was at least one billionaire. And if Mr Bhagwat's speech echoed themes beloved of India's prime minister, Narendra Modi, this was perhaps because Mr Modi is one of the club. He joined the RSS when he was eight, and was a full-time RSS worker, or *pracharak*, until he entered politics in his 30s. (This meant renouncing material possessions and taking a vow of celibacy.) Since being elected prime minister in 2014, Mr Modi has filled his cabinet with RSS men.

I’m just mad about saffron

How did a group that advocates traditional values and modest living amass such influence? Its power lies in something simple and visceral: it gives its members “a tremendous sense of self-worth”, says Purushottam Agrawal, a writer who joined briefly as a child and is now a vocal critic. “The RSS makes young people, despite their young age, and older people, despite their limitations as family men, feel they are still contributing to the cause of the Hindu nation.”

Rewind 100 years. The RSS was set up in Nagpur in 1925 by a doctor and politician, Keshav Baliram Hedgewar. He and his successors taught that India is a great, ancient civilisation crippled by humiliating invasions. In the 16th century it was the Mughals; in the 18th the British. Today, the RSS hints that the 15% of Indians who are Muslim are outsiders: descendants of the Mughals, a potential fifth column for Pakistan, and not to be trusted near a good Hindu’s cows or daughters. Hedgewar’s goal was to raise a cadre of disciplined patriots to remake India as a Hindu country.

Hedgewar wanted the RSS to be a cultural organisation, not a political one. But when India won independence in 1947 its members were aghast at what followed. They saw the subcontinent’s partition into India and Pakistan as a carve-up of sacred territory. They objected to India’s tricolour flag, preferring saffron. They loathed the new secular constitution.

In 1948 an ex-member of the RSS, Nathuram Godse, murdered Mahatma Gandhi, the pre-eminent leader of the independence movement. Godse had criticised Gandhi for the same reasons the RSS did: for taking a soft line on Muslims and promoting secular democracy. The group tried to distance itself from the assassin, but the government banned it for more than a year. Its leaders decided they had to get into politics. They set up a political wing, the forerunner of the Bharatiya Janata Party (BJP), which leads the government today.

The RSS has spawned India’s biggest trade union, its biggest private school system, a women’s group, a student association and scores of other organisations. Overseas affiliates organise meetings in Britain, America and anywhere with a Hindu diaspora (though RSS leaders abroad are coy about their links with the parent group in India). The RSS says it is funded by donations, though its finances are opaque. Through its network, the RSS "family", it has quietly gained influence in all corners of India.


Atul Loke/Panos

Manohar Vinayak (pictured) joined when he was ten. He was weedy, awkward and illiterate. Other RSS boys bullied him, but his mother wouldn't let him quit, and in time he made friends. He never finished school, but RSS elders helped him find on-the-job training. He became a tailor, then a teacher. Now 92, he still attends RSS meetings at dawn each day, wearing his old khaki shorts. "I wouldn't be the man I am today if it wasn't for the *shakha*," he says.

There are over 73,000 *shakhas*, or RSS branches. They meet for an hour every day in parks, playgrounds or temple forecourts. First, the group does yoga. Then members play games, such as *kabaddi,* a traditional cross between wrestling and tag, or duel with big sticks. Sessions close with a lesson in history and philosophy. Group leaders can be strict, particularly with young boys who fail to follow instructions.

The *shakha* model adapts to stay relevant. During covid-19 lockdowns, when public gatherings were forbidden, meetings took place remotely via

WhatsApp and Zoom. Around Bangalore, India's tech capital, *shakhas* gather on Sunday mornings to suit busy professionals. And, though the RSS generally promotes Hindi and Sanskrit, the meetings are conducted in English to include people from all corners of India.

Avaneesh Harday, a 16-year-old acolyte in Nagpur, first went to a *shakha* with his grandfather, when he was eight. To begin with, it was the games that fired him up. Now it is the history lessons. He has learned about the mistreatment of Hindus by Mughal rulers and how Bangladesh and Pakistan were ripped away from India. A Christian friend suggested to him that the RSS stokes interreligious violence. "I told him to read *Guruji's* books," Harday says.

That is not the compelling rebuttal he thinks it is. M.S. Golwalkar, known as *Guruji*, who led the RSS through India's independence, wrote about the supremacy of Hindus in India and praised the Nazis. "Germany shocked the world by her purging the country of the Semitic races," Golwalkar wrote. "Race pride at its highest has been manifested here... a good lesson for us in Hindustan to learn and profit by."

Today, the most feared RSS affiliates are the Vishwa Hindu Parishad (VHP), or World Hindu Organisation, and its youth wing, the Bajrang Dal. Members are steeped in conspiracy theories: that Muslim men seduce Hindu women as part of a "love jihad"; that Christians win converts by trickery. Sometimes, they beat up Muslims or Christians they suspect of such transgressions. Videos of the attacks go viral and, explains Christophe Jaffrelot at King's College London, send a message that minorities should "disappear from the public sphere".

The worst anti-Muslim pogrom in recent decades took place in 2002 in Gujarat. Over 1,000 people were killed. Witnesses said the attackers wore khaki shorts and saffron scarves. Police reports accused local VHP chiefs of leading the mobs. A former regional boss of the Bajrang Dal was recorded telling an undercover reporter how he beat and burned Muslims; he boasted of slitting open a pregnant woman's stomach. Mr Modi, who was chief minister of Gujarat at the time, was accused of presiding over a culture of impunity. However, India's Supreme Court cleared him of complicity.

The RSS insists it is peaceful. Of late, its leaders have distanced themselves from predecessors who admired European fascists. They would rather talk about the RSS's charitable work: some 52,500 projects in total, including 13,000 schools, as well as health clinics and shelters. Sunil Ambekar, a spokesman, says the RSS welcomes people of all faiths, though it doesn't keep count of its non-Hindu members. Yes, the goal is to remake India as a Hindu nation, he explains, but the organisation defines Hindus as the people of "Hindustan", the Hindi name for India, or "those who follow the Hindu way of life".

To help unite Hindus, the group hopes to do away with divisions of caste. This is easier said than done, however. Bhanwar Meghwanshi, who grew up a *dalit* (the caste formerly known as "untouchable") in the northern state of Rajasthan, was pleasantly surprised when he joined a local *shakha* and everyone addressed him as "*ji*", or sir, as they did one another. But he noticed that leaders were all higher caste. And one time, when a meeting was held in his neighbourhood and he cooked for everyone, the leaders said they would pack up their meal and eat it on their travels. It was found strewn on the roadside—they did not want to eat food cooked in a *dalit* home. Mr Meghwanshi quit the RSS soon afterwards.

Modi's relationship with the RSS is not straightforward

Mr Modi often talks of his time as a *pracharak,* sleeping in RSS offices and following a strict routine of early mornings, spartan meals and lots of yoga. He travelled across India, living out of a small shoulder bag and giving rousing speeches. That, says R. Balashankar, a former editor of the *Organiser*, an RSS newspaper,is where the prime minister developed his discipline and oratorical skills.

India is too vast, diverse and decentralised ever to become a theocracy like, say, Iran. But under Mr Modi the government has shown signs of what a biographer calls “Hindu triumphalism”. It has stripped Jammu and Kashmir, hitherto India’s only Muslim-majority state, of much of its autonomy. It has introduced citizenship rules that discriminate against Muslims. Several states have tightened the rules around cattle slaughter and religious conversion. And Mr Modi presided over the erection of a Hindu temple in Ayodhya, on the site of a 16th-century mosque that was razed by a Hindu mob—causing massive bloodshed—in 1992.

Still, Mr Modi’s relationship with the RSS is not straightforward. It has always advised BJP governments on appointments and policy. But over Mr Modi’s first two terms, when the BJP had a thumping majority in parliament, his government felt confident enough not to need advice, even from the movement that spawned it. At the same time, it promoted a personality cult, plastering Mr Modi’s face on billboards, vaccine certificates and the bags of grain the state hands out to the poor. This irked many RSS officials, who frown on the idea that any man, even a prime minister, could be bigger than the organisation.

Capped crusaders

A very public tussle is now under way between the RSS and its most famous disciple. In an election in 2024 Mr Modi won a third term, but lost his parliamentary majority. This has crimped his power, making it harder for him to neglect his allies. Since the election Mr Bhagwat has obliquely criticised Mr Modi; and Mr Modi has made gestures of deference, such as beefing up Mr Bhagwat’s security detail and lifting a long-standing ban on civil servants being RSS members.

It is hard to say whether Mr Modi needs the RSS more than it needs him, or vice versa. Its millions of volunteers preach the BJP party line and help drum up votes. “That’s the BJP’s electoral trump card,” says Tanika Sarkar, a historian. “No other party has this cadre.” But without Mr Modi, whose charisma has given the BJP its longest-ever stint in power, the RSS might never have realised so much of its majoritarian vision. Some RSS bigwigs may resent the way he hogs the limelight, but the rank-and-file revere him.

Sreevallabha Washimkar, 13, started going to a *shakha* in Nagpur six years ago. He knows Mr Modi started as a foot soldier in the RSS, just like him. How does that make him feel? He looks up from the saffron flag he is diligently folding: “I feel proud.” ■

Christmas Specials | Carnal knowledge

How better data could lead to better sex

What we don't know about human sexual behaviour is scandalous

December 19th 2024

Years ago, when Caroline Kabiru was due to learn about sex in school, she found that the relevant pages of one of the textbooks had been glued together. And the teacher never showed up.

Oddly, given how much time people spend thinking about sex, many understand it only poorly. Dr Kabiru, who is now an expert at the African Population and Health Research Centre in Nairobi, recalls a survey her team conducted among young Kenyans in 2008. Roughly half thought the time of the month when a woman was most likely to get pregnant was during her period. She speculates that this myth may have arisen because when a girl gets her first period, many Kenyan parents say "Now you must stop playing with boys, or you might get pregnant."

There is little data about poor countries, men or the over-50s. These are huge omissions

Globally, three forces hinder the spread of good information about sex. One is shame—many adults, like Dr Kabiru's biology teacher, find the topic embarrassing. Another problem is that bad information often crowds out the good. Many teenagers pick up ideas from online pornography, which is as accurate a guide to real sex as James Bond films are to the daily routine of a British civil servant. Rebecca Cant of Brook, a British sex-education charity, quotes one teenage boy who said, in all seriousness, that he was not ready to have sex with his girlfriend because he was "not ready" to choke her. He assumed it was expected.

A third problem is that data are often not gathered in the first place. Lianne Gonsalves of the World Health Organisation (WHO) cites three blind spots: non-wealthy countries, men and people over 50. Less is known about poor countries than rich ones, since they have less money for sex surveys. (China and Russia are black holes, too.) And less is known about men and older people because most big surveys concentrate on those who might get pregnant.

These are huge omissions. To make things harder, some governments are prudish, and so reluctant to pry into this area. Some people, when asked about their sexual habits, do not tell the truth. And in several countries gay sex is still illegal, making it tricky even to pose questions about it.

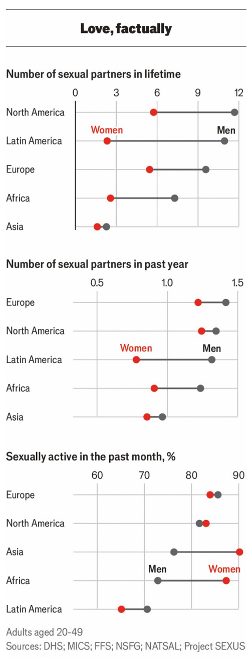
Early sex research was often shoddy. In 1948 Alfred Kinsey's "Sexual Behaviour in the Human Male" scandalised America, but since it was based on non-random samples it was wildly inaccurate.

Globally, AIDS gave a big boost in the 1980s and 90s to better research. Britain's well-regarded national sex survey, NATSAL, wouldn't have happened without it, reckons Soazig Clifton of University College London. Scientists and rational politicians immediately saw the point of studies to help predict the spread of what was then an invariably fatal disease.

Let's talk about sex, baby

The broadest source of reliable data today, the USAID-sponsored Demographic and Health Surveys (DHS), are conducted in 90 countries and focus on females aged 15-49. They tend to ask basic questions about acts that might lead to infection or conception ("bugs and babies"). They don't ask about pleasure, consent or the context in which sex occurs.

Understanding sex is not just a matter of public health. Evidence from America, India and other places suggests that troubles with emotional or physical intimacy are a cause of 20-50% of divorces—which tend to make children sadder and families poorer. If better information leads to better sex, it could add to the sum of human joy for a trivial price tag. Small wonder sex researchers are passionate about their vocation.

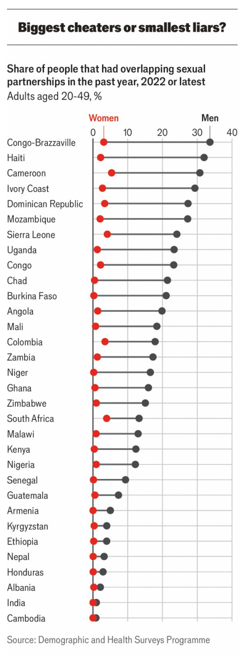


To start, some are trying to extrapolate more information from basic surveys. Emma Slaymaker of the London School of Hygiene and Tropical Medicine and her co-authors crunched data from DHS surveys and estimated the number of partners people in 47 developing countries could expect to have by the age of 50.

There was enormous variation. A Congolese man of 50 will have had on average 20 partners; an Indian, only nine. There was great variety within continents, too. Men from Niger have only an eighth as many as their

Congolese peers. Is this because they often live in small, conservative villages and must cross large deserts to find cities with nightlife? No one knows.

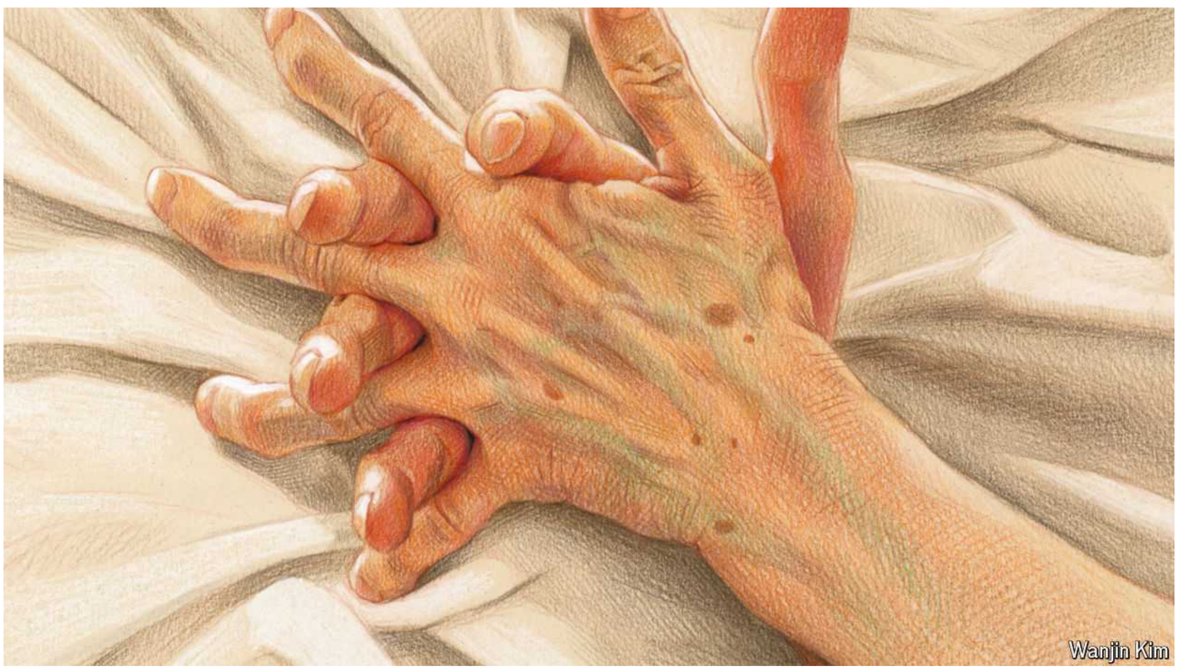
Everywhere, women report fewer partners than men. This may sound mathematically improbable, but surveys seldom capture sex workers and women often underreport. Their stated lifetime tally ranges from 1.2 in Cambodia to nine in Gabon; for men it ranges from 2.4 in Niger to 21 in Gabon. Several countries fit the stereotype that as men get richer, they have more partners. But in India and Madagascar, it is the other way round: poorer men have more partners. Perhaps this is because many migrate to work far from their families and pay for sex; again, it is hard to be sure.



The chance of having more than one partner at the same time varies, too. Men in Niger who already live with a partner are 60% as likely to find a new one each year as their single compatriots; for men in Albania, the figure is only 1%. This may reflect widespread polygamy in Niger—and perhaps a reluctance among Albanians to admit to pollsters that they are cheating.

As people live longer nearly everywhere, they are not giving up on sex. Being over 55 need not mean “focusing only on gardening and trying to get your socks on without putting your back out”, notes David Spiegelhalter, a statistician and author of “Sex by Numbers”. Libido declines with age, but slowly, and older people are more likely than in previous generations to be divorced and seeking new partners. Yet in most countries no one has much idea what they get up to. Data that do exist suggest big differences. The median 55- to 64-year-old British woman with a partner has had sex twice in the past month; her 49-year-old married Japanese peer has done it zero times. Why?

“Maybe it’s norms,” suggests Peter Ueda of the Karolinska Institute in Stockholm. In western Europe, a sexless marriage might be seen as a sign that the relationship is in trouble. In Japan “It’s sort of accepted, [since] marriage is more transactional.” It cannot help, though, that more than 70% of Japanese married women over 50 say they and their husbands “never communicate” about their sexual desires.

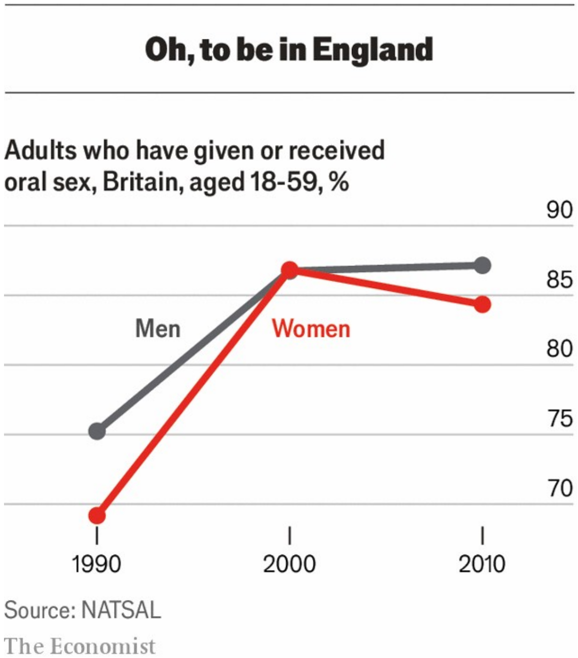


A study in South Africa, by contrast, found that the old were strikingly vigorous: most men were still having sex until their 80s. It also noted that 23% of men over 40 had HIV, and few used condoms. Despite this, information about HIV risks among older adults is scarce, the authors lament, and “very few prevention interventions [are] specifically targeted” at them.

Poor information is not only a problem for societies, but also for couples. Many are reluctant to talk about sex, which can make it not just unpleasurable but unpleasant, especially for women. Even when men are well-meaning, they are seldom telepathic. They cannot simply guess what their partners like or dislike, and non-verbal cues are no substitute for frank talk. This is tricky, though, when the topic is shrouded in shame. Consider Bangladesh, a conservative Muslim country. Its DHS survey collects data about marriage and contraception, but not about pleasure or consent. How satisfied are Bangladeshi women with their sex lives? How easy is it for them to tell their husbands what they want? Anecdotally, not easy at all.

“Sexual dissatisfaction is really high with women in Bangladesh,” says a local feminist who prefers not to be named. “Lots of women have heard of this thing called an orgasm, but they’ve never had one. If I told my husband, ‘you do this and I don’t enjoy it, he would be so upset he would not be able to perform again.’”

If a wife asks for something new, her husband may angrily assume she is promiscuous, suggests Prima Alam, a sexual-health researcher: how else would she know of such things? No one is taught to think about women’s pleasure, she laments. If they have watched porn, “what they see is [the man] just doing it, and the woman apparently enjoying it, screaming and so on, but real life is not like that, right?” The local mindset is that men should take charge. “I think marital rape may be common, but we don’t have enough data.”



What would it take to boost sex research? Perhaps voters' hunger for information will gradually outweigh politicians' squeamishness. Nana Darkoa Sekyiamah, author of "The Sex Lives of African Women", and co-founder of a blog, "Adventures from the Bedrooms of African Women", reckons there is plenty of bottled-up demand for more information. She hears "a lot more conversation about oral sex", suggesting that "Younger men have realised that for most women, the standard penis-in-vagina sex is not [good enough]."

Britain could provide an example. Sex education in British schools is fact-based. Teenagers who rely on it are less likely to have their first sex while under the age of 16, and their first experience is more likely to be a good one, with both partners willing and protected. The country has problems aplenty in the bedroom, NATSAL reveals, but only around one in seven sexually active Brits says they are sexually dissatisfied. Those who feel at ease talking about sex with their mates are more likely to enjoy it, notes Ms Clifton. And young Brits appear to be communicative: happy to try something new, but ready to stop if their lovers don't like it.

Oral sex, which was once so taboo that prostitutes charged more for it than penetrative sex, has become a staple, especially among the better-off and the young. When it comes to anal sex, by contrast, around 50% of British men and 40% of women aged 25 to 34 in 2010 had tried it, but fewer than half as many had done it in the previous year. Dr Spiegelhalter suggests that for many it is "tried for the experience but [does] not necessarily become a habit. Like swimming at Blackpool."

Porn is to real sex as James Bond films are to the routine of a civil servant

With more accurate research that was more widely disseminated, people would have a better sense of what others get up to. That might make it easier to overcome taboos, which are often based on circular reasoning (you shouldn't do x because it is "not normal"). "Knowing you're not alone is really helpful," says Ms Darkoa Sekyiamah. "If you know that lots of other couples have oral sex, [for example], that quite often will make people feel that it's okay and it's something that they might try." A culture of transparency around what other people do might also help couples talk to each other about what they actually want.

Experts at the WHO are eager to fill some of the gaps in the world's knowledge. They have spent four years devising a much more detailed survey called SHAPE. It asks, for example, about degrees of consent. (The last time you had sex, did you want it, just go along with it, or were you "forced or frightened" into doing it?) The aim is to do SHAPE surveys all around the world. But so far, funding has not materialised. For most governments, it is not a priority.

And many conservatives are loth to fund research that might reveal unwelcome facts, such as that some of their compatriots are gay. Some go further. In 2024 Ghana's parliament passed a bill, which awaits the president's signature, to ban any "promotion" on social media of "unnatural" sex. This would make Ms Darkoa Sekyiamah's broad-minded blog illegal.

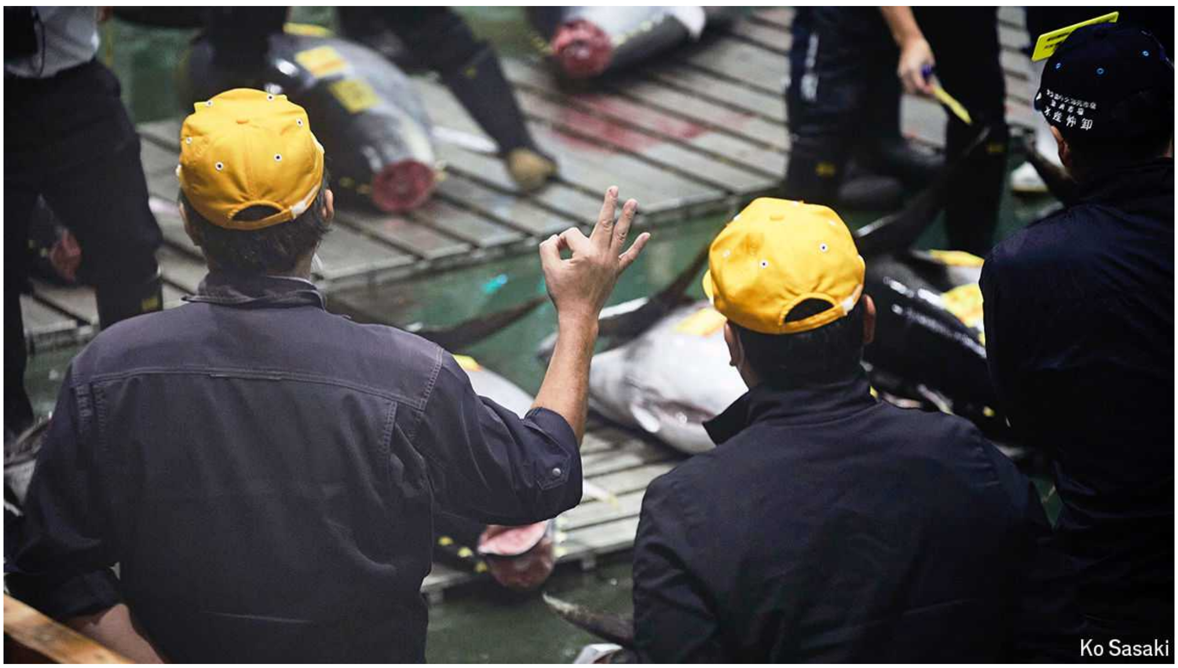
She recalls that she married the first man she had sex with, "Because I felt that's what you had to do." It was only after her divorce that she came into her own, sexually. Now in her 40s, she says she wouldn't want her daughter, or any other young girl, to make the same mistakes she did. And to avoid that, they need to hear straightforward talk about sex. ■

Christmas Specials | The titans of tuna

A day in the life of Toyosu, the world's greatest fish market

The best sashimi chefs on the planet rely on Japan's Wall Street of seafood

December 19th 2024

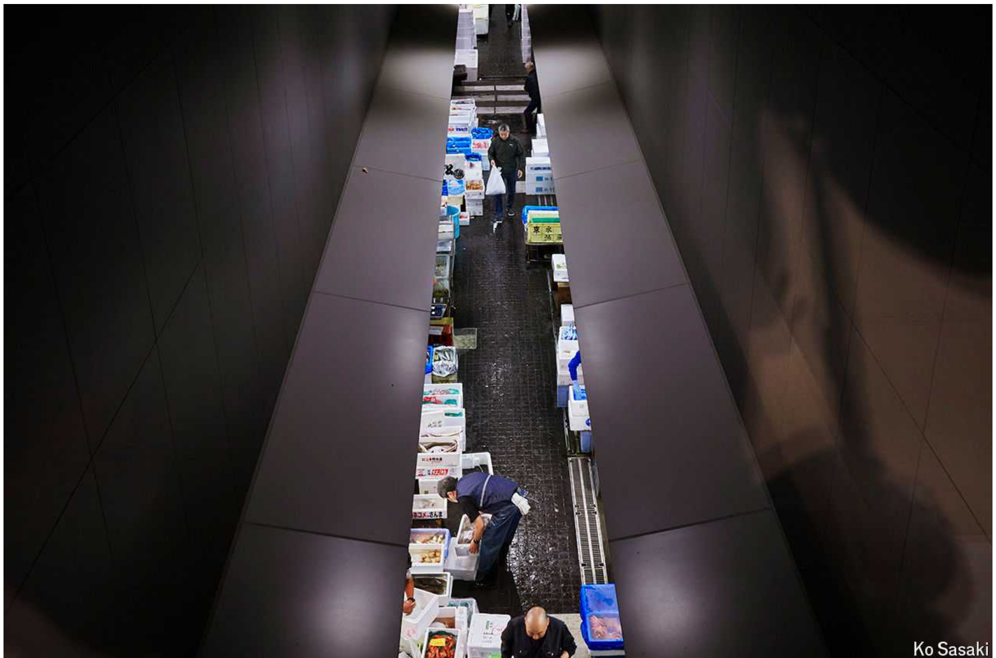


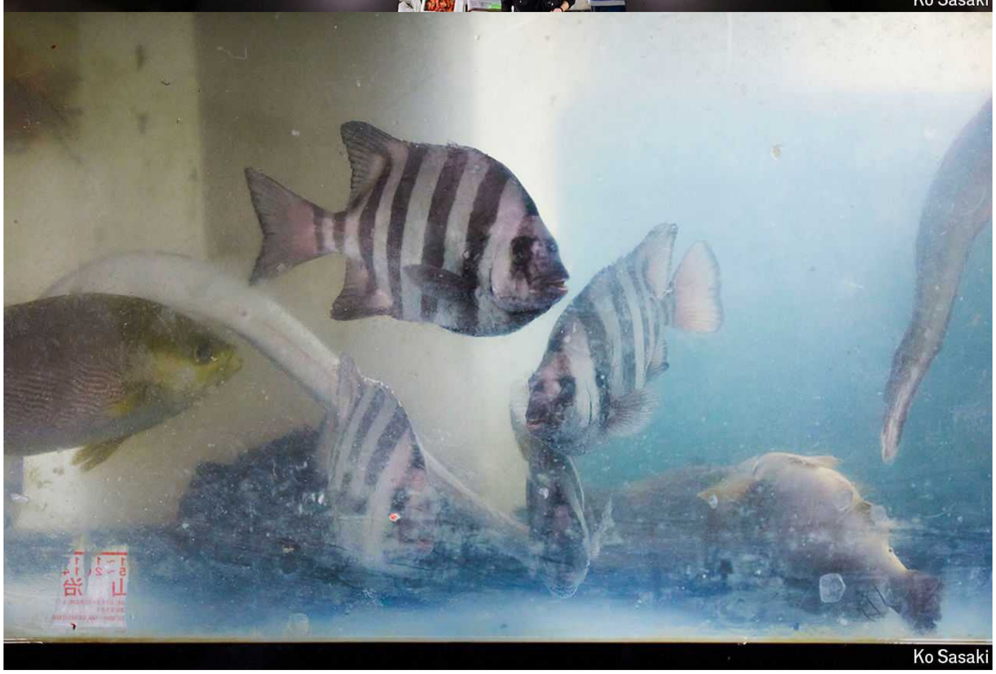
Wiry and frenetic in a white headband, Yamazaki Yasuhiro presides over his corner stall. Around him underlings cut and package fish. Like much of Tokyo, his stall is not exactly cramped but has little space to spare. He navigates through a maze of tanks holding twitching prawns and seething crabs; blue buckets in which fish swim in anxious tight circles, as if aware that plates and chopsticks await; and stacks of white boxes packed with seafood of all kinds—apologising for his paltry inventory. A typhoon the previous day grounded planes across Japan, halting deliveries. What looks like abundance is only a tenth of his usual daily trade, Mr Yamazaki explains.

Toyosu, where Mr Yamazaki has worked since it opened, is the biggest fish market in the world. It employs around 42,000 people and shifts more than a quarter of all fish sold in Japan, worth ¥2bn ($12.9m) on an average day. It is central to Japanese cuisine—and not just in Japan. Chefs from Europe, America and Australia pay handsomely for fish from Toyosu. To understand what makes this market exceptional, follow a hypothetical tuna from sea to plate, via Toyosu.

Why, of the roughly 500 types of seafood on offer, choose tuna? First, because no country eats more of it than Japan, and Toyosu almost certainly sells more fine tuna than anywhere else. Early-morning auctions, at which around 170 fresh and 830 frozen tuna are sold each day, attract both tourists and the best fish: fleets send them to Tokyo from as far away as New England and the Horn of Africa. Tuna is to Toyosu what Old Master paintings are to Sotheby's: one can buy them elsewhere, but Toyosu is the market-maker.

Many assume that tuna bought from Japan is superior because of the species, or where they are caught. That is partly true: bluefin tuna, which tend to be fattier than other species, fetch higher prices than the leaner bigeye and yellowfin, while skipjack and albacore often end up in cans. But holding species equal, the way a fish is caught and processed matters immensely to how it tastes—and therefore to its value.


Ko Sasaki


Ko Sasaki

Our journey begins on a hook. Expert tuna fishermen avoid nets, which make the creature thrash around in fear, producing lactic acid and adrenaline that mar its taste and texture. Instead, they reel it in slowly, and then begin a process called *ikejime*.

First, they drive a spike into its brain, killing it instantly to avoid a stress reaction that ruins the meat. Then they remove the tail fin and slice beneath the gills to bleed the fish while its heart is still beating. Blood contributes to spoilage through bacterial growth; properly bled fish will last longer. Robby Cook, head chef at Coral Omakase in Manhattan, says that the tuna he has shipped from Toyosu "has no smell [and] will keep a week, a week and a half", properly refrigerated—and will taste richer as it ages.

With the tail fin removed, they run a long, stiff wire into the fish to destroy its spinal cord and prevent *rigor mortis*. Once killed, bled and paralysed the fish goes into the freezer—or, if sold fresh, is submerged in an ice-and-water slurry.

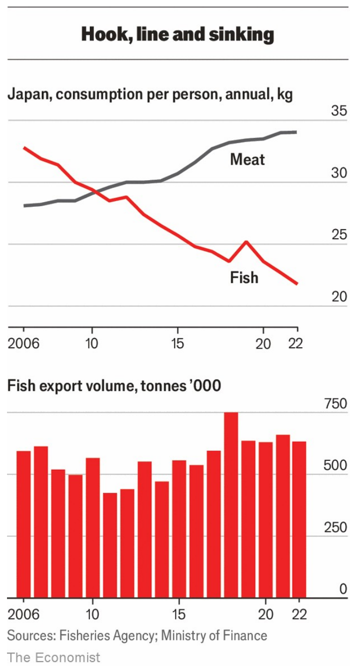
Fin tech

This sounds time-consuming, but one morning your correspondent watches a pair of workers at Toyosu perform *ikejime* on a tank full of live fish. One grabs the fish with one hand and cuts its head and tail off with the other, while another plunges a wire through the tail, cuts into the fish's back, yanks the wire up and down a few times and drops the fish into a box of ice and water. It takes less than 15 seconds per fish.

A boat with a freezer full of fish arrives back at port after ten months at sea. Our tuna is loaded into a freezer lorry and driven north to Toyosu. It arrives in time to let buyers inspect it before the auction, which begins around 5.30am, so the roads will be relatively empty.

Toyosu, which opened in 2018, was designed for an age of lorries, air-conditioning and exports. Its predecessor, Tsukiji, a fish market in the centre of Tokyo, was more convenient for chefs but cramped, dilapidated and open to the elements, requiring dollops of ice and ingenuity in the summer heat. From its opening in 1935 until 1987 it also had a train running through it. The director of one of the market's seven wholesalers put it bluntly: "Working in Tsukiji was hell."

Toyosu, by contrast, sprawls across 40.7 hectares (around 100 acres) of reclaimed land south of Tokyo proper. A coal gasification plant once sat on the site, so it needed a long clean-up. From decision to completion, the move from Tsukiji to Toyosu took 17 years.



Toyosu is made up of three main buildings: one for auctions, one for wholesalers, and one for fruit and vegetables. The second building is the largest; it also has a floor with restaurants for tourists and another selling dry goods and supplies: knives, aprons and rubber boots for the market floor, as well as miso, sake, pickles and other essentials for a restaurant kitchen.

Tsukiji was often called "Tokyo's pantry": built before the second world war, it boomed with Japan's wealth and population. Today that population is falling and eating less fish, so exports are increasingly important (see charts). Toyosu has markedly better access for the 19,000 trucks that come daily, which helps.

During the wee hours workers bring the tuna up from the loading docks to the auction floor and lay it on a pallet. It has already been consigned to, or bought by, one of the five wholesalers that sell fresh and live fish. (Two others deal in smoked, salted and dried fish.) These wholesalers are often part of large, listed, vertically integrated fishing firms; they take a 5.5% commission on each sale.

The auction may look like raw capitalism, but it is managed

Before the auction, the floor is a hive of silent activity. The frozen tuna—headless, tailless ovals with icy white skin, laid out in long rows—look more like munitions than fish. Atop each sits a sticker detailing provenance and weight, as well as a thick slice cut from the tail so buyers can see the colour. Some use hooked picks to dig out small chunks of flesh, kneading it as they walk around to determine the fat content through feel. Most carry clipboards; some acknowledge each other with a brief nod. *Mekiki*, experts in fish evaluation, set the floor price for each fish.

Around 5.30am an auctioneer rings a bell and sales begin. Fresh bluefin tuna fetch the highest prices: an average of $25 per kilo between January and August 2024, with the priciest fish fetching $750,000 on January 5th. Auctioneers chant rhythmically, keeping up a patter as buyers show interest with idiosyncratic hand signals and, because two houses often hold auctions simultaneously right next to each other, with eye contact. Buyers wear baseball caps with plastic plackets bearing the names of their firms; officials from Tokyo's government, which owns the market, wear blue caps and watch out for collusion.

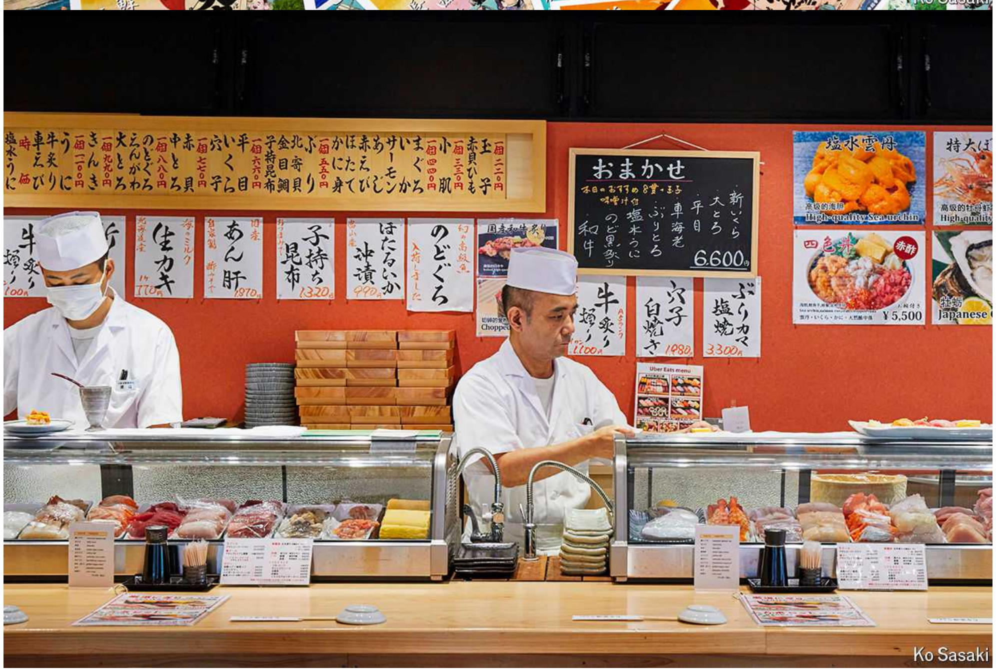
The action is hard to follow, relying on subtle gestures and clues. Workers load bought fish onto hand trucks, and then small pickups that zip around the market, sending distracted walkers scurrying.

The auction may look like raw capitalism, but is managed: only five companies are allowed to sell, and only certain species are flogged. Wholesalers are quick to say that they do not want to put their rivals out of business. Threats to their livelihood come not from neighbours, but from retailers bypassing the market and buying directly from fishing firms. Many outfits at Toyosu stretch back generations, often linked through kinship and marriage. Good behaviour and bad are remembered, and in time rewarded and punished.

In his magnificent book “Tsukiji: The Fish Market at the Centre of the World”, Ted Bestor, an anthropologist, argued that intermediate wholesalers “define much of the character of the marketplace”. The seven big wholesalers deal with shippers and suppliers; intermediates sell to restaurant groups, supermarkets and chefs. Many are family firms. The smallest may have just two employees: the husband or son who handles the fish, and the wife or mother who keeps the books. (Toyosu remains very male; book-keeping is the only job mostly held by women.)

Net profits

The number of intermediate wholesalers has fallen from nearly 1,700 in the mid-1960s to 457 today. Many small firms refused, or were unable, to move to Toyosu. Others have merged. They are laid out on what look like streets that line their building’s ground floor: cheek by jowl, with some large enough to have hefty fish tanks, a dozen workers and butchering tables big enough for an entire tuna and an arm-size knife to cut it. Some specialise, selling just tuna or eel, but many are generalists. Mr Yamazaki’s firm sells around 300 types of fish, changing them seasonally, often with fanfare. Posters announce the year’s first Pacific saury, a sleek, bony fish, delicious grilled, whose arrival heralds the coming of autumn. Each day his firm buys around 20,000kg of fish from the big wholesalers, selling them for an average of ¥36m ($238,000).



Relationships between wholesaler and buyer can last years, even generations. The former's success depends not just on expertise in choosing fish, but on knowing clients' tastes and anticipating their needs.

A wall of Mr Yamazaki's shop is taken up with tanks of live prawns, each with a slightly different temperature and salinity. From one tank he pulls a prawn, and from another another; they appear identical. But the first, he explains, is five grams lighter, and so more suited to the small *sakizuke* (amuse-bouche) that begins a multi-course *kaiseki* dinner. The heavier one is better for tempura. If they were reversed, the former would look slightly too large, and might leave the diner feeling too full; the latter would seem too stingy.

The three-wheeled truck holding our tuna flits through a network of underground passages until it reaches the wholesaler who bought it. By 7am the auction floor is mostly empty and being hosed down; activity now picks up in the other building. Stalls do not display prices, and often charge regular customers less than they would occasional ones. Buyers for supermarkets, restaurant groups and overseas chefs make big purchases at multiple stalls.

Individual chefs, such as Arakawa Takehiro, who runs Sushi Dan in the upscale neighbourhood of Hiroo, buy a few days' worth of tuna and an assortment of other fish. Mr Arakawa strides purposefully through the market—like most chefs, he has long relationships with specific wholesalers, and he would no more desert them to save a few yen than they would overcharge him. But he still greets workers at a few stalls where he buys nothing: a quick doff of his Dodgers cap, a shouted "Good morning" and a polite bow.

At one stall, he points out a cornetfish, which looks like a sinuous red magic-marker with pitiless bovine eyes ("It tastes like a cross between snapper and shrimp"). At another, he reaches into a bucket and gently squeezes a horse mackerel ("The belly should feel full"). At a third, he points to a bucket of writhing loach ("Cook them in a deep pot with egg and soy sauce"). His fish bought, he goes upstairs to the dry-goods floor for *kombu*, kelp sold in brittle squares, and *katsuobushi,* dried smoked skipjack; the two ingredients are essential to *dashi*, Japanese cuisine's foundational stock. Naturally, Mr Arakawa makes his own.

By 8am the tuna has been butchered and sent on its way: some to restaurants across Japan; some, still frozen, stuffed into styrofoam boxes and flown to New York, Sydney or Singapore. But some, perhaps, will find its way upstairs, to the first-rate sushi joints on the fourth floor, which open just after the tuna auction ends and close by mid-morning. One offers a tuna breakfast: a four-piece roll and six nigiri, arranged in order of fattiness, from mouth-coatingly unctuous to lean, poached-celery light crunch.

How guilty diners should feel about such pleasures is an open question. Stocks of the once-endangered bluefin have recovered, but the threat of overfishing has not receded, and many complain that Japan is doing too little to ensure the sustainability of its catch.

Warmer seas are making fish migrate. Mr Yamazaki says that those native to Kyushu, Japan's southernmost big island, are turning up around Hokkaido, its northernmost, 2,000km away. A growing share of the fish sold at Toyosu is farmed—something locals once winced at, but which now seems inevitable.

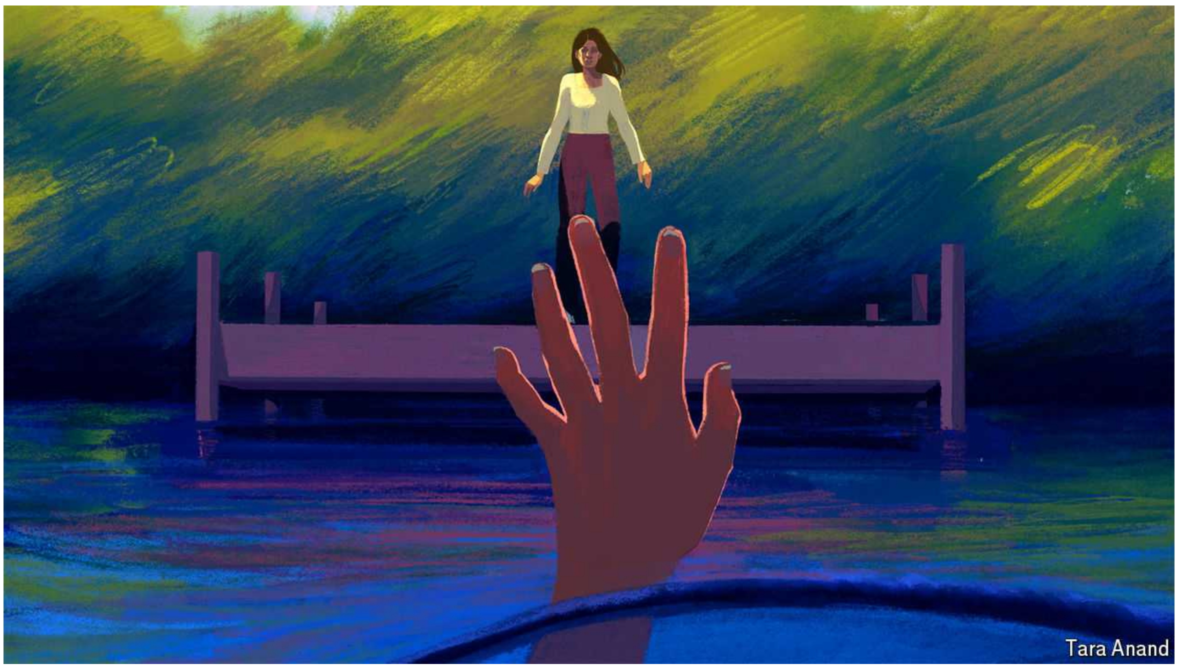
By noon the day's action is over. Afternoon is the market's quiet time: the auction floors are cleaned, with pallets neatly stacked. In the other building, accountants tally up the day’s sales before pulling down the metal shutters, going home and getting ready to do it all again tomorrow. ■

Christmas Specials | How good are good Samaritans?

When doing the right thing goes wrong

How a car crash in Los Angeles rewrote the law on helping strangers

December 19th 2024



A MOMENT MAY come, for every one of us, that tests our willingness to help. Walking by the sea, you hear a cry of distress from the surf. At a party, someone starts choking. On the road, a car up ahead crashes: your friend is in the passenger seat; she is trying to get out; the door is jammed; you see smoke. That was Lisa Torti's moment and it came on October 31st 2003.

The short version of America's most pivotal case on Good Samaritans goes like this. "They were young people not doing anything terribly wrong, out to have a good time, and then, tragedy happens." Bob Hutchinson may tell it simply. But winning this case in California's supreme court was a defining moment in his legal career. His triumph was widely, if unfairly, seen as

America's failure. Two decades on, that night's disaster remains a test of what it means to do good.

Listen to the Weekend Intelligence podcast on good samaritans in America

Heroism is both ordinary and extraordinary. A hero usually has no particular duty or special ability to help the person in peril. Both are going about their lives, and then their fates collide. Some hesitate. The hero proves her mettle.

Not so fast, say America's courts. Under an old principle of common law inherited from Britain, Americans in most states have no obligation to come to one another's aid, or even to call for help. It does not matter if your failure to assist is morally outrageous: if you walk away, you will face no legal consequences.

There are exceptions. A parent must always rescue their child, a teacher his students and a captain her crew. Others who try to help, however, can be sued if their intervention fails. "Good Samaritan laws", state to state, offer them some protection. Generous ones shield do-gooders as long as they act with reasonable care. But lots do not protect rescuers without professional training. This makes America an outlier among Western democracies. Most European countries require their citizens to help one another.

Americans, by contrast, must make snap choices, with consequences that may reverberate for years. In Lisa's case, they rippled through California's courtrooms, then its state capitol, until finally they rewrote America's oldest law on Good Samaritanism.

Genesis

On Halloween eve, three friends had finished a late shift at a mall in the foothills of north-west Los Angeles, and were getting ready to go out. Alexandra Van Horn and Jonelle Freed swung by Lisa's house to put on some make-up and pick out something to wear.

Lisa's boyfriend, Dion Ofoegbu, and Anthony Watson, another friend, drove them to a dive bar. Tucked into the corner of a nearby strip mall, it was known for stiff drinks and terrific music. The women danced and had several rounds; the men drank little. They all called it a night around 1.30am. Lisa got into Dion's car. Alexandra and Jonelle went to Anthony's.

In the car park, Alexandra glanced at Anthony. It was a moonless night, but he seemed sober enough. She buckled herself into the passenger seat and Jonelle hopped in the back. The two cars turned onto Topanga Canyon Boulevard and idled at a red light.

The highway runs for 20 miles from the edge of the Pacific Ocean, winding through the canyon among sagebrush and walnut shrubs. In the stretch near the bar, strait-jacketed by a suburban grid, it becomes a smooth seven-mile shot—perfect for drag racing.

She was terrified the car would blow up. She had seconds to decide what to do

When the light turned green, Anthony and Dion floored it. Soon Dion fell back, but Anthony kept going. He crested a hill and suddenly the highway, as if forgetting itself, made a bend. Anthony lost control of the car and rammed it into a lamp post.

An airbag punched Alexandra in the face. Jonelle was crawling out of the back, and Anthony got out. Alexandra tried to open the passenger door, but something was wrong with it. And maybe something was wrong with her, too, because she realised she couldn't reach the handle. "I can't get out," she said. Her body felt like it had been ripped apart.

"Alexandra, we've got to get you out of the car," she heard Lisa yell through the window. Lisa had jumped out of her own car and rushed to the crash. She saw smoke, and liquid pooling. She was terrified the car was about to blow up. She had seconds to decide.

Lisa yanked open the door and scooped Alexandra up, one arm under her legs and the other behind her back, she recalled in her deposition. She set her down five to ten feet away, she said, supporting her neck with a jacket. Police and paramedics arrived. Anthony's breathalyser test came back negative. Still, for the police it was clear: Anthony was at fault for speeding. They would write that down and wrap up their report.

The paramedics' investigation was just beginning. "Does this hurt?" they asked Alexandra in the ambulance, as they touched her. I don't feel that, she said. She could not move below the waist. She had three rounds of emergency surgery and never walked again.

But Lisa had the story wrong, Alexandra said. Lisa had grabbed her arm and "jerked" her out of the car "like a rag doll", she said in her legal claim. The pain got a hundred times worse. She said Lisa had actually put her down close to the car. That didn't seem like the action of someone worried it would explode. (Lisa contested this version of events in her deposition. She said Alexandra never told her not to touch or move her. Both women declined to speak to *The Economist*. The account above is drawn primarily from court records.)

Lisa visited Alexandra in hospital several times. According to Lisa's lawyer, she felt terrible about how things had turned out. She had wanted to help. Then she heard from Mr Hutchinson's office. "I told Jonelle that Alex was suing me and she said, 'That's absurd'," Lisa recalled. Alexandra was asked during her deposition if she thought Lisa had been trying to hurt her. "I hope not. I don't think so," she said. Would she consider Lisa a friend before the accident? Yes, she would.

The first court to hear *Van Horn v Watson* ruled quickly for Lisa, on the basis that she was protected under California's Good Samaritan law. (Anthony appears on the case name because he is the first defendant listed.) That judgment was reversed on appeal. In 2008 the state supreme court ruled in Alexandra's favour. The case never went to trial. She won a $4m settlement out of court, with the bill going to insurers.

American law seems at odds with Americans' moral instincts

The justices were not weighing the morals of the case. They needed only to interpret the Good Samaritan law and so establish whether or not Lisa was immune. California's law was drafted in the 1950s to protect doctors from being sued if they rendered aid off duty. Later tweaks hoped to encourage citizens with first-aid training to perform CPR.

Van Horn turned on whether the law shielded only qualified rescuers, or all citizens. Mr Hutchinson argued Lisa had no protection. Lawmakers had never intended "to invite any wannabe hero wearing a cape to rush in and make a situation worse". Moreover, he argued, she had not provided medical care in merely pulling Alexandra out of the car, whether or not she had believed it was about to go up in flames.

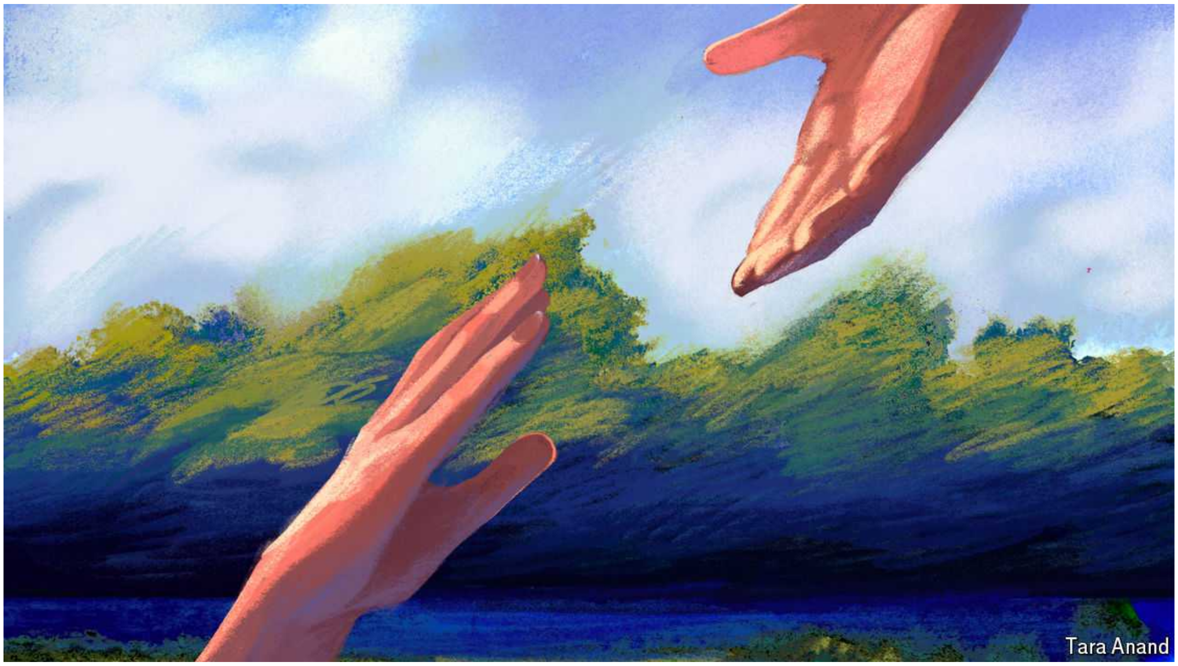
Lamentations

Lisa's lawyer, Jody Steinberg, argued that such a narrow interpretation of the law would chill do-gooding. The Boy Scouts of America lent its support to Lisa in court, alarmed that a ruling against her could expose its 3m Scouts—who pledge to "help other people at all times"—to lawsuits. It noted a twisted incentive: a rescuer would do better to wait for a victim to suffer burns before saving them from a fire, so that the law deems their care medical and protects them.

Courts enforce many of our widely shared moral values. Without prohibitions against murder, rape and theft, strangers would find it hard to co-exist. But should the law also dictate when and how we help one another? This question is at the heart of the biblical parable of the Good Samaritan. On the road from Jerusalem to Jericho, a man is robbed and left for dead. A priest and a Levite see him but walk by on the other side of the road. A Samaritan—an enemy of the Jews, in Jesus's time—stops to help. Rabbinic law instructed holy men not to touch a corpse. The parable implies that the two pious Israelites used this as an excuse to ignore the stricken man. Jesus's message was that the moral duty to help strangers in need should trump the letter of the law.

After *Van Horn*, newspapers ran lines such as "No good deed goes unpunished". Many were shocked that attempted heroics had been condemned. American law seems at odds with Americans' moral instincts. Only four states punish Bad Samaritans for failing to help a fellow citizen, on the European model: Minnesota, Rhode Island, Vermont and Wisconsin.

To their critics, who include many American legal scholars and philosophers, "Bad Samaritan laws" violate the freedom to choose whether to do a good deed. Yet examples of forced civic duty abound: the obligation to pay taxes and serve on a jury, for instance.



Some foresee more bungled rescues. A weak swimmer should not be expected to save a drowning man. They picture a legal logjam if everyone at the scene of an emergency could be prosecuted. Such laws would embolden daredevils, they argue, imposing an unfair burden on the prudent. Others consider the effects on morality. Forcing us to help one another would make true and coerced altruism indistinguishable. Spontaneous kind acts would lose their cachet—a perverse consequence for a law that champions virtue.

Yet a study by Harry Kaufmann of Hunter College found that even a minimal legal duty to rescue can help reset people's moral compasses in a positive way. Such laws also allow us to come to one another's aid without fear of reprisal. Plenty of countries have had them for decades, without dire repercussions. This may reveal the best argument against them: they don't do much at all. America's four states threaten Bad Samaritans with a $500 fine, community service or a brief stint in jail. Only a single American case, 30 years ago, ended in a conviction.

Theoretically, lots of non-rescues could be going unnoticed. David Hyman of Georgetown University doubts it: in fact, many are sensationalised. Mr

Hyman tried to quantify how often Americans help or fail to help one another. He found that rescues exceeded non-rescues by 800 to one in 1994-2004; and that 100 Americans lost their lives every year trying to rescue someone. Sixty times as many rescuers died as did victims who had been ignored. Americans were not failing to intervene—they were far too willing to do so. Whether a state had Good or Bad Samaritan laws made no difference. Perhaps this is unsurprising. Most people are not legal experts and, when the crucial moment arrives, there is no time to consult a textbook.

Revelation

Four days after the final ruling in *Van Horn*, California's state assembly introduced a bill to protect everyday rescuers like Lisa. It remains the law of the state.

Under it, Alexandra might have received a smaller payout—possibly one far from commensurate with her life-altering injuries. Would it have mattered to a jury that the smoke that scared Lisa came from the airbags, a result of the chemical reaction that makes them deploy quickly? Or that a paramedic said in his deposition that he found Alexandra lying at an awkward angle, perhaps a clue that the rescue had injured her? Or maybe this detail would have stuck: in that split second, Dion too had rushed to the mangled car and grasped Jonelle to help her out. Perhaps there lies in all of us an irrepressible urge to help. As the jurors deliberated, they may have asked a question of themselves: if it had been me, what could I have lived with? ■

Christmas Specials | The afterlife of aeroplanes

How retired aircraft find a second act

And how retired planes keep the global aviation industry aloft

December 19th 2024

On a clear Monday morning in April 2024 an Air India 747-400 named *Agra* lined up on runway 27 at Mumbai airport and commenced its take-off roll. As the aircraft left the ground and started its ascent over the densely packed metropolis it looked for a brief, scary moment as though something might be wrong. Grounded in the pandemic, for three long years it had sat exposed to humidity and monsoons. Its enormous wings, nearly as wide as its body is long, tipped alarmingly to the left, and then to the right, before it stabilised and soared over the Arabian Sea.

For observers in the know it was an enthralling moment, tinged with sadness. The manoeuvre, called a wing wave, is an aviation tradition commemorating an aircraft's last journey. For a quarter of a century *Agra* had carried families to loved ones, students to new lives and executives to fresh markets. It had flown prime ministers to summits, taken pilgrims to Mecca and repatriated stranded citizens during the pandemic. All told, it made more than 13,000 trips and spent 63,120 hours—over seven years—in the sky. Now it was en route to its final destination: Roswell, New Mexico, in the deserts of the American south-west. That is where it sits today, among the cactus and the odd lost extraterrestrial. But *Agra* will have an afterlife—one that is crucial to keeping global aviation aloft.

Airlines are constantly disposing of old aircraft and acquiring new ones. The reasons rarely have much—if anything—to do with airworthiness. A Boeing 747-400 can fly at least twice as many hours and nearly three times as many trips as *Agra* did before its structure starts to reach its limits. For an industry that operates on razor-thin margins and frequently stands accused of being environmentally unsustainable, it might seem extravagant not to wring every last mile out of a pricey asset. The case is in fact the opposite. The life and death of aircraft are determined by hard-nosed business calculations.

The biggest factors in deciding to stop operating a particular type of aircraft are customer expectations, costs and accounting. The first may come as a surprise to flyers accustomed to shrinking legroom and vanishing baggage allowances—the well-being of its passengers can seem like the last thing on an airline's list of priorities. Yet flying has become more pleasant in subtle but important ways.

An aircraft's individual parts may end up being worth more than their sum

The latest generation of long-haul planes—Boeing's 787 "Dreamliner" and the Airbus A350—is less noisy and more stable in turbulence. The new jets can manage higher humidity levels, lowering the chances of dehydration for travellers, and maintain higher cabin pressures that feel closer to conditions on the ground. An economy-class passenger on Air India's new flagship A350s will not enjoy the 747's menu of s*uprême de poulet à la imperiale* served with *pommes à la savoyarde* and *haricots verts au beurre*, but she will feel fresher when she arrives at her destination.

New planes are also more efficient. Fuel is the single largest cost for any airline. Engines and weight are major factors in determining consumption.

The biggest modern aircraft have just two engines compared with four on the 747 or the enormous Airbus A380 double-decker, and about much of the airframe is made of light composite materials, such as carbon fibre, instead of heavier aluminium alloys. Airbus boasts that the A350 consumes 25% less fuel per seat than its predecessors, producing comparably fewer emissions.

Then there are the mysterious workings of an airline's accountants, who unlike its pilots are not bound by the laws of physics. Guidance from the International Air Transport Association, an industry body, states that the accounting for aircraft acquisition and depreciation is "complex" and "requires judgment by airlines". The oversimplified version is that an aircraft's individual parts may eventually be worth more than their sum. Or the cost of the most extensive mandatory maintenance checks can exceed a plane's book value. Better to sell it off.

External factors also affect the life cycle of aircraft. Commercial aviation is in the middle of a demand boom. But manufacturers are struggling to produce enough new planes to fill orders and many aircraft are stuck on the ground because of engine troubles. Some airlines are flying older jets for longer than planned or bringing others back from retirement. Conversely, the pandemic hastened the departure of planes a step away from retirement, including most passenger 747s. British Airways had planned to fly its 31-strong fleet of 747s until this year but in July 2020 it announced the "heartbreaking decision" to retire them immediately. *Agra* operated the last scheduled flight of any Air India 747, from Delhi to Mumbai, in March 2021.

The post-retirement careers of aircraft are diverse. Some transition to different forms of hospitality. The Jumbo Stay Hotel is a 747 parked outside Arlanda airport near Stockholm; guests can sleep in a cockpit room equipped with a shower and minibar. One retired British Airways 747 has been turned into a party venue in the Cotswolds.

Others serve society in different ways. A 747 that flew passengers for two decades was converted in 1997 into a flying space observatory for America's National Aeronautics and Space Administration (NASA). In Iztapalapa, a poor corner of Mexico City, a retired 737—the workhorse of short hops—is now a library. In 2012 America's Discovery Channel and Britain's Channel 4 deliberately crashed a 727 in the Sonoran Desert to see which seats offered the best odds of survival (the cheap ones). A lucky few end up as exhibits in aviation museums, continuing to evoke wonder in future generations of pilots, engineers and frequent flyers.

But the majority of retirees make their way, like *Agra*, to somewhere like the American south-west. This remote corner of the world is the exact opposite of Mumbai. Land is cheap and there are barely any people. The sun shines for some 300 days a year. Humidity levels hover in the low double digits. It is so dry that the soil, known as caliche, hardens to a cement-like consistency—ideal conditions for storing planes, heavy things whose enemy is corrosion-causing moisture. (Interior Spain offers a similar climate and some European planes end up there.)

Doors to manual and re-sell

Commercial aircraft head to a facility like Pinal County Airpark, about 50km north of Tucson, where private companies store, maintain, convert and disassemble planes of all sorts. As you turn off the interstate and head west through the desert, you are greeted by the incongruous sight of dozens of tail fins rising in the middle of the desert. Pinal is home to some 200-300 aircraft at any given time. Unless a plane is simply there for storage (about $5,000 a month for a single-aisle jet, twice that for a big one), it usually has a new owner by the time it gets here. What happens to it next depends on the owner's business, what kind of plane it is and market conditions. But each path allows it to keep flying, in whole or in part.

One route back into the skies is acquisition. Airlines in rich countries prefer factory-fresh aircraft because of fuel efficiency and customer expectations. But smaller carriers in poorer places are willing to settle for older models. A 15-year-old Boeing 737 or Airbus A320 may well find a post-retirement gig ferrying passengers around Africa. An aircraft can also be converted to carry cargo, which can add ten to 20 years to its flying life. Despite higher operating costs, second-hand planes offer better value to logistics firms than more-efficient but pricey new ones because freighters clock fewer hours in the air than passenger services.

The other route back into the skies is more convoluted, but more common. Every aircraft at every airline undergoes routine checks of increasing degrees of intensity. These range from monthly "A checks", inspecting parts that see the heaviest usage, to multi-year "D checks", at which point "You're really taking apart nearly the entire aircraft" to identify problems and fix them, says Scott Butler of Ascent Aviation Services, a major aircraft maintenance and teardown company based at Pinal.

Retired aircraft in Arizona

An airline with hundreds of planes will be running checks every day. Worn-out or damaged components are replaced. "With the amount of maintenance that goes into it, you're basically rebuilding that airplane two to three times over the course of its life," says Mike McBride, a vice-president of maintenance operations at Delta Air Lines, which has nearly 1,000 aircraft.

For a sense of the scale of the operation, consider the Boeing 777. It has 132,500 unique parts and some 3m in total, including bolts and rivets. Beneath the soft, rounded surfaces of the passenger cabin is a bewildering tangle of sensors, radars, pumps, pistons, cylinders and drums. Miles of wires connect avionics to the cockpit. Hydraulic systems move the rudder or wing flaps or brakes. Airlines need a reliable supply of all these bits and pieces. The global aviation industry would grind to a halt without them.

(Sanctions-hit Russian airlines have resorted to smuggling in components in passenger luggage.)

The industry's insatiable appetite for parts is fed by retired planes. Some aircraft parked at Pinal sit atop Jenga assemblies of wooden railway sleepers, their landing gears long since wheeled away. Others are missing flight decks or chunks of the fuselage, exposing the innards of the aircraft like a grotesque real-life version of a cutaway diagram. Clamber into one—watching for rattlesnakes—and half the instruments in the cockpit may be gone. Many of those parts are either inside other aircraft or in storage waiting to be used. There are warehouses in nearby Phoenix, pleasingly named after the mythological bird that regenerates from the ashes, that look like Amazon fulfilment centres if Amazon only did aircraft spares.

The first things to come off when a plane arrives in Arizona are the engines. Next to go is the landing gear. Avionics, instruments, hydraulics and other components are either harvested and stored or removed gradually on the basis of need. Cockpits are sometimes removed to be converted into flight simulators for pilot training. Luxurious seats at the front of the plane find new homes with second- or third-tier airlines or in the basements and garages of aviation aficionados.

The least desirable parts of a plane, in the desert as in the sky, are the economy-class seats. Nobody wants them. Nor are they easily recyclable. An airplane seat contains 20 or 30 different materials, says David Butler of the University of Birmingham. They end up being shredded or in a landfill or both. Some airlines have tried to reduce the waste. When Southwest, an American carrier, undertook a rebranding exercise in 2014 it eventually replaced coverings on 71,786 seats, resulting in 43 acres of leather weighing 635 tonnes. It has since been donating the leather to non-profits which turn it into footballs, shoes and bags.

A Boeing 747 at Pinal Airpark

Emirates, a big carrier based in Dubai, is likewise in the process of overhauling the interiors of its planes. An A380 carries around 800-900kg of soft furnishings, says Ahmed Safa, the airline's head of engineering. Emirates employs 14 tailors who repurpose materials from its cabins into bags, wallets and suitcases, with proceeds from sales going to charity. The airline is thinking about expanding its range to things like umbrellas made from escape slides. "This actually costs us money," says Mr Safa. The returns for such efforts come in the form of good corporate citizenship.

Upcycling bits of planes is a fun idea, and some aviation nuts may be willing to spend, for example, €7,000 on a chair made from the nose of an A350 (this actually exists). But for the most part it is neither economic nor scalable, except for the odd product. One example is made by PlaneTags, a California-based firm, which harvests the metal sheet, or "skin", that covers a plane's airframe and turns it into engraved keyrings that sell for a handsomely marked-up $40.

Partly the same, and partly not the same

More commonly, the skin of the plane meets the same fate as the rest of the airframe. Once everything—engines, components, interiors—has been stripped out, the metal structure is all that remains. Made of high-quality aluminium alloy, it commands premium prices in scrap. Airbus and Boeing both estimate that around 90% of their aircraft by weight is recycled or reused in some form. The use of composites in new aircraft poses challenges —it is not as easily recyclable as metal—but the industry has about a decade to work it out before the retirements start.

This is the end that probably awaits *Agra*. Even after its corporeal form has vanished from this Earth, it will continue to roam the skies as a small part of other jets. Five airlines—Air China, Korean Air, Lufthansa, Mahan Air and Rossiya Airlines—still use the 747 for passenger services. And the model is still hugely popular as a freighter. Of the 1,574 produced from the first in 1969 until production ceased in 2023, as many as a quarter remain in service, the majority carrying cargo.

Agra and its counterparts from Air India, British Airways and every airline that operated the 747 will live on in another way too. Despite the great advances in technology and cabin comfort, no aircraft has ever been as beloved (or beautiful) as the 747. It ushered the world into the jet age. It formed the backbone of the global fleet at a time when international travel was broadening out beyond the wealthy. It is the aircraft on which many readers of this piece will have taken their first foreign trips. It will live on in legend. ■

Christmas Specials | The megapreacher Putin hates

How a Nigerian built one of Europe's largest churches in…Ukraine

The astonishing tale of an unlikely merchant of miracles

December 19th 2024

AT 5AM ON February 24th 2022, Sunday Adelaja woke to the sound of explosions. The 57-year-old Nigerian was living in Irpin, just outside Kyiv, close to a military airport. Russia's brutal invasion of Ukraine was starting. Mr Adelaja hastily gathered his wife, four students staying with them, and a backpack. They took a car as fast as they could to the Polish border.

The founder of one of the largest evangelical churches in Europe, the Embassy of the Blessed Kingdom of God for All Nations ("Embassy of God"), says he had good reason to dash. His Pentecostal network had its headquarters, improbably, in Ukraine. You might think that an ebullient, polychromatically besuited Nigerian given to speaking in tongues would struggle to attract a flock in a country with an Orthodox tradition stretching back over 1,000 years. Yet with its evangelical razzmatazz and pro-Western, can-do spirit, Mr Adelaja's church had 100,000 worshippers in Ukraine and perhaps millions more worldwide.

Listen to the Weekend Intelligence podcast on the Nigerian pastor in Ukraine

He became a local celebrity; but also angered reactionaries in Ukraine and Russia. On the day of the invasion he says he was tipped off by the government in Kyiv that he was on a Russian hit list. "Putin was my personal fight," he says. "It became the world's fight."

But critics allege that Mr Adelaja was escaping from justice. More than a decade ago he was accused by Ukrainian authorities of involvement in a pyramid scheme that fleeced his flock. Victims of the scheme say he used his influence to dupe them into investing and used the chaos of the war to escape. Mr Adelaja, who has never been found guilty of any crime and whose cases have now passed the relevant statute of limitations, says he did nothing wrong. He believes that the allegations were part of a vendetta against him orchestrated by powerful political enemies.

It is the stuff of Hollywood—or Nollywood, as Nigeria's film industry is known. Mr Adelaja's rags-to-riches tale is astonishing. But his life is also emblematic of broader trends: the global rise of Pentecostalism and its potent Nigerian brand; the role of religion in countries emerging from trauma; the way politicians use faith for their own ends; and the immense power that charismatic preachers have over their congregations, especially during turbulent times.

Prosperity gospel meets spiritual void

Idomila, the village where Mr Adelaja grew up, was "poor even by Nigerian standards", recalls Tai Adelaja, one of his uncles. To make ends meet the young Sunday would sell firewood. Even today he can roll up his trouser legs to reveal scars from foraging for sticks.

But he won a scholarship to attend university in the Soviet Union, like more than 50,000 other Africans during the cold war. Before he left he had a "supernatural experience" when watching an evangelical preacher on TV. In a recent interview in Brussels, Belgium's capital, where he has been granted refuge, Mr Adelaja closed his eyes and rapturously recalled how he "felt like there was a big light coming and this light …was coming from inside of me".

When he got to Moscow he was excited to see "big, beautiful, golden churches", but was told that under atheistic communism these buildings were just museums. He was shocked by the economic grimness. Nigeria had had Lada cars in the 1960s and '70s, he notes, but by the 1980s it had "Mercedes and Volkswagen".

Mr Adelaja was sent to Minsk, where he studied journalism. In Belarus's capital there was a "mini-Africa" of students, recalls Martin Ocholi, a Kenyan contemporary. Mr Adelaja ran clandestine Bible-study groups. He was "disciplined", "intelligent" and "extremely determined". He also partied less than some.

Being African helped: many see Africa as the last bastion of spirituality

In 1993 Mr Adelaja moved to Ukraine, which had voted overwhelmingly for independence two years earlier. He got a job at a TV station, becoming possibly the first black correspondent on Ukrainian screens. He was soon presenting a show about religion. He mixed on-air proselytising with grassroots work building a new church. Catherine Wanner of Penn State University, an expert on religion in Ukraine, first saw Mr Adelaja in a metro station in Kyiv, where he was spreading the Gospel literally underground. By the 2000s Mr Adelaja had one of Europe's largest church networks, including a megachurch in Kyiv which sometimes pulled in 25,000 worshippers on a Sunday.

Mr Adelaja was at the confluence of two trends. The first was the global rise of Pentecostalism, a form of evangelicalism that emphasises personal connections with God. The number of Pentecostalists has risen 12-fold since 1970, from 58m to 683m, out of a total Christian population of 2.5bn, according to the Status of Global Christianity database. In developing countries such as Brazil and Nigeria its emphasis on the "prosperity gospel", the idea that God wants you to be rich, has made it an alluring alternative to churches that promise rewards only in the afterlife.

Pentecostalism exploded in Nigeria in the 1980s "at a time of profound social crisis" after the country's civil war, says Ebenezer Obadare, author of "Pentecostal Republic". Then, when an oil-price crash drove many Nigerians to emigrate, they took their faith with them.

Yet Mr Adelaja's congregation was made up of Ukrainians and Russians, not diasporic Nigerians. And this unlikely scene depended on the second trend, the fallout from the collapse of the Soviet Union. In Ukraine in the 1990s "There was a lot of shock but not a lot of therapy," says Ms Wanner. Planeloads of American missionaries arrived to fill the spiritual void. Mr Adelaja's church offered a "total institution" at a time of hyperinflation, state collapse and rampant substance abuse. Embassy of God ran soup kitchens and ministered to drug addicts and prostitutes. Natasha Potopaeva, an early member, says she joined for help with her alcoholism. "It was such a taboo. You could not go to the Orthodox church."

His church ran soup kitchens and ministered to addicts. Also, it was fun

Yuriy Demidenko, another congregant, says his racist friends asked what Mr Adelaja could teach them "If he was just...eating bananas yesterday." But being African gave Mr Adelaja a unique selling-point. "He was successful...precisely because he is black," argues Mr Obadare. "There can be a sense that Africa is the last bastion of the spiritual, while the rest of the world is succumbing to decadence."

And his church was fun. Mr Adelaja hollered his way through scripture and carried out "miracles" to a gospel-rock soundtrack. Another congregant says it was freezing when she first attended. "But Pastor Sunday came in and he threw off his coat…running from one end of the hall to another…when he took off his suit, I noticed he was...drenched with sweat."

As it grew, the church became influential. Politicians such as Yulia Tymoshenko, twice the country's prime minister, attended services. In 2004 the church played a part in the Orange revolution, the protests that overturned a rigged election and helped elevate Viktor Yushchenko, a pro-Western candidate, to the presidency in 2005. Mr Yushchenko sent a framed photograph of himself to Mr Adelaja as a thank-you.

In 2006 Leonid Chernovetsky, an oligarch and one of Mr Adelaja's flock, became mayor of Kyiv. Mr Adelaja claims that most of the city council and 50 MPs were associated with the church, too. "They were beginning to change the social fabric of the city," says Ms Wanner. The church's boot-straps individualism and embrace of all sorts, including criminals and ethnic minorities, offered a contrast to the conservatism by candlelight of its Orthodox rivals.

Success brought enemies. "Yesterday he was swinging from the trees, and now he is here teaching people with a thousand years of Christian culture," complained an Orthodox patriarch. In the late 1990s the health department investigated whether the church was psychologically abusing its congregation (it found no evidence). In parliament MPs fulminated about Mr Adelaja's influence.

In Russia the reaction was even fiercer. "There is no question they are a tool of the US," a Russian MP told the *Wall Street Journal*. In 2006 Mr Adelaja was barred entry at Moscow airport despite having been invited onto a chat show called "Let Them Talk". The show aired anyway, and implied that Mr Adelaja was Satanic. Most of his Russian branches were closed.

Mr Adelaja says that it was the church's greater political prominence, and its links to Mr Chernovetsky, that led to his subsequent legal difficulties. In 2008 Ukrainian investigators accused him of involvement in an alleged pyramid scheme called King's Capital, which was founded by members of his church. According to police the scheme defrauded more than 600 people. Police alleged that Mr Adelaja organised fraud to "unlawfully acquire funds from citizens in particularly large amounts".

"He was incredibly charismatic; we never entertained the thought that the pastor could betray us," says Nadia Zaniuk, a victim of the scheme. Mr Adelaja's services featured promotions for King's Capital, she says. "Sunday framed it this way: if you were part of King's Capital, you were successful; if not, you were a loser," Nadia recalls.

In 2008 Ms Zaniuk put her flat up as collateral to get a loan, which she invested in King's Capital. She says she was promised that her repayments to the bank would be covered. When the firm collapsed she was left with crippling debt. She has tried to sue the bank on the grounds that she was defrauded, but has not been successful. "Only about seven of us are still fighting; the rest have given up," she says.

Nataliya Bogutska, another victim, says that at church Mr Adelaja would invite those who had invested in King's Capital on stage. He would challenge those who had not to stand up, and stress that they must invest to prosper. She took the plunge, investing the equivalent of $75,000 in King's Capital and other schemes promoted by the church. "I remember how Sunday told us not to worry, as he was a millionaire and could resolve all our difficulties."

Yet Mr Adelaja insists he did nothing wrong. He says the charges were motivated by rivals of Mr Chernovetsky trying to get to the mayor through him. He argues that if he had promoted King's Capital then his whole church of 25,000 people would have signed up. He knew very little about the scheme, he says. As for the victims, he says that for everyone saying he was involved there are 100 who would say the opposite. "If I had done that, I would not be living as a refugee here [in Brussels]. I will be living like somebody who has money." He claims that his wife invested and lost money in King's Capital.

Legally a court deemed in 2023 that the case has passed its statute of limitations (though a lawyer close to the case says the authorities are attempting to appeal that decision). The pastor has never been convicted of any offence.

Still, the allegations took their toll. Church membership dropped, branches closed and ambitious plans for expansion overseas were cancelled. During the 2010s Mr Adelaja was a diminished figure. He agreed not to leave Ukraine, remaining there for all of 2008-19. He spent less time preaching and more writing books (he has published dozens, including "Create Your Own Net Worth" and "Where There is Problem, There is Money"), and making YouTube videos.

Back to Africa

When your correspondent tracked him down, Mr Adelaja was living in damp, peaceful, earnest Brussels. He says he and his wife have lived in more than a dozen flats since arriving in 2022.

Does he want to return to Ukraine? Once, to hand over the church to other pastors, he says. But not to stay. His house was ransacked and destroyed by Russian troops. To Mr Adelaja this is proof they were looking for him. (Ukraine's intelligence service did not respond to requests for comment.) To Ms Wanner, the academic, the idea that a Nigerian preacher was on a Russian hit list is not ridiculous. "Was he top of the list? I doubt it. But he could have been on the list."

The church, like most things in Ukraine, has been upended by the war. "Many of our people were killed," says a congregant. But branches still operate. Every evening there are online prayers.

Mr Adelaja's thoughts have turned towards the continent of his birth. He told *The Economist* he wants to go back and "give my life to make sure we give every African child a chance at life". He sent a video of himself speaking to a large group of children at a school in the Republic of Congo, where he tells them, via a French translator using a megaphone, that “Before I was European I was African. I lived like you.”

Might Mr Adelaja want to educate Africans about Russia, which pumps out anti-Western disinformation across the continent? Yes, he says. They need to know about Putin’s “imperialistic spirit”. But his main reason for wanting to return is because he feels other Pentecostalists are letting Africa down. Earlier this year the BBC revealed that T.B. Joshua, a Nigerian megapastor who died in 2021, had raped, tortured and abused followers over two decades. “When I saw what they are doing in Africa, it made me want to cry.”

Mr Adelaja will surely stand out less in Nigeria than he did in Ukraine. But he is not short of belief in God—or in himself. The Lord has given him “the audacity [to] imagine unimaginable things”, he reflects. And having defied long odds to rise from rural poverty in Nigeria to fame (and notoriety) in Ukraine, returning to Africa is probably easier than the journey he began almost 40 years ago. Even if, as he says, “I’m more Ukrainian than African now.” ■

Christmas Specials | The first age of renewables

How premodern energy shaped Britain

And the lessons for life after

December 19th 2024

Entering Shadow Woods, a coppice just outside the town of Haven in West Sussex, England, is like stepping into a medieval fairy-tale. Before the Industrial Revolution, coppicing, a method of harvesting wood on a multi-year cycle by cutting trees back to a stump, helped meet Britain's energy needs. After the tree, usually hazel, hornbeam or oak, is cut, new shoots spring to life. A coppiced tree looks more like a porcupine than the arboreal lollipop of a child's picture book. Shadow Woods was largely abandoned after the second world war and many of the trees are now "overstood", grown beyond the point at which they would be harvested, shading the ground and preventing the growth of any new saplings. But they have kept their shape. From each of the hornbeams as many as half a dozen thin trunks rise from a thick stump, resembling the crown of some pagan god.

Since early humans first kindled firewood until Britain's Industrial Revolution, energy typically came from renewable sources like wind, water and the sun, not from fossil fuels like coal, oil and natural gas. Vertical windmills were used to grind flour in ancient Persia. Chinese water power pulped paper and hammered iron. The Romans combined their aqueducts with complexes of watermills. All of this was renewable.

In the case of wood, the practice of coppicing made it much more so. An untended ash tree might last a few centuries. There are probably coppiced ash stumps that have endured in Britain for at least a thousand years since they were first harvested. They are living relics from the first age of renewable energy.

The Weald supplied much of the energy for premodern London

The pre-industrial world operated on a lot less energy than the modern one. In the 1560s, during the reign of Elizabeth I, Britain's 3.2m people consumed 18 terawatt-hours of energy annually, according to estimates from Paul Warde, a professor of environmental history at the University of Cambridge. That equates to 10.6m barrels of oil, or slightly more than three barrels of oil per person, less than one-twentieth of what a Briton consumes nowadays. Draft animals, such as horses, provided a little under a third of this energy, and human muscle provided slightly under a quarter (solar power fuelled this muscle energy indirectly, by way of photosynthesis in plants, yielding sugar). Less than a sixth of the energy came from coal, water and wind, in that order. The rest—nearly a third of all consumed—came from firewood.

The Sussex Weald, where Shadow Woods is located, once provided a substantial portion of London's energy budget. For your correspondent, trimming coppiced hazel poles with a billhook, muscle energy feels more like a price that must be paid than a budget that can be spent. "Everything to do with coppicing is simple if you're not frightened of failing," advises Clive Cobie, a coppicer who lives in a self-built wooden cabin in Shadow Woods. An enthusiast for the natural world and an evangelist about the power of mycelium, part of a fungus, to rejuvenate the soil and store carbon, Mr Cobie taught himself the near-forgotten techniques of premodern forest management. Hazel can be harvested for firewood every seven to nine years;

hornbeam, used as the feedstock for charcoal-burning, was on a 20-year cycle. As the tree's stump remains anchored into its root system—and the wood-wide network of mycelium—it should regrow more rapidly than a freshly planted sapling.


Stuart Franklin/Magnum

For all the modern-day appeal of sustainability, the first age of renewable energy was not some agrarian Arcadia. Scarcity, or the fear of it, shaped life and the terrain. The dependence on solar power rooted the economy in the seasons, and in the land to be cultivated. The land, in turn, had to be used for either food or fuel, not both. Hedges, which formed the boundary between one field and the next, could be used for firewood, and were planted with oaks, hazels and hornbeams for coppicing. Mostly, though, in times when people wanted more farmland, that meant giving up fuel. By the time of the Domesday Book, a survey of the holdings carried out in 1086, after the Norman conquest, farmers had cleared much of Britain's wildwood for farmland. Just 15% of the country was covered in woodland, and this would fall by more than half over the next three centuries until the Black Death killed millions and eased pressure on the land.

The Sussex Weald was not torn up for crops. It was little use for farming. The soil in the High Weald, the uplands, sits on sandstone—it is hardly more fertile than gravel. The Low Weald is clay. The area remained thickly forested in the 16th century, making it, for premodern Britain, the Saudi Arabia of forest energy.

Big stick energy

With copious reserves of ironstone as well, the Weald became the centre of the Tudor and Stuart iron industry. The Romans had smelted iron there. At the peak the Weald had around 180 ironworks, making iron for London and eventually armaments for the Royal Navy. The cannons the navy used at the Battle of Trafalgar, during the Napoleonic wars, were smelted there.

Smelting iron used a vast amount of forest energy, in the form of charcoal from wood. The energy- and land-needs were massive. Some 30kg of wood would yield enough charcoal to smelt a kilogram of iron. A Wealden ironworks would probably have needed around 2,000 hectares of wood, covering the equivalent of 5,000 football pitches, to sustain its operations.

Clive Cobie, a modern-day coppicer

From the vantage point of the 21st century, coal's rise and the end of the first renewable era might seem inevitable. Using fossil fuels built up within Earth broke through the "photosynthetic constraint" placed on energy by what could grow on its surface. Energy budgets surged and living standards began their first sustained rise. Yet coal was not a new discovery. It had been known about for millennia and largely rejected as an inferior, choking, fuel source compared with wood. It was confined to limited uses in blacksmithing and the making of salt and lime, for mortar and spreading on fields (to improve crop production).

For economic historians the puzzle is why coal took over when it did and why it did so in one corner of western Europe. Explanations fall into two camps: one stresses the scarcity of renewable energy; the other focuses on innovation and shifting patterns of demand.

Among its many sins, coal made British food awful

Britain's renewable economy was, perhaps, testing its limits by the 16th century as fossil fuels began their inexorable rise. Politicians of the time fretted about wood shortages: in 1581 a statute prevented any ironworks fuelled by charcoal (and thus wood) from being set up within 22 miles of London. Yet politicians worrying about shortages, then as now, are not proof of true scarcity. Prices for firewood in London, already a trading entrepot, were rising as the city's population expanded but this was caused by rising demand rather than shortages. Anton Howes, an economic historian, notes charcoal-burners were able quickly to find new woods to expand to as demand grew. Britain imported firewood from Norway and the Baltic, which combined lower population densities with even more forests. Mr Howes writes that backers of the 1581 law were worried mostly about maintaining a domestic supply of old-growth timber—the sort substantial enough for shipbuilding, not wood for kindling and charcoal. The wood age did not end because they ran out of wood.

The beginning of the end of the first era of renewables was the advent of coal in the English home. Mr Howes notes that coal could be delivered to many places easily, by sea and river. Wooded land near water, where coal was plentifully available, began to be churned up to be used more profitably for crops. Cheap coal began to win out in nearby cities.

Thus began a "domestic revolution", in the phrase of Ruth Goodman, a historian. Coal was quickly adopted, and then adapted to. Wood smoke could find its way out of the crannies of wattle-and-daub houses and small openings of thatched roofs but coal smoke could not. Houses were rebuilt with chimneys to whip away the noxious gases. The “Great Rebuilding” of London in the 17th century, aided by the Great Fire in 1666, turned a wood-powered city into a coal-fired one. Houses changed from being open-plan structures built around a central communal hearth, Ms Goodman notes, to individual rooms with fireplaces built into walls. Tapestries, which would collect coal dust, were dispensed with. Women began to devote more hours to cleaning soot from walls, surfaces and dishes (and less time on outdoor chores like going to the market or ploughing fields). Britain’s medieval cuisine, cooked over the low and stable heat of wood, was replaced with boiled vegetables and baked meat, easier to manage with the hotter and more variable flame of coal. Britain’s reputation for cookery has never recovered.

The renewable era survived longer outside the home, and shaped the Weald in enduring ways. Littered throughout the Weald are lakes and ponds which provide a scenic stop-off for hikers and day-trippers. These “hammer ponds” are not natural features but were made for iron works. Rivers that flow through the Weald’s deep valleys, “ghylls” in the local dialect, were stopped up to build a head of water behind a dam. When the dam was lowered the water would rush out and turn a wheel which would, in turn, blow bellows helping to superheat blast furnaces.

Power to the people

In England the first age of hydropower met its downfall because it was not located where people were. Remote valleys struggled to attract workers and were easily paralysed by strikes; mill owners had to provide schools, shops and churches to lure workers to these valleys. Manchester, rather than Lancashire, became Cottonopolis not because it had better access to energy but because it had better access to labour, according to Andreas Malm, a Swedish historian.

Pre-industrial peoples did not have a notion of “energy” as a fungible, movable thing. It was the invention of the steam engine, in which chemical energy swiftly became heat and then motion, that led engineers and scientists to conceptualise energy as a fundamental, conserved quantity that can take different forms. Energy has since become understood as a commodity that can be transformed, stored, moved about and made useful in new and surprising ways.

Such insights would have been of no use to medieval peasants, who mostly consumed energy when and where nature provided it (wood being an exception). But this knowledge ensures the second age of renewable energy will not be like the first. The challenges of intermittency are being overcome with storage technology. The immobility of renewable sources can be ameliorated by electricity grids. An incipient second domestic revolution is transforming some homes with solar panels on the roofs, induction hobs in the kitchen and a battery pack in the attic.

It will, like previous transitions, transform more than just the energy economies use. The spread of coal changed Britain's landscape as well as its cities. Without their economic value as a producer of fuel the forests were either turned into timber plantations or dug up to become pasture. The mixed-wood hedgerows were ripped out to be replaced with hawthorn, worse as a source of firewood but far better as a barrier to wandering livestock. Coppicers of today are hobbyists who "coppice for nature", mimicking the behaviour of long-extinct megafauna from when the trees evolved. Cutting trees down to the stumps allows light to reach the forest floor and creates new ecological niches.

On September 30th 2024, the day before the start of the traditional coppicing season, Ratcliffe-on-Soar, Britain's final remaining coal-fired power station, closed alongside the coal-fired blast furnace at Port Talbot, a steel town in south Wales. A half-millennium-long interlude in Britain's energy history came to an end. That day wind provided 43.1% of Britain's electricity, biomass 6.0%, solar 1.4% and the little hydropower the country has 0.5%. No smoke billowed from the chimneys that punctuate London's skylines. Its fireplaces have become "attractive period details" to tempt homeowners, like the Sussex Weald's hammer ponds and coppices. Power stations on the southern bank of the Thames have already been turned into art galleries and luxury flats. A new energy economy is once again growing, from the stump of the old. ■

Christmas Specials | The Ivy League rat race

Finance, consulting and tech are gobbling up top students

Are they abandoning their dreams—and does that matter?

December 19th 2024

To understand how America's Ivy League universities see themselves, read their admissions brochures. Leafing through the just-so photos of giggling students on tidy lawns, a vision emerges of sanctuaries for personal growth and intellectual exploration—as much cocoon as ivory tower. The world has come to a different impression. Portrayals of the Ivies dwell on out-of-control woke politics and tented encampments protesting the war in Gaza. The presidents of four Ivy League schools have stepped down since late 2023 after being accused by politicians and alumni of excess sympathy for the latter vision.

But neither image captures the full reality in the Ivy League now. A better place to look is the Whitney, a museum in New York. In September 800 students were hosted there by DE Shaw, a hedge fund, to mingle between canapés and sculptures. The event's goal, attendees say, was to nudge this young and impressionable cohort towards a particular view of success.

Look at where graduates of Harvard, for example, end up. In the 1970s, one in 20 who went straight into the workforce after graduation found jobs in the likes of finance or consulting. By the 1980s, that was up to one in five; in the 1990s, one in four. That is perhaps no shock, especially considering those were boom times for Wall Street. But in the past quarter-century there has been an even more pronounced shift: in 2024 fully half of Harvard graduates who entered the workforce took jobs in finance, consulting or technology.

More than before—more even than when your correspondent entered Harvard less than a decade ago—life on campus feels like a fast track to the corporate world. Around the same time as the DE Shaw party at the Whitney, Harvard ran an activities fair for new freshmen. Hundreds of clubs laid out their wares: the beekeepers, the bell-ringers, the Model UN team.

But as the freshmen wandered between stalls, they would soon clock a pecking order. Among the most coveted clubs were pre-professional groups in consulting, investing and the like. Several admit only a single-digit percentage of applicants, conferring a cachet that the clubs like to compare to the selectivity of admission to the university itself: the "5% of the 5%". The fortunate few become not "members", in the parlance of some clubs, but rather "partners" or "managing directors": less dorm room, more Wall Street.

"They're drawn to exclusivity, like a firefly being drawn to a lantern," says Luke (a pseudonym), a student in his fourth year who runs one such club. Those in Luke's club can expect to make connections at investment banks like Goldman Sachs and hedge funds like Citadel. "We have alumni at all the big names."

More than before, life on campus feels like a fast track to the corporate world

The pre-professional clubs are merely the most visible part of a pervasive process of acculturation, one that slowly reshapes many students' worthy ambitions to make a difference, ill-defined and unrealistic though they may be, into a plan to get a management-consulting internship. Annushka, a second-year student, recalls an "overwhelming flood" of groups pitching a career leg-up to new arrivals. "You're constantly being bombarded," she says. She resisted the temptation to join, but did attend informational sessions.

Luke, by contrast, arrived at Harvard expecting to focus on politics and policy, but did not stick with it. He pivoted to the more concrete and quantifiable world of finance by the start of his second year. That was quite late in the game, by his reckoning. Even he is astonished at how early the career-hustling starts: he gets calls from students who have not yet started their first year. "I'm like: 'I will not talk to you, go explore, do other things, enjoy your fucking freshman year'."

It was not ever thus. Twenty years ago, says Deb Carroll, the head of Harvard's careers office, summer internships (often served after the third year at university) might be secured just a few months in advance, even in competitive fields like investment banking. These days, banking internships start the hiring process two years out. Some students already have plans for the summer of 2026. "It's really unfortunate", says Ms Carroll, "but it's not something that we can stop." Students at Ivies feel the crunch; at Yale some second-year students bid for tech internships meant for third-years by claiming they will graduate early.

All this raises the question of what a university is meant to be. Ivy League schools exist in the imagination as places to search for one's calling, whether it is to become a playwright, a cancer researcher or some other surprising possibility. Or, yes, a Wall Street banker (a few people know the suit fits them from an early age). Today corporate recruiting has become a dominant feature that shapes campus life from the moment students step into it. This careerist atmosphere may turn off some students like Annushka and draw in others like Luke. Either way, their experience of the university is shaped by recruiting.

A female classmate of Luke's, who interned with him at an investment bank last summer, met your correspondent at a Scandi-chic café near Harvard Square, the sort of place where a latte costs $8. Outside, protesters handed out flyers saying that a student had been fired as a barista for trying to set up a union.

"I went into college not really knowing what I wanted to do, hoping inspiration would strike," she says. "So I fell into the finance thing." She may stay in it for no more than five years. She suspects she would rather be a teacher. But she asked not to be named out of fear of hurting her prospects on Wall Street.

Even the protests against the war in Gaza cannot escape the recruitment drive. Students demanding that universities divest from firms linked to the war might seem to clash awkwardly with the more buttoned-down would-be partners in Luke's club. But these are not always different people. Some student protesters cover their faces with masks or keffiyehs in part to ensure that compromising pictures do not drift into the hands of would-be employers. (Some opponents of the protesters, such as Bill Ackman, a hedge-fund boss, have urged recruiters not to hire them).

Just keeping my options open

Top firms capitalise on young people's desire to avoid risk, which evidence suggests is greater than it should be. Isaac Hacamo and Kristoph Kleiner, economists at Indiana University, have studied "forced entrepreneurs". Students who graduate from top colleges during periods of high unemployment start more companies. These firms are also more likely than average to survive, to receive venture-capital backing and to get acquired. The study suggests that, outside recessions, high-skilled graduates are taking too little risk.

That is a lot of pressure for students. But they are young enough to change their minds. An intern at a Silicon Valley venture-capital firm today will not necessarily be a tech bro tomorrow. In 2011 Marina Keegan, a Yale student, wrote an essay lamenting the lost potential of classmates who were mulling jobs as bankers or consultants: "I want to watch Shloe's movies and I want to see Mark's musicals and I want to volunteer with Joe's non-profit and eat at Annie's restaurant and send my kids to schools Jeff's reformed."

Tragically Keegan died in a car accident a few days after graduating. More than a decade on, though, your correspondent perused the LinkedIn profiles of the people she had fussed over. Today, each is now working in, or fairly close to, the field she had hoped they would end up in. Strivers nowadays may find their true calling too—even if it is not necessarily the consulting job they land while at Harvard. ■

Christmas Specials | The titanic Triassic

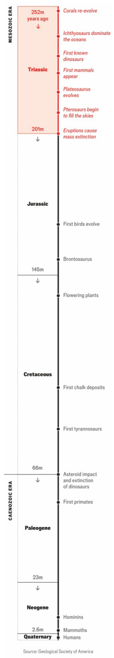
Of all the geological periods, the Triassic was the most fabulous

In 50m years it spawned dinosaurs, seafood, geopolitics—and our distant ancestors

December 19th 2024

Armando Veve

Everything has its pecking order, and geology is no exception. The cocks of the rocks are the big, swaggering periods of the past that fill books, television programmes and natural-history museums. The Cambrian, with its metaphorical explosion—the evolutionary burst that put animals in life's pole position. The Cretaceous, with its real one, when a collision with a space rock slaughtered 70% of the species then around. The Permian, the Great Dying at the end of which dwarfed even the Cretaceous slaughterhouse. The Carboniferous, which bequeathed to humans the Faustian legacy of coal, permitting the industrial revolution at the cost of global warming. And the Jurassic, with its theme-park cast of dinosaurs (though most of those in the movie were actually from the Cretaceous).



Lesser periods live in the shadows of these behemoths. The Ordovician, Silurian and Devonian have their points of interest: fish armoured like medieval knights, giant sea-scorpions, and the first, floundering attempts by backboned creatures to walk on land. But little of this fires the imagination. Nor, surprisingly, does the Caenozoic, the so-called age of mammals. Mammoths and sabre-tooths score points with some. But the allure of Brontotheria (extinct rhinoceros-like beasts) has never matched that of *Brontosaurus*.

And then there is the Triassic. The poor, neglected Triassic, sandwiched between the deadly Permian and the popinjay Jurassic like Cinderella between the ugly sisters. This needs to change. For the truth is that, the Cambrian animal-factory aside, the Triassic was the most important geological period of all. It was the moment of life's reset, a festival of evolution which prepared the stage not only for the age of the dinosaurs, but also for the then-far-distant mammalian takeover that led eventually to humans. It filled the land with giants, the seas with monsters and the skies with dragons. And, like the Carboniferous with its coal, it left a legacy that haunts humanity to this day.

The history boys

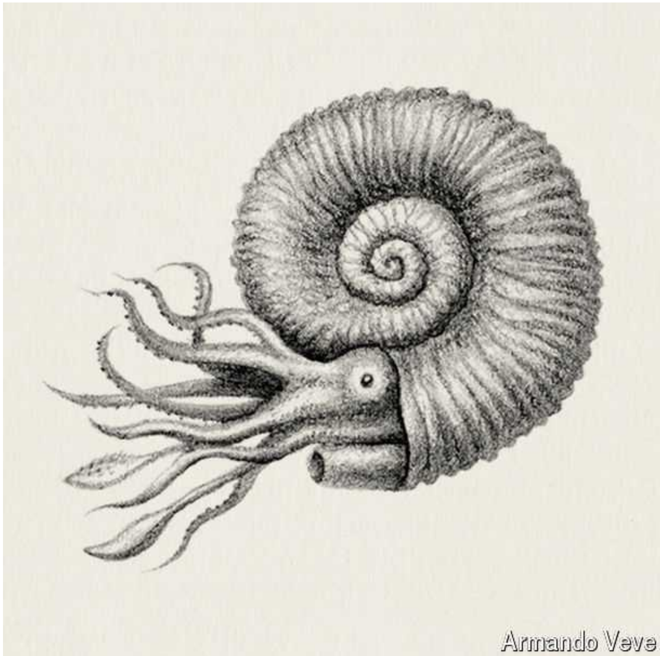
The Triassic is a tale of two histories. One is its natural history, begun after the Great Permian Dying, 252m years ago, when, as happens from time to time, plate tectonics brought Earth's continents together into a single mass—this time called Pangaea. The Triassic's other history, though, is human.

It began in 1834, with a German civil servant called Friedrich August von Alberti (his official title was "salt technician"), who realised that three rock types widespread in southern Germany—a sandstone, a limestone and a marl—were always found together, with their strata in that order. He proposed that they thus formed what was then known as a geological "system".

With Teutonic literalism, the name he suggested for his discovery reflected that triune nature. Tri-assic. And the period (as it is now known, since the realisation that Earth is far older than the 6,000 years implied by the Bible, and each system of rocks corresponds to a huge hunk of time) has been lumbered with this unmemorable moniker ever since. Other system namers borrowed mountain ranges (Jurassic), Celtic tribes (Ordovician and Silurian), relevant places (Cambrian, Devonian and Permian) or even pertinent rocks (Carboniferous, after coal, and Cretaceous, from the Latin for "chalk"). The Triassic got lumbered with a number.

A poor start. What really did for its brand recognition, though, came later, when two Americans, Edward Drinker Cope and Othniel Charles Marsh, turned palaeontology into a branch of showbusiness.

These scientific contemporaries of P.T. Barnum, who detested each other, combined to plunder the newly railwayed western territories of the union of their fossil treasures, to the benefit of fashionable east coast museums. In doing so they pretty-much defined public perceptions of palaeontology, and that definition boiled down to one word: dinosaurs.



Ammonites— common "starter" fossils for budding palaeontologists— were abundant in Triassic oceans

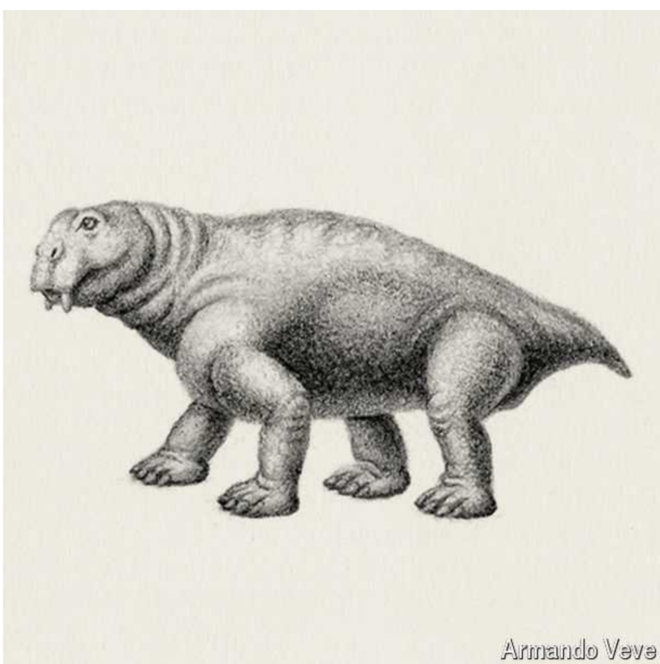
Between them, Cope and Marsh named and publicised most of the dinosaurs whose names are now familiar: *Allosaurus*, *Brontosaurus*, *Diplodocus*, *Stegosaurus*, *Triceratops*. Others (*Ankylosaurus, Tyrannosaurus*) were discovered shortly afterwards by their imitators. The dinosaur brand has been so successful that even species Cope and Marsh discovered that are not dinosaurs (*Pteranodon*, a flying reptile, and *Dimetrodon* and *Edaphosaurus*, two Permian animals with giant sails on their backs), are often misdescribed as such.

Ironically, one of the first real dinosaurs unearthed by geologists, *Plateosaurus*, was a Triassic beast (it was discovered in Germany in 1834, the year von Alberti gave the period its name). But the great American bone rush of the 1870s, '80s and '90s failed to produce any more. Partly, that was geological bad luck. North America had few good Triassic sites for Cope and Marsh to work. But partly it was because there are actually few Triassic dinosaurs to find. Only in the most recent rocks of the period do they show up, for they were latecomers to the Triassic party.

Trilobites would not have been tasty. All shell and legs

Back to Pangaea. Its coming together shrank the amount of coastline, and therefore of continental shelf—the ocean's most biologically productive part. It also put a huge amount of land beyond maritime influence, and thus beyond rainfall. The result was a giant desert in the supercontinent's interior. Then, to finish things off, Earth burped. Huge fissures opened in what is now Siberia, spewing out more lava than any other eruption known to history, along with dioxides of carbon and sulphur, gaseous drivers of global warming and acid rain, in quantities dwarfing anything humanity might ever do to the atmosphere.

When it was over, so little was left of the old world that evolution had to start again. Gone from the oceans were those stalwarts of the Cambrian, the many-legged trilobites. Gone were the giant sea scorpions. Gone were half the fish. Coral reefs were wiped out. Snails, ammonites, sea lilies and sea urchins got through, somehow. Single-celled critters were affected, too. Foraminifera, which make calcite shells to house their unicellular bodies (and can thus be tracked as fossils) lost 85% of their species. If they had vanished, the Cretaceous would have a different name, since such shells are the main ingredient of chalk.



Synapsids, of which mammals are the last representatives, came then as now in all shapes and sizes

Much changed on land, too. The synapsids, a group of vertebrates which dominated the Permian (*Dimetrodon* and *Edaphosaurus* were two of its showier members) were culled. So was the most abundant terrestrial group of all, the insects (though beetles survived). Opportunity was there, for taxa that could grab it.

The blind sometimes see more than the sighted. That is surely true of Geerat Vermeij, a Dutch palaeontologist who lost his vision at the age of three. Dr Vermeij who, at 78, still works at the University of California, Davis, is responsible for the Mesozoic marine revolution. Not literally, but he invented the term.

Dr Vermeij is an expert on marine molluscs, the shells of which he can study in detail by touch. In the 1970s he realised that those of some sea snails he was examining had become sturdier over the course of the Mesozoic era (the Triassic, Jurassic and Cretaceous periods), in response, presumably, to shell-crushing and shell-boring predators becoming more effective. That got people thinking about just how much things oceanic had changed from the days of the Palaeozoic (the era which lasted from the Cambrian to the Permian). But to nail down the details required more fossils. And two sites in China provided them.

The Meishan beds in Zhejiang province, identified in 1932 and studied in detail since the 1990s, straddle the Permo-Triassic boundary and contain layers of volcanic ash which permit the precise radiometric dating of their strata. In them, the catastrophe is writ large. The sea temperature rises suddenly by 10°C (this can be measured by looking at the ratios of oxygen isotopes in certain minerals). The water becomes both acidic and anoxic. Biodiversity crashes.

The Luoping beds in Yunnan province, meanwhile—laid down a mere 10m years later and first reported in 2008—speak of a flourishing ecosystem, filled with snails, bivalves, squid-like molluscs called belemnoids and fish. Corals, too, re-evolved about now. The revolution, in other words, got going fast.

In this context Mike Benton of Bristol University, a Triassic expert who helped Chinese scholars during early excavations of the Luoping strata, notes one crucial consequence of the Triassic for humans: seafood. Palaeozoic marine invertebrates such as trilobites would have offered modern gourmets little. They were all shell and legs. But the Triassic, as Luoping witnesses, saw the burgeoning of bivalves (think oysters, clams and scallops), decapods (lobsters, crabs and shrimp), shell-less “coleoid” cephalopods (octopus and squid) and, for sushi lovers, sea urchins.

Tortoises did a reverse ferret

The Luoping strata also illuminate another aspect of the revolution, the return to the ocean abandoned by their Devonian ancestors of landlubbing vertebrates, their limbs converted to paddles. First were the ichthyosaurs, reminiscent of modern dolphins. But they did not have the sea to themselves for long. They were soon joined by thalattosaurs, reminiscent of ichthyosaurs in shape though unrelated to them, by turtles and, at the very end of the period, by plesiosaurs—reminiscent of no living creature unless you believe the Loch Ness monster is real (full disclosure: it isn’t).

Of these, only turtles now survive. But in their prime, the Triassic’s marine reptiles matched any sea creature alive today, the great whales included. *Shonisaurus sikanniensis*, a late-Triassic ichthyosaur, for example, is reckoned to have exceeded 80 tonnes. This is not far short of a modern blue whale.

It is on the land, though, that the Triassic’s effect on the future is most apparent. All terrestrial vertebrates now alive are members of one of six groups that originated then. Turtles’ offshoots the tortoises are one such (for this group did a reverse ferret in which, having taken to the briny, some members then returned to dry land). The others are the frogs, toads and salamanders; the lizards, snakes and tuataras; the crocodiles and their kin; the mammals; and the theropod dinosaurs (though modern members of this group are generally referred to as “birds”).

These were the eventual winners. But their staying power, with one exception, might not have been obvious to a contemporary zoologist. That exception is the crocodiles. Their relatives in the Triassic were abundant, and included creatures Cope and Marsh would have killed to have in their collections.

Modern crocs can be big. The largest on record was just over six metres long. But Triassic crocodylomorphs could easily outdo that. *Prestosuchus* reached seven metres from snout to tail, as did *Saurosuchus*. *Fasolasuchus* was bigger still. It could grow up to ten metres in length—as long as Marsh's *Allosaurus*. And what is big is heavy. Some *Fasolasuchus* specimens are reckoned to have weighed three tonnes when alive—the same as a female Asian elephant and more than most estimates for *Allosaurus*. They would not have outweighed *Tyrannosaurus*, but they were still probably the largest non-dinosaur land predators of all time.

Triassic pterosaurs had tails. Later ones, such as *Pteranodon* from the Cretaceous, were often tail-less

They could, moreover, support their weight permanently on their legs in the way that modern mammals do, allowing them not only to walk, but also to run—unlike today's crocodiles, which have to adopt a special, temporary posture called a "high walk" to achieve anything similar. Not surprisingly, the large herbivores of the period were well armoured. Aetosaurs were also crocodylomorphs—but plant-eating ones. They may not quite have matched their meat-eating contemporaries for size (the biggest, *Desmatosuchus*, reached six metres long and weighed half a tonne), but they were impressively fitted out with plates, and sometimes also with spines, like the dinosaur *Ankylosaurus* and its kin.

In the skies, meanwhile, a new group of reptiles took off: the pterosaurs. These were the first vertebrates to fly, beating the dinosaurs (or birds, if you insist) by 50m years. And among those smaller flying animals the insects, beetles, which had boomed in the Triassic, were joined by wasps, flies and moths. These four groups (with due allowance for wasps giving rise to ants and bees, and moths giving rise to butterflies) now number between them about 90% of known insect species, and thus 80% of known animal species on Earth—another testament to the Triassic's long reach.

The dinosaurs and the mammals, though, were still hiding in the shadows. The early discovery of *Plateosaurus* turned out to be a fluke. Even once they had appeared, Triassic dinosaurs were not that important. They probably would not now get a second glance from palaeontologists were it not for their subsequent history. Likewise mammals, a minor group of synapsids, also from the late Triassic, would scarcely have a look-in were human beings not their descendants.

It took the randomness of two further mass extinctions to propel these groups into the limelight. One, as is well known, involved the dinosaur-destroying asteroid collision which ushered in the Caenozoic, meaning that mammals had to scurry all the way through the Jurassic and Cretaceous before they hit the jackpot. For dinosaurs, though, the jackpot came fast.

The restless Earth

Nothing lasts for ever, even a supercontinent. Convective plumes of hot rock rise continually from the mantle below Earth's crust, tearing at the continents and carrying them around. Some 201m years ago such a plume tore a huge crack, the precursor of the North Atlantic ocean, across Pangaea. Out welled more lava, CO_2 and sulphur dioxide. Not as much as when the Triassic began, but enough for a smaller mass extinction. Von Alberti's period had run its course.

The crocodilians did badly. The synapsids, mammals aside, did worse. But the dinosaurs, along with frogs, lizards and tortoises, sailed through. And the rest is history—which, in its natural as well as its human version, is written by the winners.

Nothing lasts for ever, even a supercontinent

Biology, though, is not the Triassic's only legacy to the modern world. For, with the breakup of Pangaea came the period's final, Parthian shot. The mountainous region which stretches from Anatolia to Afghanistan, Parthia (as Iran, or Persia, was once known) included, began to rise in the late Triassic when a small continent now dubbed Cimmeria collided with the disintegrating supercontinent, squeezing up the seabed sediments between them.

The Cimmerian orogeny, as this mountain-building moment is called, has created a natural barrier fortress along the southern margin of what is now Earth's largest continent, Eurasia, dividing Asia's heartlands from Africa and Europe. This barrier—which includes the Anatolian plateau, the Iranian plateau and the mountains of Afghanistan—is difficult to pass and difficult to conquer. Together with its more recent, eastward, extension, the plateau of Tibet, it has proved to be history's puppet-master. It has kept humanity's three great civilisations—China, India and the Mediterranean-focused world of the Middle East, north Africa and Europe—apart, and allowed them, for good or ill, to develop separately, with (until recently) little intercourse between them.

Woe betide any who would conquer it, too. Alexander the Great tried, but his empire vanished on his death. The Umayyad Caliphs tried, also. Their attempt ended equally in failure. In the age of European empires, Russia's came shuddering to a halt along the orogeny's northern margin, and Britain's along its eastern one. Even mighty America has been humiliated by the Cimmerians. Only Persia, expanding from the region's centre rather than invading from outside, has ever truly mastered the place. And that was briefly, two-and-a-half millennia ago.

By a curious coincidence, the span of time that has passed from Persia's rise until now is almost exactly a hundred-thousandth of that since the Triassic began. The history of man is but an eyeblink compared with that of Earth, and humans will eventually pass. How that passing happens, though—with a whimper or a bang—may determine whether the Triassic's legacy continues, or is at last replaced by some scurrying, half-regarded extinction-surviving creatures that fortune's dice have favoured. ■

Christmas Specials | Really cool jobs

The harsh economics of the Arctic

The world craves polar minerals. But who wants to work in a frozen wasteland?

December 19th 2024

As if the snow and the cold and the dark weren't bad enough, a coyote sneaked into the cooking tent and chewed through the camp's electrics. It blew the fuse on the fridge-freezer and ruined months' worth of food. The three geologists who were living in the camp, just off the Dempster Highway, an ice road into Canada's Northwest Territories, had to get a new generator. That meant a week-long round trip to the nearest town, Whitehorse, 900km away.

Hunting for Arctic minerals is rough, risky work. Any slip with heavy machinery, and medical help may be a three-hour flight away, on a plane that can't take off in a blizzard. It is also lonely. Nathan, one of the three geologists, works 28 days at a stretch studying a zinc deposit. Lack of light saps the spirits. In November, when *The Economist* visited, the camp was snatching three hours of watery sun a day. “I guess there aren’t many guys who would like it,” says Nathan.

Governments and investors are increasingly excited about the Arctic. Its seas and tundra contain oil, gas and a host of minerals critical for green energy and modern armies. It holds the biggest known deposits of titanium (in Siberia), plus huge reserves of palladium (Norilsk, Russia) and iron ore (Nunavut, Canada). Until now these metals have largely remained in the ground, not because people did not know they were there, but because it was too costly to extract them.

But climate change and retreating ice are making it “much easier” to mine in the far north, says Mads Fredericksen of the Arctic Economic Council, a lobby. The Arctic is now 0.75°C warmer than it was a decade ago. Between 2013 and 2019, summer ice receded by 17% and shipping increased by 75%. By 2035 there may be no ice cover left in the Arctic Ocean in the summer.

Geopolitics lends urgency to the hunt. All the big powers want to reduce their dependency on China for “rare-earth” metals, tiny quantities of which are vital for everything from microchips to sonar systems. Billion-year-old solidified magma chambers under Greenland contain not only the West’s biggest deposit of rare earths but also the northern hemisphere’s biggest stores of nickel and cobalt, essential for batteries.

The atmosphere was frenzied at the most recent annual Arctic assembly, a talkfest for governments and investors held in October in Reykjavik, Iceland’s capital. Investors floated ideas for new mines. Officials from Greenland were so besieged by mining honchos that they barely had time to eat their canapés. Speculation is rife that Donald Trump, who once suggested that America should buy Greenland from Denmark, may revisit this improbable idea.

Yet extracting treasure from the top of the world is not simple. The hardest thing is persuading people to work there. Pay must be sky-high to compensate for the hardship. A blue-collar worker in the North American Arctic can expect to earn five times the average wage in Vancouver, according to Dalhousie University. A mechanic at Mary River, an iron mine on Canada's Baffin Island, says he earns $170,000 a year—more than three times what he would make in Quebec.

The farther north you go, the harder it gets. Picture the Arctic Circle itself, which has a radius of 2,000km. In the 400km-wide band just south of it, which is not quite so dark in winter, there are 124 operating mines and 9m residents. Inside the circle, there are a lot more minerals, but just 30 mines. Most of the circle's 4m residents support themselves by hunting (caribou and seals), farming or drawing a government paycheque. Firms that want to dig or drill must typically import a workforce from thousands of kilometres south.

Early Arctic explorers routinely died of frostbite or scurvy, or were reduced to eating their own boots. Those days have passed, but in 2024 miners died in rock slides and floods in Russia and a plane crash in Canada. The number of people falling through melting ice sheets has also risen.

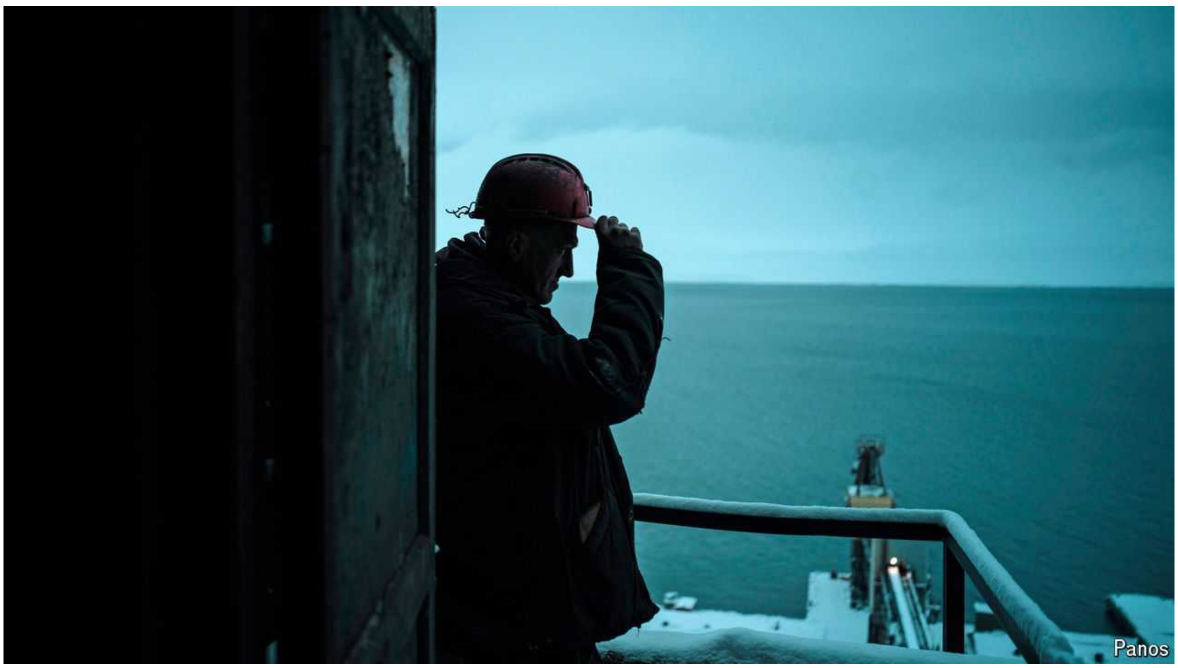
No light, no warmth, no women. Good wages, though

Good employers strain to keep workers safe, which is costly. Housing must often be designed so that living quarters are warm but the foundations are cool, so as not to melt the permafrost (frozen tundra). Softening it can trigger slumps (a kind of landslide). In August the Batagay Crater in Russia, the world's largest slump, became visible from space. Since opening in the 1960s, it has swallowed surface land the width of 14 Giza pyramids (roughly 3.2km).

The darkness gets people down. The sun sets on Mary River at the end of November, and does not rise until the end of January, when temperatures fall to minus 60°C. "Some guys", says Alan, a worker, "just get more and more deflated." Some mines have installed pools and mess rooms to fight the claustrophobia and loneliness. But few miners use them, says Alan, as long shifts leave little time for much other than sleeping and eating. After 12 hours of isolation, another worker says, "You can't remember how to talk to people."

The pseudo-towns that house miners across the Arctic have a strict no-alcohol policy to avoid accidents. Staff are searched for contraband at the airfield. But “a little bootlegging” happens anyway, Alan says.

Arctic employers would love to attract more female staff, but few want to work in a frozen wasteland. Agnico Eagle, Canada’s biggest mining company, reckons only 15% of its workforce are women. This normal for the industry—the atmosphere in Arctic camps is rather macho. Kathy Lane, a woman who used to work at Deadhorse, an oil complex in Alaska, is reluctant to get into specifics. “Let’s just say everyone knew who you were, but the men got to stay anonymous.”


Panos

Commercial mine workers are flown in and out every fortnight. (Alan spends his time off in Florida, gorging on sunshine.) The productivity of fly-in, fly-out workers is low, however. Canadian Arctic construction workers are a third less effective than their counterparts down south, found a study in 2023 from the University of Western Australia. This may be because the lifestyle makes them glum. And perhaps also because they are under-managed. Since it is impossible to bring families to the camp, almost no one’s boss lives on site, so easy fixes often go unnoticed.

The men in exploration camps, who take samples before commercial mining begins, are the most isolated of all. Nathan, Connor and Eg, the three geologists with the coyote problem, were dropped with three helicopter-loads of kit at a camp in Canada's Northwest Territories in March. They have barely left since.

Between the coyote, the storms and the summer wildfires, there have been plenty of bad days, costing their employer a bundle of cash. But on a good day, the wilderness is glorious and the mood is lively. The men control their own timetable, unlike at a tightly scheduled mine, and booze is allowed. Working here is a little more dangerous, and a little more fun.

Many of these men (and every explorer *The Economist* met was male) have been bouncing around remote spots for a long time. "Greenland, Australia, Zambia, Congo," says Connor, "and now here." They bring their own kit, and can make $300,000 for a long season. Unlike mine workers, few have families.

All eight Arctic governments prop up polar business. The state is the biggest employer in Canada's three northern provinces, and public subsidies outstrip mining revenues. Greenland gets two-thirds of its income from the Danish state. Russia subsidises a coal mine to buttress its spurious claim to parts of Svalbard, a Norwegian archipelago.

The Arctic resource rush has, unsurprisingly, affected the nearest towns. In Whitehorse, the capital of Canada's Yukon province, property prices have soared as outsiders pour in. Mining firms, eager to soothe the local First Nation (indigenous) population, offer lots of jobs but find few takers. At a job fair run by Kwanlin Dun, a First Nation group, only 20 jobseekers turned up to meet 200 would-be employers. Most young locals already have jobs, says Adrienne Hill, a First Nation spokesperson, and few think the trade-off of more money for grim working conditions is worth it.

Besides, as in previous gold rushes all over the world, there is money to be made providing services for miners, from selling shovels and steaks to leasing helicopters and tow trucks. There is an old Greenlandic saying: "We do not care if they find anything, as long as they keep looking." They surely will. ■

Christmas Specials | Chinese calligraphy

What a fourth-century drinking game tells you about contemporary China

China's obsession with calligraphy colours its view of itself

December 19th 2024

Some time in the fourth century, a politician called Wang Xizhi gathered 42 friends at the beautiful Orchid Pavilion on Mount Kuaiji in what is now eastern Zhejiang province in China. The men floated lotus-leaf cups filled with rice wine down a stream. When a goblet stopped, the nearest guest had to drink and write a poem. The drunken Wang was delighted at the ensuing literary outpouring. So he wrote a preface to the collection. In 324 characters Wang, who was acclaimed for his skill in calligraphy, expressed joy at the ensemble and melancholy at such fleeting happiness.

Calligraphy has for two millennia been considered the highest form of art in China. Wang's screed is one of the finest and most famous examples. The original, completed in 353AD, is long vanished. But Wang inspired others, as he was inspired. Many duplicated his preface, imitating his brushstrokes precisely. One came up at an auction at Sotheby's in Hong Kong in October, consisting of copies by Emperors Renzong and Gaozong, Song dynasty rulers from the 11th and 12th centuries. The endless iterations of the Orchid Pavilion preface are both an emblem of Chinese culture, and a lens through which China views its past.

In imperial China, prowess with a brush was a mark of refinement, like piano-playing in Victorian Britain. But it was also a sign of moral strength. "Beware a man whose writing sways like a reed in the wind," Confucius, China's most famous philosopher, cautioned in 500BC. But the test was not just of one's handling of a brush, but of imitating the master. In this, as Robert Harrist junior of Columbia University puts it, Chinese calligraphy is "copies, all the way down".

Replicating classic works showed your allegiance to Confucian values, key among them accordance with hierarchy, at the top of which sat the emperor. Brush work was part of the imperial exams for prospective government officials. The Orchid Pavilion preface was often the subject. Its use as a symbol of loyalty extended to the highest office. In the scroll being auctioned, Gaozong's work was a gift to a senior minister, to show that, even as the Song dynasty crumbled and his territory shrank, he was the legitimate heir to its history.

Each successive owner of the scroll stamped their possession on the front of the artwork with a crimson seal. What might be considered vandalism on a Western painting merely adds to the price of this one. The value ascribed to having a visible chain of owners is a further indication that, when it comes to calligraphy, continuity and conformity are prized over originality.

Many artefacts and practices of imperial rule were destroyed after the communists came to power in 1949, but calligraphy endured. Mao Zedong was proud of his own hand. His four-character calligraphy still stands at the masthead for *People's Daily*, the flagship party mouthpiece. He weighed in on academic debates about Wang's Orchid Pavilion preface. In fact, the Cultural Revolution was arguably the heyday of popular calligraphy. Red guards plastered city streets with posters daubed with characters denouncing fellow citizens, and brush shops thrived.

Strokes of fortune

The importance of calligraphy has only grown, even beyond the mainland, where China is eager to enhance its soft power. When Erin Chan was growing up in Hong Kong, in the 1980s, learning English was the passport to success. Ms Chan says she "did not dare" to tell her friends that she loved drawing characters. These days her passion stands her in good stead. She runs classes for students of all ages at the Pinzi Calligraphy Studio, and teaches in schools. Why is the craft in fashion now? Parents are "very realistic", she says.

The revival or invention of traditions often reveals much about the anxieties of the present. As China's leader since 2012, Xi Jinping has transformed calligraphy from an art form to a cultural practice that conforms to and boosts the version of the country's history promoted by the Chinese Communist Party (CCP).

Today children in Chinese schools must study calligraphy from age six to fifteen. Lessons are called art classes, but self-expression and creativity are discouraged. In 2018 students taking the *gaokao*, China's competitive university-entrance exam, stopped getting bonus points for maths, sports and science. They get extra credit only for art, which includes calligraphy.

The elevation of calligraphy is part of a wider government-backed drive to build what Mr Xi labels "cultural confidence": a pride in being Chinese that unites people and presents the CCP as the ultimate defender of China's unique qualities. The state broadcaster launched a popular national programme, "Chinese Spelling Hero", in which children paint complex characters. An adult version also aired. Government-sponsored "art" competitions offer cash prizes.

Calligraphy is used to promote unity outside mainland China, too. In September the CCP staged a mass calligraphy event in Hong Kong for people to express their "heartfelt blessings…for the great motherland". In a brazen denial of the CCP's destructive history, Mr Xi is reigniting Chinese traditions to secure the party’s role as “faithful heir” to China’s glorious past and as a protector of its uniqueness against “foreign forces”.

The CCP presents calligraphy as an enduring sign of nationhood. After the fall of the Qing, China’s final dynasty, in the early 20th century, some intellectuals proposed abandoning pictographic writing, saying that it held the new nation back from advancing in science and logic. They failed. The 8,000 characters used in mainland China have been simplified since 1949, but have stuck. Students still practise the first character of Wang’s preface, *yong*, “forever” (pictured). .

And at the Man Luen Choon art-supply shop in Hong Kong, many items would be familiar to Wang. They include the “four treasures” of Chinese calligraphy: brush, paper, inkstone and ink. Most of the ink on sale is still black, as in the fourth century. Beside brushes made from goat-beard, rabbit hair and “auspicious dragon wolf” sit hard, weasel-hair wands like the one Renzong would have used a thousand years ago.

Replicating classic works showed your allegiance to Confucian values

But the CCP’s insistence that calligraphy reflects Chinese unity is a revision of the past. For most of their history, those who live in today’s China spoke hundreds of mutually incomprehensible dialects and languages. Steven Zuo, an expert on Chinese paintings at Sotheby's, notes that Wang's preface, if recited by someone in Song territory, would have been unintelligible to someone from elsewhere in the empire.

Chinese script was used by scholars to communicate because they would otherwise have been unable to understand each other. Until the mid-20th century, the written language, including all forms of calligraphy, replaced a shared spoken tongue, as Latin did in medieval Europe. And like Latin, calligraphy was inaccessible to most. When Mao proclaimed the People's Republic, only 20% of people in the country were literate, maybe less, at a time when 97% of Americans and Britons, were and 49% of Brazilians.

The presentation of writing as culture in China has led to an unusual emphasis on its importance to claims about national heritage. Mr Xi boasts of "5,000 years of unbroken Chinese civilisation". Yet the earliest inscriptions date from the Shang dynasty, around 1600BC. Trying to find the oldest records, the state has ploughed money into archaeology, particularly in the past decade. No such traces have been uncovered.

That has left the CCP with two problems. First, the accolade for the oldest writing goes to the Sumerians of ancient Mesopotamia (now Iraq), where cuneiform script was used in around 3,200BC. The second, deeper problem, is that writing is considered a fundamental part of what denotes a civilisation: without earlier records, the party's claim of 5,000 years looks wobbly.

The answer has been to change the definition of civilisation. The CCP has done this before. "Democracy" means the party, which perfectly represents the people. "Human rights" means economic development, not freedom. "Civilisation" has been given the same treatment. In September a CCP-sponsored exhibition entitled "The Origins of Chinese Civilisation" opened in Hong Kong. "What is civilisation?" asks the opening text. Its answer rejects the "international academic criteria" based on "writing, metallurgy and cities". Instead it offers "the Chinese criteria for defining civilisation", which includes population, social stratification and the emergence of class. Chinese academics have made similar arguments.

In Hong Kong bids for the Song-dynasty scroll reached HK$95m but it did not make its reserve price. A private buyer may nab it. Across the city the M+

gallery is showing the work of Qiu Zhijie, an artist from Fujian, replicating the Orchid Pavilion preface in a video installation. He copies it a thousand times on a single sheet of rice paper. As Mr Qiu's brush progresses, the text becomes illegible, "losing meaning and historical significance": a true character statement. ■

Christmas Specials | The Japanese art of child-rearing

Why do small children in Japan ride the subway alone?

The pluses and pitfalls of the world's most disciplined primary schools

December 19th 2024

Why does Ohtani Shohei, a Japanese baseball star, pick up litter after games? Why do Japanese people queue so politely, and wait for green lights before crossing the road? Why, in short, is Japan so orderly? Some say the answer lies in its primary schools.

As the final bell rings, a flurry of six- and seven-year-olds dash out of class at Minami Ikebukuro Primary School in Tokyo: hats on, water bottles flying. Four girls are left behind; it's their turn to clean up. They pull child-sized brooms from a cupboard and get to work. Four brushes knock together as they gather paper shreds and dirt. "It always gets dusty here," says Mariya, pointing to grooves in the floor. The others rush over to help. By cleaning, children learn not to make a mess in the first place, says Kohashiguchi Megumi, the teacher. They also learn to be egalitarian: no, "Oh the caretaker will clean it up later."

At first, small children "act wild, like monsters!" says Satou Hiroshi, the genial head teacher. "Our job is to prepare them to enter society" by teaching them to collaborate, take initiative and treat everyone equally. He calls it *hito-zukuri*, the art of making people.

The results are impressive. Not only do Japanese children do well academically; they also show remarkable independence at a young age. Six-year-olds walk or ride the metro unaccompanied to school. (It helps that the country is unusually safe.) Sugiura Kouma, seven, walks the ten-minute route daily. "I get nervous because he has to cross a main road, but people help him," says Hiroki, his father. A Japanese reality show features toddlers going to the shops on their own to buy fishcakes. Contrast this with the hysterical safetyism sometimes seen in the West, where many parents are convinced something terrible will happen if they stop hovering over their children for an instant, and where governments sometimes act as if this were true. In October Brittany Patterson, a mother in the American state of Georgia, was handcuffed and arrested because her 10-year-old was seen walking calmly to the town less than a mile from his home.

Your correspondent takes a particular interest in Japanese education: her children attended pre-school in Tokyo, when she was *The Economist*'s bureau chief there, and are now at a Japanese school in Mexico. Over the years, she has seen both the strengths of the system, such as imbuing children with self-discipline and consideration for others, and its flaws, such as excessive conformity. This article stems, in part, from the debate within her family about how long to stick with Japanese-style schooling. To assess the system fairly, she went back to Japan to investigate.

Six-year-olds walk to school on their own

Japan's approach dates back centuries. During the feudal Edo period (1603-1868), the samurai class set up schools to train literate, ethical warriors. Schools in temples trained the peasants; this may be where the practice of kids cleaning classrooms began. In the 19th century, after the shock of contact with the industrialised West, education was centralised and geared to modernisation. As Japan turned to militarism in the 20th century, schools promoted imperial fervour. After defeat in the second world war and American occupation, the curriculum became more democratic.

Schools in Japan today still strive to build character. They stress discipline and responsibility to others, says Nakano Koichi, a political scientist. Group harmony trumps individualism. Authority is important. Rules are internalised, so that scolding is unnecessary.

But the overall approach is much more humane than that bare summary makes it sound. The education ministry's slogan is *chi-toku-tai*: a blend of *chi* (academic ability), *toku* (moral integrity), and *tai* (physical health). This means lots of sports and arts. It also means that teachers praise effort, rather than achievement. Studies suggest this is an excellent idea: it makes children more resilient, notes Jennifer Lansford of Duke University.

The social context in which Japanese schools operate is in many ways like the West: Japan, too, is a rich, liberal democracy. But in some ways it is different. Whereas Americans want their children to be leaders and win competitions, Japanese parents place greater value on their offspring getting along with others, surveys find. Relationships with mothers are especially close in Japan. Most kids share their mother's bed until they are ten. Research reveals Japanese mothers typically anticipate their children's needs, whereas American mothers wait for requests.

So schools must teach kids to cope with less coddling. This starts at preschool, where they focus on free play, music, arts and crafts, exercise and nature appreciation. They are taught to dress themselves and wash their hands. (There are regular health and dental checks here and in schools, too; a blessing for busy parents.) Much thought goes into the simplest activities. Children learn both jumping and turning a skipping-rope for their classmates, blending exercise, motor skills and group co-ordination. Origami involves an increasing number of folds at each age. Pencil cases with a slot for each item teach kids to take care of their things. If a pen is missing, they notice immediately.

Once they reach primary school, children should be ready to run a "*mini-shakai*" or "mini-society", says Yonaha Sanae, Minami Ikebukuro's deputy head. Each day starts and ends with a class meeting. Children might discuss the day ahead or which dance to perform at a school event. Daily duties rotate. At the end of a lesson in Ms Kohashiguchi's class two children clean the blackboard, while a third announces the next lesson. After that, another student announces the end of the lesson; all bow. Now it is time for lunch. There is clanking and clattering as the children on lunch duty don chef whites, roll out tables and lay out crockery. The others line up to be served by their peers, from vats of food delivered to each class by in-house cooks.

Squeaky-clean character factories

Over lunch at their desks, some children read. Others listen to a broadcast of classical music and announcements from one of the special school committees. Last week one such committee of 12- and 13-year-olds ran *undokai*, an annual festival of sports and dance. Between mouthfuls of tempura, salad and rice, the children assess how it went. “We didn’t tell people the choreography for the dance until two or three days before and that wasn’t enough,” they lament.

All are expected to help each other out: older pupils teach their juniors little things like where to store their bags. Children are also instructed to help more at home. Your correspondent’s older daughter was told to start making her own *bento* (lunch box) and packing her books every day. She doesn’t. But she and her younger sister do take pride in their daily jobs at school and frequently want to replicate them at home.

Manners and rules help the school run smoothly, says Ms Yonaha. Children place their outdoor shoes neatly in a locker when they arrive, and change into indoor shoes to keep the place clean. The school recently launched a campaign to remind children to say “hello” to each other; they were getting sloppy at it.

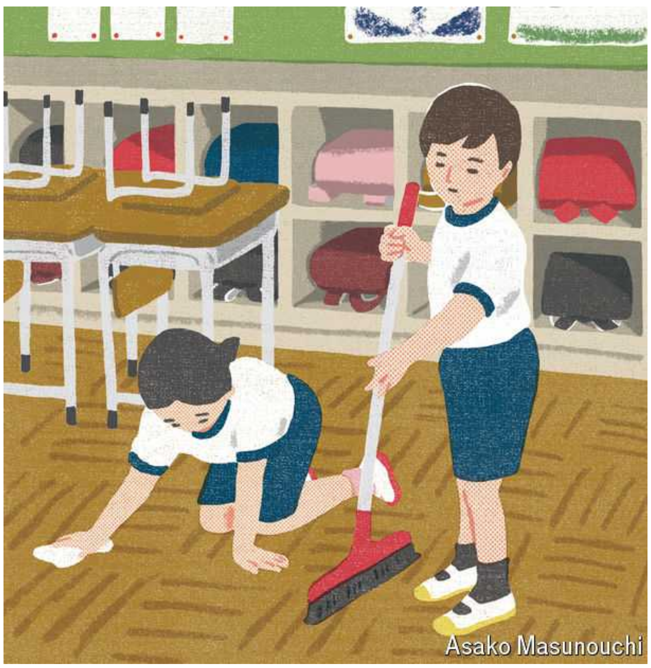
Japanese schoolbooks often include precise instructions for writing. Sit with a straight back, place a fist behind you and one in front to measure your distance from the desk and chair back; put your non-dominant hand in the centre of the opposite page to hold your book still as you write. Also, do stretching exercises before writing.

An emphasis on group harmony permeates everything. Ms Yonaha was shocked, during a visit to America, to see children just running around “having fun” in physical-education classes. “In Japan, sports is also about learning how to act in a group,” she says.

Japanese schools have dedicated classes for *dotoku* (moral education). In one, children discuss the consequences of not doing their daily classroom duty properly. “You make trouble for other people,” says a boy. When teachers tell pupils off, it is most commonly for “bothering others”, says Mr

Satou. This sentiment is repeated everywhere: posters, books and lessons remind children not to "bother" their neighbours.

Morality lessons address realistic situations, such as: what if a borrowed book becomes a source of misunderstanding between friends? Today, in a fourth-grade class at Minami Ikebukuro, the topic is jumping to conclusions. The teacher asks the children to suggest examples. "Even though he's a boy he might not like insects!" one child offers. Each child has to reflect on whether they are quick to judge others and what the effect might be. "I don't jump to conclusions as the other person might get hurt," writes one girl.



In the 1970s and 80s scholars looked to Japan for ideas about how to improve kids' test scores. Now, foreign visitors are more interested in how Japanese schools promote character. Countries from Mongolia to Malaysia have talked to Japan's government about this, says Sugita Hiroshi, a former education official now at Kokugakuin University. Since 2014 Singapore has made students clean their classrooms.

A notable fan is Egypt's strongman, Abdel Fattah al-Sisi. During a trip to Japan in 2016 he described the locals as "walking Korans" for embodying Islamic virtues. Egypt has now built 55 schools that combine its own national curriculum with Japanese-style classroom duties to foster discipline and collaboration. Some 30,000 teachers have been trained; the aim is to extend this Japanese-Egyptian hybrid to all public schools. Mr Sisi thinks it can help Egypt grow rich. (He may also, conceivably, see an opportunity to inculcate obedience to himself—handy in a country where mass protests have been known to topple presidents.)

Back in Japan, liberal-minded parents find some aspects of their system irksome. Even if they like the way primary schools work, they are often less enthusiastic about what happens at middle and high school. There is an emphasis on rote learning—understandable, given the need to memorise over 2,000 characters, but often excessive, at the expense of creativity. And "black rules" at some schools enforce needless conformity, from regulating the length of socks or the colour of hairbands to requiring all pupils to wear white underwear. In 2017 a girl in Osaka sued her school for ordering her to dye her naturally brown hair black.

Egypt's president thinks Japan has "Islamic" virtues

Children learn not to stand out. (Japan has a saying: "The nail that sticks up gets hammered down.") Although *dotoku* encourages the discussion of different viewpoints, everyone knows the correct answer, says Otani Nanako, a mother in Tokyo who has one child in an international school and two in Japanese ones. Children who are different may be bullied. Mixed-race kids, known as "*hafu*" (from the English "half") have an especially hard time. Absenteeism is growing, not least because nonconforming children often find school oppressive. According to Unicef, the UN's children's agency, Japanese kids are physically in better shape than those in any other rich country, but come a dismal 37th out of 38 for mental well-being.

Lisa Katayama is a half-Japanese, half-Chinese mother of two who lives near San Francisco and has her children in Japanese schools. When she goes to Japan, she finds the sense of social harmony "feels good ....like a nice warm bath". But "the concern with not causing an inconvenience to others can be stifling."

Many Japanese schools—and the government—are trying to deal with the downsides. In the 1990s and early 2000s a policy of *yutori kyōiku* ("relaxed education") allowed for a lighter curriculum and a shorter school week (five days instead of six) to give students more free time. But some commentators, especially nationalistic ones, blame it for what they see as slipping standards. Many parents are as desperate as ever for their kids to get into the right university, setting them up for a job at a prestigious company.

So from fifth grade many children attend *juku*, or cram school, to prepare for college entrance exams. This is anything but relaxed—and violates the spirit of *chi-toku-tai*. Ohki Souma describes a daily routine of regular school, then four hours of homework, then a long evening cramming. He says he has given up his football club to fit in all the swotting. He is 10.

Other parents seek more of a balance. Sugiura Yumi, seven-year-old Kouma's mother, considered enrolling her children in *juku* but then decided to let them have more time for their hobbies instead. Kouma likes to swim and go to insect exhibitions.

Fall seven times, get up eight

The overall excellence of Japan's schools should not be underplayed. Japanese 15- and 16-year-olds come third, fifth and second respectively in the reading, maths and science tests run by the OECD. But as Japanese society changes, its schools must, too. Not everyone aspires to be a salaryman these days, individuality is increasingly prized and immigration is gradually making the culture less homogeneous. Mr Satou says it is "very hard" to strike the right balance between fostering community spirit and giving pupils enough space to express themselves freely.

Meanwhile, a few parents are voting with their feet. Ms Otani, for example, moved her son Luka, now 13, from a Japanese public school to an international one for secondary education. "It works beautifully until a certain age," she says. "Then it becomes about shaping people to fit into the system."

Your correspondent may end up doing something similar. Her kids have benefited enormously from the self-reliance and wide range of skills that Japanese schools instil, but it may soon be time to move on. ■

Christmas Specials | Bakersfield blues

The beginning of the end for oil in California

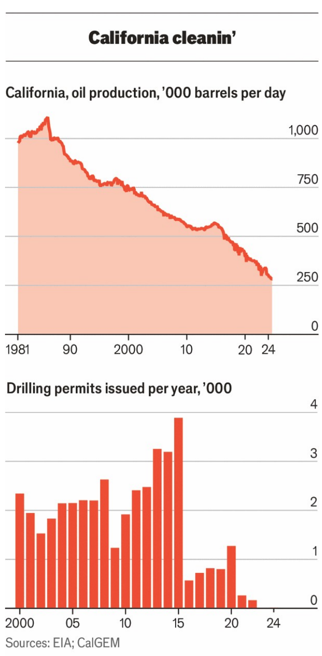
What happens to an oil town when the drilling stops?

December 19th 2024

"EVERY ONE OF those wells has a name and a personality," says Mike McCoy, the director of the Kern County Museum. He is standing on a bluff overlooking Bakersfield, Kern's biggest city, and pointing towards the oilfield below. "It's like going to a dance and there's a bunch of pretty girls, and every one of them is different." That one is where so-and-so cut his finger off. Over there is where he contemplated getting married. When Mr McCoy was younger, the roughnecks called him "Sunshine" for his golden locks. Now a baseball cap covers his grey. His father ("Tex") spent a career on the pipelines, having moved here back in the days when Texans flocked to California, rather than vice versa.

Kern County, California feels as far from the Pacific coast as Iowa. Squint past the palm trees and foothills, and it resembles the Great Plains. From Mr McCoy's vantage point, the horizon is littered with pump jacks, bobbing up and down, sucking the oil out of earthen canyons like thousands of metal mosquitoes. Here, oil is not just a commodity; it is part of people's identity. If you're not in oil, you know people who are. California is still the eighth-largest oil producer among American states, and three-quarters of its oil comes from Kern County. As recently as 2016 Kern produced more oil than any other county.

Yet times have changed. California has taken a sharp green turn in recent decades. It aims to be carbon neutral by 2045; only China, the European Union and South Korea boast larger carbon-trading markets. Its car-emissions standards are tighter than the federal government's. By 2030, 60% of its utilities' power must come from renewables. Oddly enough, the Golden State is now both a large producer of oil, and aggressively trying to end its production. State-issued permits for drilling have become vanishingly rare.



All this means trouble for Kern County. As oil production has plunged in the state (see chart), it has fallen in the county, too, from a peak of 256m barrels in 1985 to 90m in 2023. Locals fear that their jobs and towns are being sacrificed. Resentment and anxiety are spreading. As the world shifts away from hydrocarbons, there will be many places like Kern. So it is useful to examine how its people respond to the green transition. Will they push back politically, or adapt economically, or simply up sticks and leave? What happens in Kern County could offer a road map to other carbon-dependent places—or a warning.

Historically, Kern has had three big booms. In the 1850s miners came hunting for gold in the Sierra Nevada mountains. After the American civil war, southern farmers and homesteaders moved west, and irrigated cotton became king. The third boom was oil. In 1899 a group of men hacked away at the dirt until they had dug a well 21 metres deep. They struck black gold in what would become the Kern River oil field. A small stone monument still marks the spot.

The sounds of the earth are like music

Towns sprang up in the shadow of towering oil derricks. In Oildale, some houses are so close to the Kern River field that pump jacks are visible from backyards and church car parks. The Standard School District there is named after Standard Oil, John D. Rockefeller's petroleum empire. (When the Supreme Court ordered its break-up in 1911, Standard Oil of California was born.) The mascot of Bakersfield High School is the Drillers. Murals of oilmen decorate its walls. Taft, a small town in the western foothills, was built with oil money. It was near here that the Lakeview Gusher erupted in 1910. An average of 18,000 barrels exploded skyward from the well's mouth each day for 18 months. Workers rushed to stop the river of oil from surging into a nearby lake used for irrigation. The black geyser became a tourist attraction, but only for those who didn't mind getting coated in inky slime.

In the early 20th century, migrants from the Plains began to roll into the region, escaping from the Great Depression and the Dust Bowl. Oildale became a "Little Oklahoma". "This was all Okies, Arkies and Texans," says Mr McCoy, driving around the part of Oildale where he grew up, explaining in his Texas drawl where his parents settled after the second world war.

For decades, oil has meant opportunity

Thousands of migrants ended up as farmworkers. John Steinbeck's fictional Joad family in "The Grapes of Wrath" settles in a government-run camp based, in part, on one that still stands on the outskirts of Bakersfield. Others found work in oil. "The first three words an Okie baby says is mommy, daddy and Bakersfield," says Fred Holmes, who began work in the oilfields when he was 13. Now 80 (pictured), he owns a drilling firm and swaggers around wearing a golden belt buckle that depicts the Lakeview Gusher.

These migrants nurtured a distinct culture. The "Bakersfield sound", a twangy strain of country music pioneered by local stars like Merle Haggard and Buck Owens, still rocks the city's honky-tonk bars. "In the old days you'd go in some of these places...and get your ass kicked," jokes Mr McCoy. Your correspondent meets him at one nonetheless. A singer with a gravelly voice and a guitar serenades the crowd. No punches are thrown. Honky-tonks are more respectable now, though patrons may still hear a song with crude lyrics. Literally. "Loaded with crude oil, headed for town, the boxcar would tremble from the top to the ground," warbles Merle Haggard in "Oil tanker train", recalling his childhood living in a converted boxcar in Oildale.

Long-resident families can remember being mocked for their Oklahoma roots. “Okie use’ ta mean you was from Oklahoma,” wrote Steinbeck. “Now it means you’re a dirty son-of-a-bitch.” These days people take pride in it. Suzanne Garrison gives tours of the old migrant camp where her mother was born in 1946. “My grandpa said…‘Be proud that you come from Okies,’” she remembers, “we come from the dirt and the lowest point of life, and we overcame it.”

Bakersfield is still hard-up. About 19% of Kern residents live below the American poverty line of $31,000 a year for a family of four, compared with 12% of Californians. Oilfield work, though dangerous and gruelling, offers opportunity. Kenny Pearson grew up in foster care. Back in 2008, when he was 20, he took a job cleaning the inside of oil tanks. "We would pop open the manhole covers and crawl in," he says. He lived in fear of the rotten-egg smell of hydrogen sulphide, a deadly gas. But he made $20 an hour, more than twice the state's minimum wage. Many Latinos like Mr Pearson have found their way into oil work. Now Kern County is around 60% Hispanic.

When the price of oil was high, the county prospered. Tax coffers were full. Donations from oil firms paid for school sports teams. Local businesses thrived. The busts hurt, but were quickly forgotten. "We could hunker down. We would have our money saved, and we could go through it," Mr Holmes says. Previous crashes, however, were followed by booms, and he doubts there will be another. "If I had time to do a little math, I could tell you the day we'll be out of business."

Local drilling faces practical obstacles. Kern's crude is thick like molasses, so it must be heated expensively to extract it. However, the main problem, as drillers see it, is government. Chevron, the successor to Standard Oil of California, argues there is still enough demand for oil that drilling in Kern would make financial sense, but the state has imposed a de facto moratorium on drilling. A decade ago, in 2014, nearly 3,200 new oil and gas wells were permitted in the county. As of December, just 11 had been permitted in 2024. California recently banned drilling near homes and schools, and increased fees on idle wells.

Sometimes the state tries to have it both ways, insisting that oil must be curbed but petrol must still be reliably available and cheap. In 2024 Gavin Newsom, the Democratic governor, called a special session of the legislature to tackle petrol-price spikes when refineries undergo maintenance and supplies run low. A new law will require them to maintain emergency oil supplies. Kern residents argue that the state is choking off production, and trying to put a band-aid over the effects of doing so. Mr Holmes texted your correspondent when news of the special session broke: "The governor is after us again."

What locals call a "war on oil" has deepened a rift between Kern and the state government. California is run by Democrats; the county is deeply conservative. Kevin McCarthy, the former Republican speaker of the House of Representatives, is a son of Bakersfield. But there are not enough hydrocarbon-loving Republicans in California to mount an electoral revolt against Mr Newsom and his party. Democrats don't have to worry that harassing oil firms will endanger their majority (though lefties running in Kern County may suffer).


Alex Welsh


Alex Welsh

Lorelei Oviatt runs the county's planning and natural resources department and is the architect of its energy transition. Yet she never says "transition", preferring "evolution". "Climate change is urgent, and now the state of California's policies are urgent because they're going to put us out of business," she says, sitting in an office decorated with photos of sunflowers.

Some 13,000 people work in oil and gas in Kern County, 36% fewer than ten years ago. In 2020 the industry contributed nearly $200m to the budget via property taxes, says Ms Oviatt. Without that money schools, parks and police will be squeezed. "We probably have five years to stabilise the situation here in Kern...and then we may be approaching a cliff that we're going to fall off," she says.

Certain refrains can be heard around the county. California makes the cleanest oil in the world because of all of the regulations, Kern residents argue. So why cut drilling here just to import dirtier oil from abroad? Imagine that you spy a golden nugget in a riverbed and you're asked not to pick it up. That, locals insist, is what it's like being unable to drill in their backyards.

They won't be retrained. They'll move

The old guard hope the state will be shocked into bringing back oil-friendly policies by a supply shortage, or that Donald Trump's election on a platform of "Drill, baby, drill" will turn the tide. Some younger workers are optimistic. They understand that when production stops, someone will have to plug all those wells. That could take years and a lot of manpower. There is opportunity even in decline.

Advocates of a green transition usually say it should be "just", and include re-training or new jobs for fossil-fuel workers. But wages in logistics and manufacturing, which are growing in Kern County, are paltry compared with oilfield money. And rather than learning new skills, rig hands and executives whisper about an exodus to less-regulated states. Workers "won't be retrained", says Ms Oviatt. "They'll move."

Tim Paulsen, who oversees Chevron's San Joaquin Valley operations, says he has recently transferred a few dozen staff to Texas and Colorado. "How long do we have?" he recalls them asking. "Can I make it another two years here before I need to move?" He doesn't expect to finish his own career in Bakersfield, either; Chevron is moving its headquarters to Texas.

The American West has hundreds of ghost towns: settlements that died when a mine or a sawmill closed and residents moved on. Yet it is far from certain that Kern county will follow that path. Renewables are booming: the desert is ideal for solar panels and the foothills for wind turbines. Ms Oviatt hopes carbon, of all things, can be Kern's saviour. She wants to build a "carbon management park", where steel and hydrogen plants, for example, can store their carbon waste below the oilfields. There is no guarantee the park will ever be built, but if it is, she reckons it can make up some of the lost jobs and tax revenue. "I am the bringer of hope," she declares, a county planner in a cape.

Workin' man blues

Bakersfield is big and diverse enough to survive. But storefronts in Taft are boarded up. Meth, and later opioids, have ravaged Oildale. Homeless people camp on Beardsley Avenue, "the worst street in Oildale", according to Mr McCoy. He points out some neat houses in his old neighbourhood that have weathered the hard times, but now sit between trailers and shacks with tin roofs.

Some residents want Kern to look beyond carbon, and think about what Chevron's canyons could look like returned to their natural state. Locals hope tourists will stop by on their drive north from Los Angeles to the Sierras. Conservationists have restored a strip of land beside the Kern River and the oil field that bears its name. Cottonwood trees offer shade. A coyote yips nearby. The waning sun glints off nearby pump jacks as it dips below the western horizon. The metal mosquitoes bob up and down, up and down, in their monotonous rhythm. Until, one day, they will stop. ■

Christmas Specials | Tales of Odessa

Cancel culture in Ukraine

What happens in Odessa will shape what kind of country Ukraine becomes

December 19th 2024

At the top of the Potemkin Steps in Odessa, the most famous staircase in cinema history, a statue of the Duc de Richelieu stands on the corniche of Primorsky Boulevard. Richelieu, a French nobleman who became a Russian army officer, was, in 1803, appointed governor of the region and mayor of the young and then underwhelming city. His reformist zeal, introduction of duty-free trading and religious tolerance helped the small town transform itself into an Enlightenment metropolis. Two centuries later his toga-clad bronze form looks out sternly at the Black Sea.

In March 2022 Odessa's inhabitants anxiously followed his gaze, scanning the horizon for signs of an amphibious attack that might open a new front in Vladimir Putin's invasion. The acacia-bordered heights of Primorsky

Boulevard were pressed into service as an emplacement for Ukrainian artillery. And Nika Vikniansky, an agile man with curly hair and expressive grey eyes, began to fear for the statue's safety.

It was not Mr Vikniansky's job to worry about such things. He is a furniture distributor. But that spring it was everybody's job to defend the city and they put aside all differences to do so. Mr Vikniansky was co-ordinating volunteers who brought aid to a hipster food-court; he was delivering stoves to the army. But, as he recalls, "I suddenly thought, what if our duke gets hit? How are we all going to live?" Soon he had volunteers covering the monument up with sandbags.

Further down Primorsky Boulevard there is another statue: of Alexander Pushkin. Statues of the poet are commonplace in the countries which once formed the Soviet Union, a symbol of Russian cultural primacy. In Odessa, though, he has a more intimate connection. He lived there in internal exile; it is the city in which he began to write his masterpiece, "Eugene Onegin". His statue, like that of the duke, was paid for by Odessa's citizenry: Richelieu's, in 1828, in gratitude for raising the city up; Pushkin's, in 1889, as thanks for celebrating it in verse as European, free and cosmopolitan. Should Pushkin, too, be shielded from the guns?

Odessa's identity, its polyphony and its freedom are under threat from Ukraine's own officials

Mr Vikniansky thought not. If Mr Putin's Russia was happy to laud the poet as a symbol of its nationalism, then the duty of protecting him was theirs. "I just thought, Putin is not going to risk hitting Pushkin. And if he did, it would be quite ironic." Pushkin would have appreciated the irony.

Mr Putin attacked Odessa, claiming its history made it Russian. Mr Vikniansky turned to history for the city's defence—getting it listed as a UNESCO World Heritage Site. He pestered officials who said it was impossible, exploited friendships and circumvented bureaucracy. And in early 2023, using an emergency procedure, UNESCO designated Odessa's historic centre a place of unique value, "a polyphonic city", built by Italian architects, run by French and Spanish subjects of the Russian empire, inhabited by some 130 nationalities. "It was meant to protect Odessa from Russian missiles. I never thought I would have to protect it from our own vandals," says Mr Vikniansky.

Today, though the city is regularly hit by Russian drones and missiles, Odessa's identity, its polyphony and its freedom are under a subtler threat. This is from Ukraine's own officials, and from a small but aggressive and vocal group of activists who have seized on a loosely worded law on the decolonisation of Ukraine which orders the "liquidation of symbols of Russian imperial politics to protect Ukraine's cultural and informational space". Pushkin's statue, unshelled, is in their sights. So, too, is that of Odessa's best-known literary son, and Mr Vikniansky's hero, Isaac Babel, who shaped its Jewish character.

The law on decolonisation was signed by Volodymyr Zelensky in April 2023 and coincided with Ukraine's counter-offensive to liberate territory captured by Russia. Most Ukrainian cities and regions complied without causing consternation. Like the statues of Lenin a few years earlier, the monuments to Pushkin fell across Ukraine from Uzhhorod in the west to Kharkiv in the east. Most were indeed part of Stalin's imperialist policy; their proliferation began in 1937, the centenary of Pushkin's death and the height of the great terror. Mr Putin also conscripted Pushkin to his cause. When Russian troops entered Kherson, the occupying forces put up billboards featuring Pushkin and proclaiming that Russia was "here for ever".

Breathes and breezes of Europe

But what holds in the rest of Ukraine does not hold in Odessa, because Odessa is not like the rest of Ukraine. Pushkin's sojourn did not make it Russian; his writing celebrated the city as liberal and European. Babel gave voice to a Jewish population as culturally important as that of any European city. The problem of decolonising Odessa is not that it is in any way pro-Russian—it resisted Russia's attempts to engineer an insurgency there in 2014 and defended itself against invasion in 2022. The problem is that it was not a colony so much as a world city ahead of its time—a metropolis.

As scholars and citizens have reflected, it had its own way of speaking and thinking, its own music, its own humour, its own literature, even its own gefilte fish. What other city in Ukraine has given its name to restaurants in Istanbul, New York, Paris and Vienna? Like them, it has also produced a distinct myth that is bigger than the city itself. Yaroslav Hrytsak, a historian at the Ukraine Catholic University in Lviv, says that its cultural influence spread far beyond its own limits or those of whichever country encompassed it.

At the heart of Odessa's myth is a joyous idea of freedom and beauty, enterprise and opportunity, a city built on "the sun-drenched steppes washed by the sea", in the words of Babel. Leonid Utesov (born Vaisbein), a singer and bandleader popular from the 1920s, mixed Yiddish klezmer with New Orleans jazz. "I was born in Odessa," he wrote. "You think I am bragging? But it's really true. Many people would like to have been born in Odessa, but not everyone manages to."


Mariaelena Caputi

Its climate, free port and religious freedoms attracted traders, merchants, fortune-seekers, and smugglers and gangsters of every ethnicity: Greeks, Italians, Germans, Poles and countless others. Jews, who were excluded from other large cities of the Russian empire, made up a third of Odessa's population. Odessa was the melting pot of all melting pots.

In 1794 Catherine II ordered the construction of “a military harbour along with a merchant quay” on the site of Khadjibeia, a seaside Turkish village, but the merchant quay took over. Odessa grew up centred not on a citadel, a seat of government or a prison, as many cities in the Russian heartland did. It evolved around market squares. It was built on a human scale and designed not for intimidation, but for commerce and enjoyment. Its main landmarks were a neoclassical stock exchange and a Baroque opera house.

In the 19th century it was the fastest-growing city in Europe; its population soared from 2,000 in 1795 to 400,000 in 1897, larger than San Francisco. “For most of its history Odessa has earned a reputation of defiance of Russian imperial and later Soviet law,” writes Patricia Herlihy in her evocative book, “Odessa Recollected”. Today Ukrainian politicians are struggling to Ukrainianise Odessa (which they spell with one ‘s’) and to make it fit into their decolonisation law.

Oleh Kiper, the head of the regional military administration, doesn’t much care about such complexities. A former prosecutor who served under Viktor Yanukovych, a Moscow-backed kleptocrat who was president of Ukraine from 2010 to 2014, he had been barred from official positions, but was reinstated in 2019. As an unelected bureaucrat he was interested in obeying orders, not in how Odessans think about themselves. So in July 2024 he ordered the wholesale removal of the city’s statues and the renaming of its streets, sparking a cultural war that is tearing the city apart.

The statues of Pushkin and Babel have prompted the biggest controversies because their writing is so central to the myth of Odessa. Pushkin has been cancelled as a Russian imperialist; and Babel as a Bolshevik (he was executed on Stalin’s orders in 1940).

Pushkin spent 13 months in Odessa in 1823-24, after being banished from St Petersburg for his anti-autocratic poetry. The city was only four years older than him when he started writing “Onegin” there.

> “I lived back then in dry Odessa...
> Where all breathes Europe to the senses,
> And sparking Southern sun dispenses
> A lively, varied atmosphere.”

He was not allowed to travel abroad, but in Odessa Pushkin felt himself to be in Europe. He stayed in the Hôtel du Nord (the house still stands). He sipped Turkish coffee and slurped "plump and living" oysters in a French restaurant, before strolling to the theatre for the latest Rossini opera.

The liberal city by the sea was a radical one too: "A nest of conspirators" in the words of Tsar Nicholas I. A secret Greek society plotted the war for independence from the Ottoman empire. In the late 19th century Ukrainian students and intellectuals promoted their language and culture. And revolution became part of the iconography of Odessa with Sergei Eisenstein's classic film of 1925, "Battleship Potemkin", which mythologised the city's uprising in 1905. The scene of a pram careening down the grand staircase gave Odessa's most famous landmark its place in history.

When Odessans staged a Euromaidan protest against Mr Yanukovych's rejection of closer ties with Europe in 2013, they met by Pushkin's statue and used his line about the city's Europeanness as a slogan. Alexander Babich, a Euromaidan activist and historian, watched Russian troops occupy Crimea in response to Mr Yanukovych's eventual overthrow. He wrote a Facebook post: "Russians, I will be defending Pushkin's house in Odessa from you! [And] Potemkin staircase...!!!! You get this into your head!!!!"

This was precisely what Mr Putin could not get into his head. Mr Babich wrote in Russian. To Mr Putin, Russian-speakers were Russian. As Mr Hrytsak says, he could not, or would not, "understand that Ukraine has evolved into a civic nation that was defined not by language and ethnicity, but by people's readiness to defend its independence".

A decade later, Mr Babich is at the front, defending Odessa and Ukraine from Russia, while Ukrainian ethno-nationalists attack Pushkin's house. Like Mr Putin, they see Russian-speaking Ukrainians as a deviation. One ideologue is Oleksandr Muzychko, who teaches history and memory at Odessa's main university and sits on a commission that decides which streets should be renamed and which statues removed.

Mr Muzychko, a tall man with rectangular glasses, sees the war as a chance to "purify" Ukraine. "The skeleton of a healthy Ukrainian nation is ethnicity and language." Those people who are "holding on to this Russian language, essentially parts of identity, monuments and street names…whether they want it or not, help keep the Russian claws in the Ukrainian body." The metaphor of a body in need of surgery crops up often and echoes the worst of Mr Putin's propaganda.

Mr Muzychko's companion, Katerina Musienko, a neatly dressed 26-year-old doctor and activist, reinforces his message. "A Russian-speaking Ukrainian is a political construct, created by enemy propaganda. It serves as fertiliser for Mr Putin's war." As such, the pair agrees, these people bear the responsibility for Mr Putin's invasion because he came to "defend" them.

While Mr Muzychko disseminates his views among students, Ms Musienko enforces them on the street. She runs a group of "language vigilantes". When they hear of a shopkeeper or waiter addressing a customer in Russian, they go and "ask them to correct it". If the staff refuse, her activists inform the authorities and people are fined. And sometimes thugs turn up.

The result of this de-Russification is fear and polarisation

"The Russian language should be cancelled in public spaces. Anything to do with Russia, with our main enemy, must be levelled. Without negotiations or compromises," Ms Musienko says firmly. But as Maya Dimerli, an Odessan writer, points out, Russian is not only the language of the aggressor, it is also the language of the victim. And the victim is now being shamed for the acts of the aggressor.

The result of this de-Russification is fear and polarisation. What was marginal is becoming mainstream. On the boulevard, people look away when asked about the statues. "The fear of speaking gives way to fear of thinking, until people no longer know what they think," says Anastasia Piliavsky, an Odessa-based anthropologist at King's College London. Criminal cases against "collaborators" make clear that the threat of being branded a Russian sympathiser is real.

What is my name to you?

When Mr Vikniansky was visited by two colonels from the SBU, Ukraine's security service, who "prophylactically" warned him not to protest on the streets, he replied "And what if I did?" "It is unacceptable when people in my country tell me not to speak." Defending the statues of Pushkin or Babel is not a matter of history or language (he is funding a translation of Babel into Ukrainian), but of freedom and his own existence.

And as a Jew growing up in the Soviet Union, he knows about prejudice. His father and grandfather grew up speaking Yiddish and Ukrainian. Babel's Jewish Odessa was largely destroyed in the Holocaust and drained by post-Soviet emigration. Mr Vikniansky embodies Babel's Odessa. He did not go to *shul*. But he recites Babel's autobiographical story like a portion of the Torah, interspersed with his own commentary.

It is a tale of a frail nine-year-old Jewish boy, who studies feverishly to get into a school that has a 5% quota for Jews. As a reward, his parents give him money to buy the dovecote he had been dreaming about. Then an antisemitic pogrom starts and his loving great-uncle is killed. The boy runs into a crippled cigarette seller who takes a dove and smashes it against the boy's face. "I lay on the ground, the crushed bird's innards sliding from my temple. They ran down my cheek, winding, dribbling, and blinding me."

Perhaps in response to his own experience of a pogrom, Babel created a gutsy and generous Jewish gangster, Benya Krik, the King of Moldovanka, a poor part of Odessa. "It was a story of a Jewish kid who fought back," Mr Vikniansky explains. These tales gave him solace and courage when boys at school picked on him and told him he stank, and when a schoolteacher tried to Russify his name.

Mr Vikniansky's parents wanted to call him after his grandfather, Naum Moiseevich Shrabstein, who fought the Nazis all the way to Berlin. But to give the boy an obviously Jewish name in the Soviet Union was to spoil his chances. So they chose one that starts with the same letter: Nikolay. Russians usually shorten it to Kolya. Instead, he was called Nika.

His Russian teacher did not like it. She would stand him before the class and say: "Vikniansky, remember, there is no such name in the Russian language as Nika. Your name is Kolya. You are Kolya." The boy would cry and the class would laugh. Mr Vikniansky did not want his name to be changed. He does not want his favourite writer to be "cancelled". His name and Babel make him what he is: an Odessan. ■

Christmas Specials | Consider the monster

What a 70-year-old firebreathing lizard reveals about humanity

Each incarnation of Godzilla reflects the fears of its time

December 19th 2024

TANAKA TOMOYUKI gazed down at the ocean, and the ocean spoke back to him. A star producer at Toho, a Japanese film studio, Tanaka was flying home over the Pacific, pondering a slot that needed to be filled in the release schedule for 1954. He imagined a creature rising from the depths in the wake of an underwater nuclear explosion and wreaking havoc on land. “Mankind had created the Bomb, and now nature was going to take revenge on mankind,” he later recalled.

On set the monster came to life as an immense beast with scaly skin, spikes along its back and radioactive breath. The raging, reptilian creature, somewhere between lizard and dinosaur, was given a lumbering gait, a long tail and powerful feet, perfect for crushing buildings; the actor inside the costume prepared for the role by observing the movements of large animals at the Tokyo zoo. Its roar, created by dragging a leather glove across a contrabass and running the sound through an echo chamber, evoked existential angst. Tanaka referred to it as “the sacred beast of the apocalypse”. Toho dubbed its new star “Gojira”, a portmanteau of *gorira* (gorilla) and *kujira* (whale); a name transliterated in English as “Godzilla”.

The film smashed box-office records. Nearly 10m people watched *Gojira* in theatres, a tenth of Japan’s population at the time. Audiences gasped as Godzilla trampled Tokyo’s stylish Ginza district and cheered as it stomped on the Diet, the Japanese parliament. The special-effects team recreated the city in immaculate miniatures on a scale of 1:25, with detailed interiors so that even the rubble of buildings looked convincing. For a country still emerging from the wreckage of the second world war, the scenes were raw.

The plot of *Gojira* is simple but potent. Japan must defeat the monster before the monster destroys Japan. The task falls to several individuals: Dr Yamane Kyohei, a paleontologist who wants to capture and study the strange specimen; Dr Serizawa Daisuke, a younger scientist who has created a powerful new device, the Oxygen Destroyer, which could kill Godzilla, but could also be used as a fearsome weapon later; Ogata Hideto, a sailor who rallies his comrades to humanity’s defence; and Emiko, the daughter of Dr Yamane, who is caught in a love triangle between Ogata and Dr Serizawa. In a poignant climax (spoiler alert), Dr Serizawa takes the Oxygen Destroyer underwater and detonates it near Godzilla, killing both the monster and himself and burying the secrets of his technology. Godzilla has been defeated, the world has been saved.

Less than a year later, however, the monster returned. Much as Dr Yamane warns in the initial film, if nuclear testing continues, “then someday, somewhere in the world, another Godzilla may appear.” This year Godzilla celebrated 70 years of rampaging across movie screens, making it one of the world’s longest-running cinematic franchises. It has arguably never been stronger. *Godzilla Minus One*, the 37th film, became the first ever to win an Oscar (for special effects) last year. “Godzilla has never been more popular, more vibrant creatively and better known...and that sadly reflects a world that is even more at wits' end, filled with anxiety and worried about the future," says William Tsutsui, the author of *Godzilla on My Mind*.

The series ranges from profound meditations to cheap schlockfests. The uninitiated tend to dismiss the monster as unserious on the basis of the latter. Yet Godzilla's enduring appeal reveals much about post-war Japan, its relationship with America, the globalisation of culture and shared fears of the forces that threaten the modern world.

Every culture and era has its monsters. The Ancient Greeks had Scylla and the Hydra. Dragons stalked Europe during the Middle Ages, while Jiangshi, a hopping vampire, haunted China. Such creatures invite both empathy and revulsion. "The monstrous lurks somewhere in that ambiguous, primal space between fear and attraction," writes Jeffrey Cohen, the editor of *Monster Theory*, a collection of essays. *Monstrum* is "that which reveals" or "that which warns"; the monster is thus a portent, a mirror to collective anxieties.

For the first director, Godzilla made radiation visible

Godzilla's story begins with a boat. In early 1954 the *Daigo Fukuryumaru* (Lucky Dragon No 5), a hulking tuna trawler, set sail from Japan, bound for the rich waters of the South Pacific. It proved anything but lucky. On March 1st the ship's crew saw a bright white flash in the distance; eight minutes later they heard a guttural boom. White dust soon began raining down. The sailors had inadvertently witnessed an American hydrogen bomb test on the Bikini Atoll, in the Marshall Islands. All 23 of them soon came down with radiation poisoning. Throughout Japan, the incident inflamed memories of the atomic bombings of Hiroshima and Nagasaki just nine years earlier.

The boat now stands in the hangar of a museum in Yumenoshima Park in Tokyo. The white paint on its wooden hull has faded and chipped, and its bolts have rusted. But the vessel remains intact—a monument to its cursed crew. The American and Japanese governments played down the incident, loth to upset their burgeoning alliance or to slow the use of nuclear energy to power Japan's economic revival. "They wanted to put a lid on the issue, they wanted the fire to disappear," says Tanaka Yoshiko, whose father, Oishi Matashichi, was a crewman on the ship. The sailors received compensation, but were feared and ostracised at home. One potential suitor of Ms Tanaka's rejected a marriage proposal, wary of the invisible force coursing through the family.

Honda Ishiro, the director of the first Godzilla film (and seven others), saw the monster as a way to "make radiation visible". He had seen the apocalyptic ruins of Hiroshima on his way home from the war. "Godzilla represents the anger of the victims of radiation," says Ichida Mari, a curator at the Lucky Dragon museum. The film begins with Godzilla attacking a fishing boat far south of Japan. "This is awful: radioactive tuna, black rain and now Godzilla to top it off!" one woman on a train complains after it comes ashore. "I barely escaped the atomic bomb in Nagasaki and now this!"

Americans, however, saw a different picture. The Hollywood adaptation, released in 1956 as *Godzilla: King of the Monsters!*, cut all references to recent nuclear history and recast the story through the eyes of an American foreign correspondent in Tokyo. Robbed of its pathos, Godzilla was panned by critics. The *New York Times* called it "an incredibly awful film".

The nuclear core continued to power Godzilla, but it also evolved with the times. Films released in the 1960s, such as *Gojira vs Mothra,* introduce new villains. Rapacious capitalists threaten to destroy humanity with their greed. Alien races descend, raising questions about the relationship between people and rapidly changing technology. New monsters proliferate, from the three-headed dragon King Ghidorah to the winged Rodan. Godzilla reverses roles, coming to humanity's defence.

In the 1970s Godzilla turns to the environmental consequences of rapid industrialisation. In *Gojira vs Hedorah,* a heady psychedelic-inflected cult hit, a giant smog monster feeds on pollution and devastates Earth. In an attempt to appeal to younger audiences, Godzilla is given a son, Minilla, in *Son of Godzilla.* The series went on a hiatus in 1974, but returned in 1984 amid fresh nuclear fears—the plant on Three Mile Island melted down in 1982 and Soviet-American tensions were on the rise. *The Return of Gojira* harked back to the original film's plot.

The monster's shape-shifting—at times a hero and at others a villain—is a key to its appeal. "It's mysterious, people don't know exactly what it is," says Ota Keiji, Toho's "Chief Godzilla Officer", who oversees all of the studio's Godzilla-related work.

The form has ancient roots. Fujita Naoya, a critic, notes that *kami*, or Shinto spirits, traditionally have two sides: a protective, gentle one that can bring about rich harvests and good fortune—and a wild, destructive one that begets misfortune.

What hath Godzilla wrought?

Godzilla, like many Japanese beasts and spirits, has a complex relationship with human language. The monster roars and screeches and stomps. It pinches its fingers and swings its arms, like an Italian whose favourite football club has just lost on penalty kicks. But it does not utter a word aloud. (There is one brief, semi-exception to this rule: *Godzilla vs Gigan*, a film from 1972 where Godzilla fights off a monster dispatched by a race of cockroach-aliens to conquer Earth, features a scene where its words are rendered in *manga*-style speech bubbles.)

That silence has helped Godzilla become a global icon. "Godzilla is a figure that a lot of fantasies can be projected onto, and a big part of this is the fact that it can't speak," says Gregory Pflugfelder of Columbia University. The films reached both sides of the Iron Curtain during. Godzilla is an "emblem of globalisation", Mr Pflugfelder argues, and a reminder that it need not mean Americanisation. The films made "fantasy and fear" exportable, he writes, "as much a part of global trade as soybeans and silicon". (Toho closely guards the overall economic value of the Godzilla franchise, and Mr Ota will only say that it is a "treasure".)

Few characters have inspired such a diverse range of fans, critics and imitators. Dave Chappelle, an American comedian, once spoofed the monster with a skit about "Blackzilla". Joe and Mario Duplantier, French heavy metal musicians, formed a band called *Gojira*, which performed at the Olympic games in Paris last summer. MF Doom, an American rapper, released music under the alias King Geedorah, a nod to Godzilla's three-headed archenemy. The cinephile North Korean dictator Kim Jong Il kidnapped a famed South Korean director and forced him to make a communist Godzilla remake called *Pulgasari*. Susan Glasser of the *New Yorker* recently likened Donald Trump to Godzilla: "the monster very often wins."

Serious pundits have long pondered the monster's deeper meaning. Susan Sontag, an American critic, saw Japanese science-fiction films such as Godzilla as emblematic of an age of extremity. "We live under continual threat of two equally fearful, but seemingly opposed, destinies: unremitting banality and inconceivable terror," she writes in "The Imagination of Disaster", an essay from 1965. "It is fantasy," she added, "which allows most people to cope".

In Japan many see Godzilla as a metaphor for the country's war dead. Godzilla returns to attack Japan time and time again because it is "a revenant, the returning spirit of the Japanese who died in that war we would rather forget", argues Kato Norihiro, a Japanese critic. In these readings, the monster haunts the survivors who went on to enjoy peaceful, prosperous post-war lives—and helps them overcome their guilt.

Fans have built communities. One balmy day in late October, a group of Godzilla-heads from across North America set off on a Godzilla-themed trip around Japan. J.D. Lees, the lanky, unassuming impresario behind the journey, bears little outward resemblance to the monster, but he is arguably the King of the Fans. A retired teacher from Manitoba, Mr Lees began producing "G-Fan", a Godzilla fanzine, by hand in 1992. It grew and eventually spawned an annual convention—"G-Fest"—and the tour series —"G-Tour".

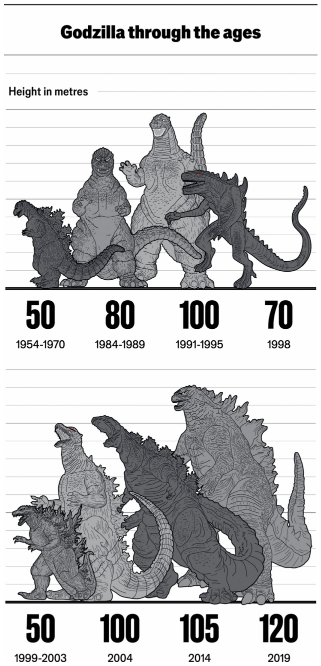
Toys and collectibles have helped keep Godzilla's spirit alive in between film releases. For Nabe Yakan, a Japanese comedian, the obsession begins with Godzilla's image. "The story comes second, for me it's really about how Godzilla looks: the scaly skin, the scary face, the fiery breath—it's just so cool!" Mr Nabe gushes. His house has a room dedicated to Godzilla memorabilia, from the heads of Godzilla costumes to old film scripts and scores of toys, lined up on shelves like jewellery. Some people even treat Godzilla merch as an investment. "Rich people buy and sell them like paintings," says Kizawa Masahiro, the owner of "*Gojira-ya*", a Godzilla-themed toy shop in western Tokyo. Mr Nabe reckons his collection is worth around $1m—but he has no plans to part with it.

The monster's revival has come with rising geopolitical tension

Deviations from the monster's ideal form are frowned upon. Mr Ota's team offers detailed guidelines on how the monster should look and behave. It ought to have spikes on its back and four fingers on its hands. It should "stir the soul with its overwhelming life force".

TriStar, a Hollywood studio, acquired the rights to make "Godzilla", a film released in 1998. But the American directors turned the monster into a whimpering animal that runs from attack. Fans "turned on it like an angry mob," Mr Lees recalls. "The TriStar Godzilla didn't look like our Godzilla, didn't act like our Godzilla." The film featured an all-powerful American military laying the monster low, a snapshot of America's hubris when it was the sole superpower.

With the Cold War over, nuclear anxiety receded, and fearful fantasies were supplanted by cute ones, from Pokemon to Hello Kitty. Godzilla's recent revival has coincided with the return of geopolitical tensions and a heightened awareness of existential risks, from nuclear accidents to climate change. And as fears have grown again, Godzilla has grown bigger (see chart).



In 2011 an earthquake and tsunami triggered a nuclear meltdown at a power plant in Fukushima. "These are not problems from a distant past: Fukushima and the *Fukuryumaru* are linked," Ms Tanaka says. *Shin Gojira,* released in 2014, took the disaster head-on, skewering Japan's doddering bureaucrats for their indecision during the crisis. The film resonated with viewers who had recently been reminded that "there is still this massive, destructive force that can wipe out humanity," Mr Fujita says. "Prior to that, people had this post-modern sense of not needing to be scared."

A world riven with new conflicts has also given Godzilla new relevance. *Godzilla Minus One,* released in 2023, pays homage to the original *Gojira,* nodding to the original train scene. As Godzilla descends, an American general tells Japan to fend for itself. As Roland Kelts of Waseda University in Tokyo notes, "The depiction of America abandoning a Japan in crisis speaks directly to Japanese anxieties today." *Godzilla Minus One* broke box-office records in both Japan and America. As Mr Tsutsui puts it, "Godzilla tends to resonate most when fear is closest to the surface." ■

Christmas Specials | Home for the holidays

A network of volunteers is rescuing dogs and cats by bringing them north

Tens of thousands of animals are moved to new states each year, so they can find homes

December 19th 2024

IT WAS A crammed flight. Most of the passengers squirmed. Some whimpered. A few even cried. One barked complaints in the direction of the cockpit. In some ways this was not unlike a cut-rate trip on a budget carrier; in others it was exceptional. Everyone within eyeshot stared intensely at your correspondent, as if looking for an answer and assurance about what would happen next. The smell—a mix of dog and cat hair, urine, faeces and stress—was overpowering.

This was a rescue mission. Crates carrying 101 animals—45 dogs and 56 cats—had just been loaded up at an airstrip in Atwater, in California's

Central Valley, an agricultural breadbasket-turned-economic wasteland. The small private plane, with a cargo hold where seats might have been, was about to fly to Washington state.

Nearly 1m cats and dogs were euthanised each year from 2016-2019

"All these dogs and cats would be euthanised" were they to stay in the Central Valley, says Sharon Lohman, who is standing on the tarmac with Liberty, a small, silver, Washington-bound mutt with traces of schnauzer, in her arms. Liberty had been abandoned in an almond orchard on a piece of cardboard for weeks. "When you see an animal who stays in the same spot day after day after day, it's been dumped, because it's waiting for the owner to come back," she explains.

Ms Lohman, who worked at Disney before founding New Beginnings, an animal-rescue charity, did not want to see these animals die because no one local would adopt them. She called Ric Browde (pictured here with Liberty), a former music producer who runs Wings of Rescue, a charity that flies animals likely to be euthanised to places where they can find a home. He phoned contacts in Washington to see if they had space for any new animals. The answer was yes, so these lucky pets were set to travel some 1,500km (around 930 miles) by air with volunteer pilots, a husband-and-wife team based in Oregon, who own a plane and average around three rescue flights a month.

In America an average of nearly 1m cats and dogs were euthanised each year from 2016-2019, according to Shelter Animals Count, a database. There were too many animals for the number of willing adopters. However, for the past two decades volunteers have been trying to reduce this death toll by banding together to whisk dogs and cats to safety. They function a bit like an "underground railroad" for pets, ferrying dogs and cats mostly from the South to the North.

Some of these efforts are informal: shelter staff post notices on message boards asking pilots and truck drivers to help provide "freedom flights" and "rides to rescue" for animals in need. Others are more co-ordinated. The largest initiative, run by the American Society for the Prevention of Cruelty to Animals (ASPCA), relocates around 30,000 dogs and cats a year by truck and plane, including chartered flights each weekend; 43 people work on its programme. Wings of Rescue will organise around 50 flights this year: Liberty was the charity's 75,000th pet to be taken to safety.


Brooke Herbert

Volunteers have formed bonds of trust and something approaching friendship. They often organise for handoffs to happen halfway to reduce each other's travel burdens. The first stop on your correspondent's flight, two-and-a-half hours after leaving Atwater, was Arlington, Washington. Volunteers from the Northwest Organisation of Animal Help, a charity, were waiting on the tarmac and greeted the pilots and Mr Browde with hugs and handshakes. Coos of admiration met the 38 cats and kittens, who were put in the back of a van. Liberty stayed on the plane.

Another take-off. The animals were adjusting to the jet-setting and were quieter. Most slept. Liberty was curled up in her carrier. The next stop was Oroville, near the Canadian border. The tiny airstrip had only a small shed, which doubled as US Customs and a toilet. A jaunty Canadian, Jeneane Rucheinsky of Our Last Hope Animal Rescue Society, was waiting. She could take only seven dogs. One, still wearing its pink collar and tags with its former owner's details, looked morose as it was loaded into the boot of her van. Ms Rucheinsky double-checked the paperwork; she was driving to

British Columbia and would have to report her passengers to Canada's border patrol.

Another 30 minutes by air, and Spokane was the final stop. The rest of the animals were taken out of the cargo hold and loaded onto a truck, bound for SpokAnimal, the local shelter. All would be spayed and neutered, and most would be adopted within a week.

With the animals off, the pilots prepared to depart. "There are so many things in life that rob you of this or that, and this is one of those things that fills everybody up—everyone involved," explains Kale Garcia, one of the pilots. "It gets you hooked."

Two days later, Theresa Fall, who has had eight dogs during her 48-year marriage, came to see Liberty. She had watched Wings of Rescue's Facebook video, recorded in Atwater. It was not love at first sight: Liberty bit her. But Ms Fall understood Liberty had been "so traumatised" by being abandoned that it was not personal. What Liberty needed was a home; Ms Falls offered her one. Rescue animals "come with quirks and fears, but you just love it out of them," she says. "And they become the most wonderful, thankful dogs. You can't buy pedigreed dogs like rescue dogs."

Hear that howl?

Hurricane Katrina, which lashed New Orleans in 2005, flooded the public with news of human suffering, as well as images of displaced pets. Shelters across the country banded together to place homeless dogs and cats in other states. It gave people the idea that relocation could help "save animals across the country", says Karen Walsh of the ASPCA. Now charities often fly in before storms hit, to take animals elsewhere for adoption and free up space for newly displaced ones.

Relocation is now key to non-profits' and shelters' strategies to help animals survive. Take the Humane Society of Cedar Creek Lake, a shelter in rural east Texas. Half of the 1,000 or so animals they take in each year are transferred to another shelter, mostly out-of-state. "This would be a miserable job, if we did not have transport," says Jennifer Miller, who works there.

Transports are logistically complex. Animals require health certificates to move across state lines; certain states mandate specific vaccinations and even quarantines. Relocation is also costly and so hard to scale. Operation Kindness, in Dallas, will spend about $1m to transport around 1,500 dogs and cats this year; in 2023 it spent $600,000 to move 1,000. Does anyone object to such high costs or the carbon footprint of rescue flights? Not really. "It's puppies," quips Mr Browde. No constituency of vocal environmentalists or fiscal hawks lobbies for them to die instead.

From 2005 to 2020, the story was almost a fairy tale, with furry protagonists whisked to safety in the north. However, covid presented a dark plot twist. Shelters closed temporarily, and many spay-neuter procedures were put off for that reason, as well as a shortage of veterinarians and rising costs. The pandemic contributed to a deficit of more than 2.7m spay-neuter procedures, according to one academic study. Dog and cat populations have ballooned. "It's easy to have an animal boom in a very short period of time. I think we've proved that," says Ms Walsh of the ASPCA.

The cost-of-living crisis in America has also forced people to make uncharitable decisions about fur babies. Large dogs have been the hardest hit. Many landlords have imposed weight restrictions and bans on certain breeds. Animals are being dumped more often.

Shelters in the North that once took truckloads of animals from the South can accommodate fewer today; they have no space. The ASPCA will move around a third fewer animals this year than in 2019; Wings of Rescue's flights are down by more than half. "Everything's so rough in animal world" that shelters are jostling for space on transport missions and relying heavily on the hope of relocation to save their animals, says Ed Jamison, the boss of Operation Kindness.

Dogs and cats offer a Rorschach test for human nature: do you focus on the positive or the negative? The bleak view is that people treat animals callously, abandoning them to starve or be hit by cars. Anji Kealing-Garcia, one of the volunteer pilots for Wings of Rescue, encountered a dog that had been surrendered at a shelter after a woman redid her living room's upholstery and decided the colour of her dog clashed.

People can be impulsive and faddish. Whole breeds come in and out of style. People rushed to adopt the spotted canines after the release and subsequent remakes of Disney's "101 Dalmatians". Today shelters are crammed with Siberian huskies. After "Game of Thrones" featured dire wolves, which are extinct, breeders and buyers decided huskies were the next best thing, only to find they require huge amounts of care, exercise and grooming.

But shelter pets can also serve as a testament to human compassion and generosity. Americans will spend more than $150bn on their pets this year, around two-thirds more than they did in 2018. (That is more than the gross domestic product of around two-thirds of the world's nations.)

A dog was surrendered at a shelter after a woman decided it clashed with her living room's upholstery

At Operation Kindness, your correspondent briefly pitied a small dog recovering from surgery after one eye was removed, only to be told that one-eyed dogs are adopted faster. "Everyone thinks they're cute, and everybody feels bad for them," says Colton Jones, a veterinarian. But "one-eyed dogs and tripods", three-legged dogs, "are the first out the door." Dogs and cats evacuated from hurricane zones are also adopted quickly. People empathise with their ordeals—and like to have pets with a unique story.

Liberty certainly came with one. It took her a few days to settle in at the Falls' home, eased by the calm companionship of another rescue dog, named Gus. "I sit back and think about all the people who made it possible for me to get this little dog," says Ms Falls. She sends photos and updates to Ms Lohman in California to keep her posted on Liberty's milestones, such as her first hike in Washington. (Liberty loved it.)

It will take years, most agree, to deal with the fallout from this recent population boom. It leaves rescuers with a feeling of urgency. "Every time the door closes, you get this sense of joy. And you go 'Oh wow, we did something cool'," explains Mr Browde, after the daylong trip from California to Washington. "And then you think about the ones that didn't make the flight, and you're back in the doldrums again and think, 'I've got to work harder next time'." ■

International

International | Air cower

Is the age of American air superiority coming to an end?

The growing effectiveness of air-defence systems could blunt the West's most powerful weapons

December 19th 2024

ON AUGUST 26TH the skies over Ukraine filled with the roar of 230 missiles and Shahed explosive-laden drones. It was Russia's biggest such attack and it ought to have been devastating, since the largest missiles each carried as much as 700kg of explosives. Yet it soon became clear that Russia had failed. Ukraine claimed it shot down 201, or 87%, of the missiles, a stark example of how little effect air power has had in Europe's biggest war in more than eight decades.

The inability of Russia, which has Europe's biggest air force with roughly 600 warplanes, to operate freely over Ukraine has caused consternation not just for Vladimir Putin's generals. It has also sparked concern among Western strategists, who have long planned on the assumption that they could gain and maintain control of the skies, protecting friendly troops and raining down bombs and missiles to defeat far larger enemy ground formations. During the two Gulf wars, for example, coalition aircraft penetrated Iraq's integrated air defences and tore apart Saddam Hussein's armoured divisions well before they could engage American or British ground troops. Yet now that anti-aircraft missiles have grown more effective, and at the same time small and cheap drones have proliferated across battlefields, some worry that the West's dominance of the air may be coming to an end.

"In my three and a half decades in uniform, I do not think I've seen a more challenging strategic environment," said Sir Richard Knighton, the head of the Royal Air Force (RAF). "We largely enjoyed air supremacy…That is not going to be the case in the future." This is of particular concern should America and its allies have to fend off an attack by China to take control of Taiwan or by Russia on a member of NATO.

China and Russia both field complex, multilayered air-defence systems that stitch together a variety of advanced sensors and surface-to-air missiles (SAMs). Although such layered air defences date back to the cold war—and proved brutally effective in downing Israeli jets in the Yom Kippur war of 1973—newer digital technologies that allow radar to operate across multiple frequencies have improved detection ranges, including against stealthy aircraft. Longer-range missiles equipped with better guidance seekers can now threaten aircraft hundreds of kilometres away.

The smaller ones can stop, set up, fire and leave in a matter of minutes. Western air forces have struggled to defeat mobile air defences in the past. In 1999 dispersed Serbian SAMs proved a thorn in the side of NATO aircraft, even downing a stealthy American F-117 Nighthawk. But now, rolling back air defences "the size, depth and complexity of those of Russia or China would most likely take weeks and possibly months of full-scale warfighting", argues a report from the Royal United Services Institute (RUSI), a think-tank in London.

To be sure, no defences are impenetrable. In October Israel is thought to have used stealthy F-35s to destroy Iran's Russian-made SAMs, allowing strikes from missiles fired by non-stealthy planes. In a fight in the Pacific, America would probably defang Chinese air defences by assembling large "strike packages". These would contain electronic attack planes and F-35s that would jam or hack radars and SAM systems, opening a temporary corridor for long-range missiles or stealth bombers like the B-2 Spirit and the new B-21 Raider. Fighters would have to circle protectively. Yet America can no longer count on gaining "ubiquitous air supremacy for days and weeks on end", said General David Allvin, the head of the US Air Force (USAF), earlier in 2024. Instead, strategists talk of gaining brief "windows of dominance".

Even this would be beyond the capabilities of most other Western air forces, which are short of radar-homing missiles and the intensive training needed for suppressing enemy air defences. Were America to be distracted in Asia, or to refuse to come to Europe's aid, Europe's air forces would struggle to "establish air superiority over territory contested by Russia or any other state-opponent with mobile SAMs", argues Justin Bronk of RUSI.

Grounded

Equally worrying is whether Western aircraft would even survive the opening strikes of a war to get into the air to fight. Although outmatched in the air by Russia, Ukraine has nevertheless been able to use cheap drones to destroy Russian planes on the ground nearly 600 kilometres from Ukrainian-held territory. In October Iran lobbed ballistic missiles at Israeli air bases, damaging buildings, taxiways and runways. Finland and Sweden practise operating from dispersed and rugged bases, but their model is hard to copy. Many NATO forces fly planes designed to operate from well-equipped bases.

The threat is particularly acute in the Pacific, where America has consolidated many of its planes at a small number of bases, such as Kadena in Japan or Andersen in Guam. A war game by the Centre for Strategic and International Studies, an American think-tank, found that in a war over Taiwan, Chinese missiles would probably destroy hundreds of American, Japanese and Taiwanese planes on the tarmac. America wants to disperse its planes. But that would complicate logistics by requiring people, fuel and parts to be shuttled around the vastness of the Pacific.

If they do get airborne, America's fighters, bombers and support aircraft would then have to contend with a stiff opponent. China's air force is now thought to churn out stealth fighters faster than America does. Although the quality of Chinese pilots is debated, the radar and weapons bolted to their aircraft are increasingly seen as top-class. China fields "long-range air-to-air missiles that have a greater range than American missiles and continues to develop even more advanced capabilities," notes the China Aerospace Studies Institute, a research arm of the USAF. China's PL-17 for example, a 400km-range air-to-air missile, is designed to strike well beyond the front lines, turning American "enablers", such as aerial tankers or command-and-control planes, into juicy targets.

All these threats come at a time when Western air fleets are stretched thin. NATO air forces have shrunk since the end of the cold war (see chart). In theory, aircraft and the weapons they carry have become far deadlier, so fewer of them may be needed to strike a given number of targets. But many air forces, in a bid to cut costs, have followed that logic to the extreme, says David Hiley of Renaissance Strategic Advisors, a defence consultancy. "One of our greatest vulnerabilities is…too few aircraft [and] too few people to fly them."

Between the end of the cold war and 2022, the number of fighters in the USAF fell from 4,321 to about 1,420, reckons the Mitchell Institute, a think-tank. That is well below what is needed, reckons General Mark Kelly, the recently departed head of USAF's Air Combat Command. The Air Force is also weakened by dismal "readiness", a measure of how many planes can fly. Decades of hard flying in the Middle East on constrained budgets have led to planes being cannibalised for spare parts. "We literally ate the muscle tissue of the air force," the general lamented.

Squeezed defence budgets in Europe have cut air forces to the bone. A British parliamentary report from 2023 starkly noted that the "UK simply [has] too few combat aircraft to credibly deter and defend against aggression." European air forces have also been tight-fisted about training for high-intensity missions. Some pilots fly a mere 80 hours a year, though NATO stipulates that pilots need at least 180. The lack of a serious threat since the cold war's end means exercises often emphasise "flight safety at the expense of pushing aircrew, aircraft and weapons systems to their limits", notes Mr Bronk.

Meanwhile, the costs of buying and operating high-tech aircraft have ballooned. America's F-35 programme, key to the modernisation of many NATO and allied forces, is now more than a decade delayed and some $209bn over budget, according to the Government Accountability Office. Even souped-up versions of older models are pricey. The F-15EX, the latest variant of a fighter designed in the 1970s, will cost $90m compared with around $60m (adjusted for inflation) in 1998. Some worry that the cost of programmes in America and Europe to build sixth-generation fighters may be so prohibitive that only small numbers are bought.

Drone troopers

Some argue that stealthy jets are too expensive and should be replaced by swarms of cheap drones. Less drastic are plans to build cheaper uncrewed systems that could accompany a crewed fighter into battle. In April, the USAF awarded the first batch of contracts for its Collaborative Combat Aircraft (CCA) programme, which will produce more than 1,000 advanced drones. Such drones ought to be what military types call "attritable", meaning that they are cheap enough that they can be lost in large numbers. Their first iterations will probably perform basic tasks, such as scouting, refuelling planes or hauling air-to-air missiles that fighter jets would guide to their targets.

But the costs of even these seem to be inexorably rising. CCAs need to be fast and have long ranges in order to keep up with crewed fighters. They probably also need some stealth to avoid detection. And they will need robust communication links that are not easily jammed. None of this is cheap. For now, the USAF wants to keep the price below $30m each, around a third of the cost of an F-35. That might be considered attritable—but only just.

Others think the West should instead embrace the small-drone revolution. The war in Ukraine has shown that small drones can challenge traditional notions of air power, wresting parts of the air away from manned aircraft, albeit at lower altitudes, contesting what some strategists are calling the "air littoral". That might work over cramped battlefields in Europe or the Taiwan Strait, but small drones would lack the range to cross the Pacific, for instance.

Western air forces are still the best in the world. But they should brace for change. "The way air forces once looked at air superiority is no longer applicable," cautions Greg Malandrino, a former US Navy fighter pilot now at the Centre for Strategic and Budgetary Assessments, an American think-tank. "The epic age of Western air dominance…has closed." ■

Stay on top of our defence and international security coverage with [The War Room](), our weekly subscriber-only newsletter.

International | The Telegram

Why warriors should welcome laws of war

Lessons from a 17th-century thinker on preventing crimes against humanity

December 19th 2024

THIS IS A perilous moment for all who seek to regulate conflict with law. From Europe to the Middle East and the Horn of Africa, brutal acts by violent men are challenging the international order founded after 1945, in response to the horrors of industrialised, racialised world war.

At the apex of that post-war order, the UN Security Council is increasingly paralysed by divisions between Russia and China, on one hand, and America and Western allies on the other. Solemn principles, whether they ban the wanton targeting of civilians or the use of starvation as a weapon, are being tested with seeming impunity. Organisations that claim moral authority over belligerents, from the UN to the International Criminal Court, face defiance from governments accused of wrongdoing. At the same time, international law is being harmed by partisans. Notably in the Middle East, rival camps want opponents condemned as barbarous and illegitimate, while paying too little heed to the right of all peoples to peace and security.

In these unhappy times, some may wonder whether laws of combat are a naive dream. Those tempted by gloom should study history. The world order has been in worse shape before. Indeed, many modern laws of war have roots in periods of violence and insecurity. Most important, some pioneers in the field were intensely practical in their approach, appealing to the self-interest of rulers and military commanders.

In search of perspective, The Telegram headed to the handsome, canal-filled Dutch city of Delft. Hugo Grotius, a lawyer, historian and diplomat, was born there in 1583 to a family of Protestant scholars and high officials. He is buried in the city's New Church, beside Dutch kings and queens. His homeland was fighting for independence from the Spanish empire, and was wracked by war throughout his 62 years on Earth. The late medieval world was crumbling and a modern Europe of nations had yet to be born. Institutions, from the Roman Catholic church to the Holy Roman Empire, were losing authority.

Grotius was a child prodigy, composing Latin verse aged eight and entering university at 11. But he was a man of action, not a bystander. He was sentenced to life imprisonment in a dispute over religious tolerance. Dutch schoolchildren learn that Grotius escaped in a chest used to bring him books, carried to freedom by unwitting guards. A time-blackened wooden chest, bound with iron hoops, is displayed at the Prinsenhof museum in Delft. It is "most likely" to be the original, a label cautiously says. The tale is quaint but the times were grim. The same dispute saw Grotius's patron beheaded. The chest is reached by climbing a medieval staircase in the Prinsenhof. Bullet holes on the wall, preserved under glass, attest to the assassination there of a Dutch prince at the urging of the Spanish monarch, the year after Grotius was born.

In that age of tumult, old codes of warfare and chivalry were no longer reliable guides. Traditional church teachings focused on lawful and unlawful reasons for resorting to war, absolving sovereigns and their armies of sin if they began a "just war" to uphold justice and avenge a wrong. The church was less focused on the conduct of war. Those fighting for justice faced few limits, while unjust opponents had no inherent right to use force at all. Wars pitted good against evil, and could not be just on both sides.

Tidy distinctions were a poor fit for a messy age, in which every belligerent, whether monarch or rebel, Catholic or Protestant, claimed to be doing God's work. In his treatise "On the Laws of War and Peace", published in 1625, Grotius offered a solution. Because the identity of the just party may never be known, at least to mortals, wars should be fought as if all sides are upholding justice, with each belligerent guided by identical duties and responsibilities. In the words of a modern editor, Stephen Neff of Edinburgh University, Grotius wished to correct the "very serious error" that no law regulated the conduct of war. To this end he argued that armies in the field belong to "a common moral community" governed by "eternal and immutable ideas of right and wrong", as well as prevailing customs and laws agreed to by states.

War is inevitable, seek to limit its harm

In his treatise, Grotius notes tactics and weapons commonly deemed barbarous by European rulers, from the enslavement of prisoners (demanding ransom for prisoners is the civilised way, he advises) to the use of poison-tipped javelins. But the bulk of his work dwells on fundamental norms, such as the principle of necessity. Foreshadowing modern debates about proportionality in war, Grotius endorses the use of such force as is necessary to defeat an enemy, but no more. If it is sure to end a war swiftly, a city filled with civilians may be bombarded, Grotius writes. But gratuitous harm to women, children, religious figures or prisoners-of-war will not hasten victory and is prohibited. Rape is outlawed for the same reason. At times, Grotius could be talking to present-day leaders. He calls extreme brutality a form of self-harm, advising that campaigns of absolute devastation may radicalise an enemy, inducing such "despair" that opponents become harder to defeat. He considers whether neutral countries may be attacked for delivering arms to an enemy (yes), peaceful goods such as Bibles (no), or dual-use items such as food and ships (maybe).

Modern lawyers are uneasy with Grotius's emphasis on necessity, preferring to prohibit certain tactics and weapons in all circumstances. But his influence remains large and his moderation and practicality—striding "a middle way, between the warmonger and the pacifist", as Professor Neff puts it—suited the "brutally imperfect world" of 17th-century Europe. The times are troubled now. Grotius's injunction to fight as if you are the one upholding justice, though you may never know for sure, is a fine guide. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Business

- Why Louis Vuitton is struggling but Hermès is not
- Workers love Donald Trump. Unions should fear him
- Can Lego remain the world’s coolest toymaker?
- A tie-up between Honda and Nissan will not fix their problems
- The business of nicknames
- Meet the most ruthless CEO in the trillion-dollar tech club

Business | Luxed out

Why Louis Vuitton is struggling but Hermès is not

Worries that the luxury business is peaking are overblown

December 16th 2024

There will be fewer designer handbags and high heels under Christmas trees this year. Spending on personal luxury goods is set to fall by 2% in 2024, according to Bain, a consultancy. Sales of fashion and leather items at LVMH, the world's biggest luxury conglomerate, have tumbled. Kering, which owns Gucci, has issued a string of profit warnings. Anyone who receives Versace goodies from Santa may feel a little less flattered than usual. The luxury brand is selling 40% of its products at a discount.

These travails follow an extraordinary rise for the luxury industry. For two decades it expanded smartly as brands reached new customers. In 2023 global sales of personal luxury goods hit $400bn, up from a little over $100bn in 2000, according to Bain. The combined market capitalisation of the ten most valuable Western luxury firms approached $1trn, compared with around $300bn in 2013. Over the past 12 months, however, their value has fallen by more than a tenth and growth has reversed. Can luxury recapture its lost allure?

The Economist

Two trends fuelled the growth of the luxury business. The first was globalisation. Brands that began life catering to Western elites in places such as London, New York and Paris increasingly turned eastwards for growth—and to China in particular, for good reason. In 2000 there were 39,000 dollar millionaires in the country, according to UBS, a bank; by 2023 there were 6m, more than anywhere else other than America, and twice as many as in Britain, the third-biggest home for millionaires. The Chinese market made up around 15% of global personal-luxury-goods sales in 2023, about five times its share in 2000.

The second trend propelling growth was what industry types call "democratisation". To serve the merely affluent, as well as the stinking rich, luxury brands began selling a selection of items at less lofty prices. Gucci, for example, started peddling white socks, which will set you back a mere $200 (a steal compared with a $3,600 Gucci handbag). Brands from Armani to Valentino launched cheaper sub-brands, often focused on more casual attire. "Until 30 years ago, luxury had no adjectives attached to it," says

Brunello Cucinelli, who runs the luxury brand that carries his name. The industry now talks of “aspirational” or “accessible” luxury. According to BCG, another consultancy, shoppers who spend €2,000 ($2,100) or less a year on luxury goods and services—a trifling sum by industry standards—account for nearly two-thirds of total sales.

Those two engines of growth are now sputtering. Middle-class shoppers in the West have been squeezed by high interest rates and cooling job markets, leaving them with less to splurge on the finer things in life. Luxury spending in China has been crimped by the combination of a housing crisis and a government campaign against showy displays of wealth. Rather than monogrammed totes, Chinese youngsters now carry their belongings around in plastic bags to flaunt their frugality.

Hefty price increases over the past few years have also irked shoppers. HSBC, another bank, reckons luxury products are 54% more expensive today than in 2019. A mid-sized Dior Lady Bag now costs €5,900, up from €3,200 in 2016. Andrea Guerra, the boss of Prada, another luxury brand that raised prices sharply in the past few years, now describes the increases as “a blatant mistake”.

Some in the industry fret that the days of heady growth may not return. There are, after all, only so many middle-class shoppers willing to spend $200 on a pair of socks. And no emerging market will add as many affluent consumers in the decade ahead as China did in the decade past.

Yet the pessimism may be overdone. For one thing, China’s luxury slowdown is not as bad as it seems. True, luxury spending in the country will fall by 26% in 2024, estimates Bernstein, a broker. But that is partly because many Chinese shoppers now spend more during trips abroad, particularly to Japan, where the currency has weakened against the yuan. Bernstein reckons that luxury spending worldwide by Chinese shoppers will be down by only 3% in 2024. “When people ask: What is the next China? I say: It is still China,” notes Laura Burdese, deputy chief executive of Bulgari, a maker of high-end jewellery.

Moreover, not all brands are equally exposed to middle-class shoppers—and, by extension, to the economic cycle. Even as less wealthy consumers feel the pinch, the ranks of the world's very rich continue to swell. UBS reckons there will be 86m millionaires in the world by 2027, up from around 60m currently. *Forbes*, a magazine, counted 2,781 billionaires in its annual tally for 2024, pipping the previous record set in 2021. These cashed-up shoppers tend to vary their spending less with the ups and downs of the economy.

That explains why luxury brands that remain focused on the very rich have continued to grow handsomely. Brunello Cucinelli, which sells $6,000 cashmere sweaters, increased its sales by 12%, year on year, in the first nine months of 2024. Hermès, maker of the world's most coveted handbags, notched up revenue growth of 14% over the same period.

What about the brands that have embraced the masses? Many are now searching for ways to get consumers excited again. Miu Miu, which is owned by Prada, has pushed boundaries with new products (think sequinned knickers) and clever campaigns (one involved giving a big-spending septuagenarian customer a strut down the catwalk). Its approach seems to be working: sales doubled in the first nine months of 2024, compared with the same period a year before. Bottega Veneta, Celine, Chanel and Givenchy have all brought in new creative directors in recent months. Their effect, though, can take time; Bernstein calculates that a brand's earnings peak five years after a new creative director is installed.

Perhaps the biggest question for these brands, however, is whether they can appeal to the very rich while continuing to flog most of their wares to the wider population. In 2021 Valentino killed off its cheaper sub-brand, Red Valentino. Others have followed different strategies to avoid eroding their cachet. Rolex produces its more affordable watches in limited volumes to manufacture scarcity. Chanel and Dior segregate pricey fashion from cheaper beauty products. As Luca Solca of Bernstein puts it, the luxury industry today sells not exclusivity but "perceived exclusivity". For some brands, that perception may need to be rebuilt. ■

To stay on top of the biggest stories in business and technology, sign up to the Bottom Line, our weekly subscriber-only newsletter.

Business | Labour under false pretences

Workers love Donald Trump. Unions should fear him

The president-elect is no friend to organised labour

December 17th 2024

America's unions have had a banner year. In November 33,000 machinists returned to their stations at Boeing having won a 38% wage increase over four years. Their victory followed a seven-week strike that brought the planemaker to its knees. A month before, 47,000 dockworkers walked out for three days at some of the country's busiest ports. And on December 19th the Teamsters union announced a nationwide strike against Amazon, just in time for Christmas deliveries.

According to the Bureau of Labour Statistics, 29 work stoppages involving more than 1,000 employees each began between January and November (the total in 2023 was 33, the most since 2000). The National Labour Relations

Board (NLRB), the federal agency tasked with resolving labour disputes, says petitions to hold a vote to unionise are up by more than a quarter compared with last year.

America's unions are asserting themselves in other ways, too. United Steelworkers loudly opposed the purchase of US Steel, a rustbelt icon, by Nippon Steel, a Japanese competitor (both Joe Biden and Donald Trump have committed themselves to blocking the deal). This month a court blocked the merger of Kroger and Albertsons, two big grocers, putting some weight behind the Federal Trade Commission's argument that the deal could weaken the hand of union workers, as well as raise prices. Despite—or perhaps because of—all this action, unions' approval ratings are at their highest since the 1960s, according to polling from Gallup.

What will Mr Trump's second term mean for this momentum? American conservatism is certainly edging closer to the country's workers. Mr Trump has promised "historic co-operation between business and labour". Yet his inauguration is also likely to bring unprecedented cosiness between the White House and billionaires such as Elon Musk. The populists and plutocrats who make up Mr Trump's uneasy coalition have vastly different ideas about the future of the labour movement. American workers, unions and industry cannot help being caught in the middle.

Unions have notched some early wins. After the 2016 election, Mr Trump horrified organised labour when he nominated Andrew Puzder, a fast-food boss, as labour secretary. (Mr Puzder later withdrew.) This time he tapped Lori Chavez-DeRemer, a pro-union congresswoman. "It shows that he considers those interests a part of his coalition," says Oren Cass of American Compass, a conservative think-tank. Sean O'Brien, boss of the Teamsters, who addressed the Republican convention in July, praised the choice. Some free-market conservatives are "losing their minds" over it, Mr Cass says.

Other company kept by Mr Trump, however, is cause for picket-line panic. Mr Musk, who has been chosen to run a new Department of Government Efficiency, is a threat to organised labour. He has resisted unionisation at Tesla, his electric-vehicle company, which has helped it best the legacy carmakers of Detroit. Along with Amazon, Mr Musk's firms have challenged the authority of the NLRB in court.

There are more reasons to expect a decline in union power. The conditions of high inflation and near-full employment that gave leverage to striking workers during Mr Biden's term have softened. Few think Mr Trump's picks to lead antitrust authorities will be as keen as their predecessors to consider workers' interests when assessing deals. "Whether the labour secretary will have any influence within the White House remains to be seen. She would have to go through layers of advisers to the president to get anything done, and they will be very unsupportive of labour," says Thomas Kochan, a professor of industrial relations at the Massachusetts Institute of Technology.

Talkin' bout a revolution

America's dockers are already testing the strength of Mr Trump's pro-worker rhetoric. The port strike was stopped in October when workers agreed to a pay rise of more than 60%. But unions and port operators are still at loggerheads over automation, with a deadline of January 15th for a deal. Whatever the efficiency gains automation might bring America's plodding ports, a strike would cost the economy dearly. After meeting union bosses last week, Mr Trump has, for now, backed the dockers. Knowing "just about everything there is to know" about the subject, automating ports isn't worth the cost to society, he declared on Truth Social, his online megaphone.

Not all unions, however, can count on the same support. "I think there's going to be a lot more attention paid to the concerns and issues raised by unions in manufacturing sectors," says an official from the first Trump administration. Much of the growth in union activity, though, is coming from workers in service industries. Baristas at Starbucks are one example. Workers at Amazon, who Mr O'Brien says are treated in an "un-American" way by the company, are another.

To secure Mr Trump's favour, unions may have to adapt politically. Many have taken to championing views on topics irrelevant to the livelihoods of those they represent. Earlier this year, for example, a coalition of unions demanded cessation of military aid to Israel. They will need to rein in their campaigning.

After all, wooing workers and courting unions are not necessarily the same thing. J.D. Vance, the incoming vice-president, and Marco Rubio, the presumptive secretary of state, both of whom are currently senators, have introduced a bill that includes provisions for direct worker representation on corporate boards to bypass "big labour". America's unions should brace for competition. ■

To stay on top of the biggest stories in business and technology, sign up to the Bottom Line, our weekly subscriber-only newsletter.

Business | Toying with new ideas

Can Lego remain the world's coolest toymaker?

And get greener too?

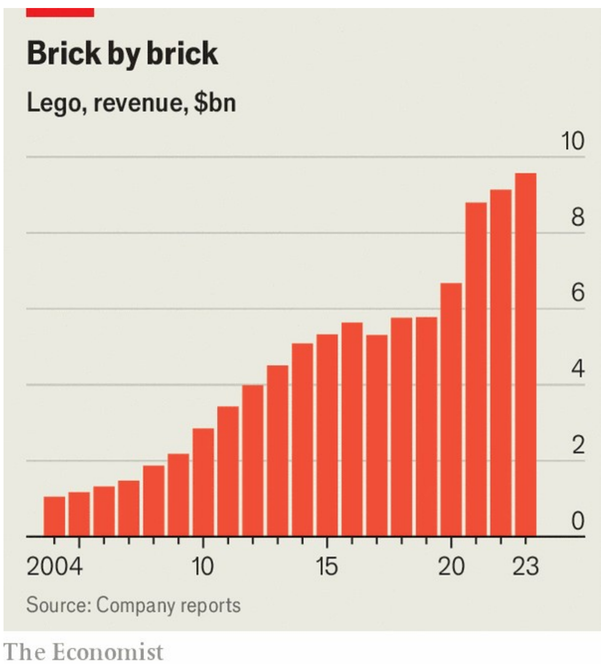
December 19th 2024

The Venus de Milo; "Mona Lisa"; 250 skulls on a mirrored wall; a six-metre *Tyrannosaurus rex*. You can see all this and more at "The Art of the Brick", a touring exhibition currently in Berlin. It is the work of Nathan Sawaya, a former lawyer. His chosen medium? Lego bricks.

Lego guards its bricks jealously. Early in Mr Sawaya's artistic career, the Danish toymaker sent him a cease-and-desist order. (Now a "Lego certified professional", he builds with the firm's blessing.) At Lego's headquarters in Billund, in Denmark, "master builders" work behind tinted windows, hidden from prying eyes. This year the EU's General Court ruled in Lego's favour in a trademark dispute with a German company.

"We are the most reputable brand in the world, so we want to be super-careful with our reputation," says Niels Christiansen, Lego's chief executive. When you are the world's biggest toymaker, that reputation relies on keeping your customers—young and old—enchanted. Mr Christiansen also believes it will depend on making Lego's billions of plastic bricks in a way that is friendlier to the planet.

Lego did not begin with plastic. Its founder, Ole Kirk Kristiansen, started the firm in 1932 as a maker of wooden toys, truncating *leg godt*, Danish for "play well", to form its name. He patented his plastic bricks in 1958 (and died later that year). Two years on, after a fire destroyed its wooden-toy warehouse, Lego chose to stick with only plastic bricks.



Lego nearly went under in 2003-04 after branching into too many areas, such as children's clothes and dolls. Jorgen Vig Knudstorp, who became chief executive in 2004, sold its theme parks and refocused the firm on bricks and articulated "minifigures". Under Mr Christiansen, who took over in 2017, Lego has continued to thrive, while most rivals have struggled with the toy business's ever-shifting fads.

Over the past 20 years the company's revenue has grown ten-fold, reaching DKr66bn ($9.7bn) in 2023 (see chart). A decade ago it became the world's largest toymaker by revenue. Today its sales are greater than those of its two biggest rivals—Mattel, creator of Barbie, and Hasbro, maker of Nerf guns—combined. In 2023 it opened 147 shops around the world, taking its total to 1,031, and built factories in America and Vietnam. Sales in the first half of 2024 were up by 13%, year on year, even as the global toy market shrank. In 2004 the company was loss-making; in 2023 its net profit was DKr13bn, implying an enviable margin of nearly 20%.

Playing to win

Can the toymaker maintain its success? "We need to stay relevant for kids and adults," says Mr Christiansen. New sets keep coming; nearly half the products in its range in 2023 were released that year. The firm also makes more than 140 elaborate sets, some with thousands of pieces, for adult fans of Lego (AFOLs), who now account for one-fifth of sales.

But competing with the online world for time is hard. On average, American children aged 8-12 spend 4-6 hours a day watching screens of various types, from smartphones to televisions, according to the American Academy of Child and Adolescent Psychiatry. That is why in 2022 Lego invested in a partnership with Epic Games, maker of "Fortnite", a popular video game, to build "engaging digital experiences for kids of all ages". Their arrangement has proved lucrative.

So far Lego's attempts to find a green alternative to plastic, the company's other big challenge, have been less successful. Still, Mr Christiansen plans to make bricks entirely from sustainable material by 2032. Lego has started manufacturing some pieces with a new plastic made using renewable energy and recycled material. Renewable resin is up to 60% dearer than plastic made of fossil fuel, but Mr Christiansen says he is prepared to absorb the cost. By buying lots of it, he hopes to create a market for the material and push its cost down. He intends to reduce Lego's carbon footprint by 37% by 2032 (compared with 2019) and be carbon neutral by 2050.

Family ownership allows Lego to take the long view, Mr Christiansen says. (A foundation owns a quarter of the firm; the Kristiansen family owns the rest.) After 2032 the path to carbon neutrality will be steeper, he admits, but "we serve kids"—the inheritors of the planet. And, he surely hopes, tomorrow's AFOLs. ■

To stay on top of the biggest stories in business and technology, sign up to the Bottom Line, our weekly subscriber-only newsletter.

Business | Honda’s accord

A tie-up between Honda and Nissan will not fix their problems

Speed, not scale, is what they require

December 18th 2024

Honda put nostalgia to the fore on December 18th when it announced that the Prelude, a nameplate last produced some 25 years ago, now being relaunched as a hybrid-electric, would come with the option of a system that simulates gear changes and combustion-engine noises. The message, however, was quickly drowned out by news with far more bearing on the Japanese carmaker’s future. It is considering merging with Nissan, a floundering domestic rival, to create the world’s third-largest carmaker by sales, behind only Toyota and Volkswagen. Yet joining together will not fix the problems of a duo stuck in the past.

Both firms have struggled with the upheaval in the car industry. Keeping pace with Chinese rivals in their home market and, increasingly, around the world requires rolling out electric vehicles (EVs) and investing heavily in software while continuing to sell the petrol cars that will finance the shift. Donald Trump's threats to levy tariffs when he re-enters the White House, and the possibility of retaliation, has added uncertainty. Honda and Nissan seem to have concluded that a partnership to develop EVs unveiled in March will not be enough.

Nissan in particular is dangerously weak. Operating profit plunged almost 90% in the six months to September, compared with a year before. Its market share has dwindled in North America, its most important market, and sales have gone downhill in China. Although it announced 9,000 layoffs and a 20% cut in manufacturing capacity in November, investors remain unconvinced that it has a clear strategy for EVs or hybrids, which are growing in popularity with car buyers.

An enlarged group made up of Honda, Nissan and probably Mitsubishi, a smaller carmaker in which Nissan has a controlling stake, could invest more in technology to catch up with rivals. The news of a potential tie-up has been greeted with glee by shareholders in Nissan and Mitsubishi, as well as France's Renault, which holds a 36% stake in Nissan (it might sell some of this to Honda or else convert it into a stake in a less troubled car firm). Honda's investors, though, seem wary; its shares fell on the news.

A deal would undoubtedly mean cost savings through factory closures and job losses, even in Japan, where restructuring is frowned upon. The ministry which oversees the car industry called the reports "a positive development". That is probably because the alternative—a foreign takeover—is even more unpalatable to the Japanese government.

Rumours have swirled that Foxconn, a Taiwanese contract manufacturer that wants to become as dominant in the production of cars as it is in consumer electronics, was talking to Nissan about a takeover that would have allowed it to acquire skills in designing and producing hardware such as chassis and suspension systems. Chinese carmakers might also be interested in buying Nissan for its production facilities in America, which would help them sidestep punitive tariffs on imported EVs. Foxconn's approach is likely to have accelerated talks between Honda and Nissan.

Would a deal secure the future of the firms involved, though? Pooling resources would help. Yet the biggest advantage Chinese firms have is not scale but speed. New models are developed in three years or fewer, half the time it takes foreign firms. Software is updated in the blink of an eye. No legacy carmaker from Japan, America or Europe has yet worked out how to match the pace at which Chinese carmakers are innovating. Bringing together two ponderous Japanese giants, whose best years may be behind them, is unlikely to be the answer. ■

To stay on top of the biggest stories in business and technology, sign up to the Bottom Line, our weekly subscriber-only newsletter.

Business | Bartleby

The business of nicknames

When they help brands and employees. And when they hurt

December 19th 2024

The Can OF HAM cannot find a buyer. It may be hard to see the Gherkin because the Walkie-Talkie and the Cheesegrater get in the way. London's skyline is made of glass, steel and nicknames. Sometimes these names start out as criticism: the city's tallest building got its name when it was described as a "shard of glass through the heart of historic London" by a heritage group. But in time, they denote familiarity and, often, affection. On December 13th the City of London approved plans for a new skyscraper that will be as tall as the Shard; the chances are high that it will eventually wind up with a sobriquet based on its shape.

There are good reasons why buildings acquire monikers. The Bottle Opener resonates more than the World Financial Centre Shanghai; the Lipstick

Building is easier to remember than 885 Third Avenue. Consumers give brands nicknames, too. BMW owners in Britain drive “beamers”; in America they might be at the wheel of a “bimmer”. If you’re a high-roller, you might wear a Rollie on your wrist. You probably would not shop at Tarjay, an ironically Gallic pronunciation of Target, a mass-market retailer. Athletes’ nicknames can become brand-like. LeBron James, a basketball star, successfully opposed an attempt by a cruise liner to trademark “King James”.

Brand nicknames are not always flattering: Neiman Marcus, another retailer, was once christened “Needless Markup”. But usually they suggest that consumers feel a genuine connection to a product. In a recent paper Zhe Zhang of Western University in Canada and Vanessa Patrick of the University of Houston looked at how people react to the use of nicknames by other consumers. In one experiment participants saw an online review of a new menu item at McDonald’s; some saw a version in which the chain was referred to by that name and others saw one that called it “Mickey D’s”. The chances that the review would be reported as fake were much lower when the nickname was used. A nickname also made other people more likely to buy a product or pass on the review to a friend.

Mr Zhang and Ms Patrick tested whether these same beneficial effects would also materialise if the firm used its nickname in its own communications (by showing people messages in which, among other things, Walmart referred to itself as Wally World). The benefits disappeared. Nicknames that seem to genuinely reflect consumers’ fondness for a brand can send a positive signal. But companies referring to themselves in this way feels inauthentic. Imagine someone called John saying that people call him “J-Dawg”, and you can understand why.

Nicknames are part and parcel of many workplaces, too. In a new paper Mr Zhang and Shuili Du of the University of New Hampshire found that 87% of the employees they surveyed had encountered nicknames at work. Some occupations are awash with banter: one guide to Australian building sites has a long list of common nicknames that includes “wheelbarrow” (only works when pushed), “broken arrow” (doesn’t work but can’t get fired) and “deck chair” (always folds under pressure).

Workplace nicknames are sometimes unpleasant. But even if a nickname is meant as a mark of affection, it matters who coins it. The difference between monikers among friends and nicknames at work is that companies are hierarchies. In their paper Mr Zhang and Ms Du look into the differences between upward nicknaming, when workers christen a boss, and downward nicknaming, when the reverse happens.

In one experiment, they asked participants to imagine a scenario in which a worker refers to their boss as "Panda" because of a tendency to dress in black and white. Other participants were told to imagine a boss calling an employee by the same nickname for the same reason. People associated the use of this nickname by the boss with a lower concern for employee welfare and less psychological safety, among other things; when the nickname was given to a manager, it was associated with a greater sense of well-being among staff.

For managers, the lessons ought to be apparent. Nicknaming is a natural habit; it can often be a positive one. If the new skyscraper in London does not get a moniker, it will almost certainly be because it is boring. But the best nicknames emerge from the bottom up. Brands should be careful about using them. Bosses should stamp on them if they are causing distress—but otherwise leave the name game to others.■

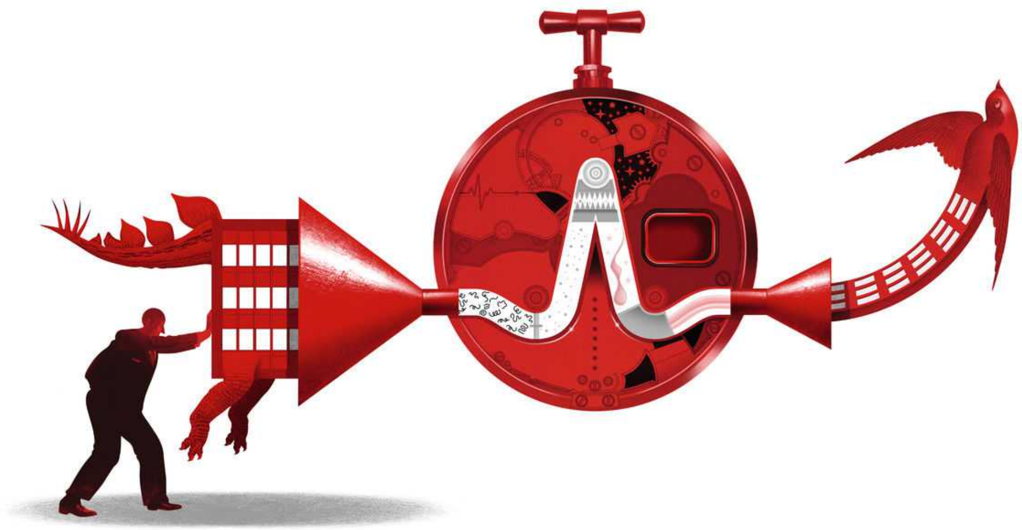
Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Business | Schumpeter

Meet the most ruthless CEO in the trillion-dollar tech club

Hock Tan of Broadcom is less Jensen Huang or Tim Cook and more Jack Welch on steroids

December 19th 2024



Brett Ryder

THE BOSSES of America's trillion-dollar technology giants represent two CEO archetypes. First, the eccentric visionary founder: Mark Zuckerberg of Meta, Elon Musk of Tesla and Jensen Huang of Nvidia are obsessed with their products; wield untrammelled power thanks to the strength of their will, the size of their shareholding, or both; and make questionable sartorial choices. Second, the caretaker: Tim Cook of Apple, Satya Nadella of Microsoft, Andy Jassy of Amazon and Sundar Pichai of Alphabet, Google's corporate parent, are low-key, sensibly attired hired guns who mostly take great existing products and turn them into fabulous businesses.

Hock Tan of Broadcom, which joined the trillion-dollar club on December 13th, does not fit neatly into either category. The company's market value surged by 40% in a week owing to brighter-than-expected prospects for its line in designing custom artificial-intelligence (AI) microprocessors for clients such as Google and Meta. This immediately drew comparisons to Mr Huang and Nvidia, whose own AI chips have propelled its market capitalisation to $3.4trn over the past couple of years. Yet Broadcom is, true to its name, much broader than that. And Mr Tan cuts a distinct figure in the world of big tech.

Besides the sexy AI processors, Broadcom sells everything from worthy but dull wireless-networking chips to equally worthy and duller "virtualisation" software for managing company IT systems across in-house servers and the computing cloud. Whereas most other tech titans play up the links between their various units, Broadcom is a proudly disjointed conglomerate. Asked in an interview in 2023 whether he had an overarching strategy for its 23 divisions, Mr Tan responded with characteristic candour: "The answer, I hate to say, is 'no'."

Mr Tan is unlike his fellow 21st-century technology bosses in a number of revealing ways. He was born in Malaysia, not exactly a hotbed of global C-suite talent. He is a decade or so older than Messrs Cook and Huang, the eldest of the Magnificent Seven's CEOs, and three decades Mr Zuckerberg's senior. You will be hard-pressed to find a photograph of him wearing anything but a starched shirt and a sober jacket.

His method is likewise singular—for despite his professed lack of strategy he is nothing if not methodical. William Kerwin of Morningstar, a firm of analysts, likens it to that of the buy-out barons who first recruited Mr Tan in 2006 to run what was then Avago, a privately held chip-designer. Identify a mature business, ideally one that is critical for customers. Buy it at a decent price. Cut it to the bone by reducing the workforce, eliminating less lucrative products and slashing research-and-development budgets. Jack up prices for captive clients. Harvest the cash. Fork lots of it out to shareholders through dividends and share repurchases, which big tech tends to shun. Take what is left and repeat.

Mr Tan recoils at comparing Broadcom to private equity. True, his penchant for takeovers ($150bn-worth since Avago went public in 2009), an obsession with cashflow and an impatience with underperformers recall the buy-out industry. But above all, in the words of Doug O'Laughlin of SemiAnalysis, a research firm, he is a "capital-R ruthless" operator, getting down and dirty in ways that pinstripe-suited financiers do not.

A more apt comparison than private-equity moguls may be Jack Welch, who ranked, yanked and dealt his way to becoming an icon of late-20th-century capitalism at General Electric. Except that Mr Tan is a much more disciplined dealmaker than Welch, who strayed so far from GE's industrial bread and butter as to buy the NBC television network and make a reckless foray into finance that ultimately brought GE low under his successors in the 2000s.

"Neutron Jack", so nicknamed after the neutron bomb that kills people but leaves buildings intact, also looks like Mother Teresa next to the pink-slip-happy Broadcom boss. After the acquisition in late 2023 of VMware, which makes virtualisation programs, he sacked several thousand staff, narrowed the product range and raised prices for what remained as much as ten-fold. In the latest quarter VMware's sales were nearly double those in the first quarter of 2024. Its operating margin is an enviable 70%.

New buyers of Broadcom's AI chips, which are rumoured to include OpenAI, a leading builder of cutting-edge AI models, and ByteDance, TikTok's Chinese owner, should brace for similar treatment. In early December, while accepting a lifetime-achievement award from the Global Semiconductor Alliance, a trade body, Mr Tan chastised his industry for being "naive" in accepting a 20% decline in chip prices every year even as car prices rose 10%. "We are really complicit in creating this rather distorted expectation of paying less for more," he declared.

In hock to Tan

Broadcom's customers will almost certainly, like VMware's, grumble but pay up. They all want to reduce their dependence on Nvidia, whose graphics-processing units are not exactly cheap and more power-hungry than

Broadcom's at a time when energy is becoming a constraint on the growth of AI. Mr Kerwin of Morningstar expects custom chips to account for 20-25% of the market for "accelerated computing" by 2027, up from perhaps 10-15% today. Mr Tan's company will grab a lion's share of that.

Mr Tan, for his part, will want to reduce Broadcom's reliance on AI chips. Having been stymied by Donald Trump's first administration from buying Qualcomm, a large chip-design rival, in 2018, he may steer clear of semiconductor deals and instead spring another software surprise. One thing, though, will not change. In Mr Tan's tech-dom, cash will remain king—as well as queen, prince, princess and the rest of the royal household. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Finance & economics

Finance & economics | Staying power

Ukraine is winning the economic war against Russia

Whether that lasts depends on its ability to overcome acute shortages of power, men and money

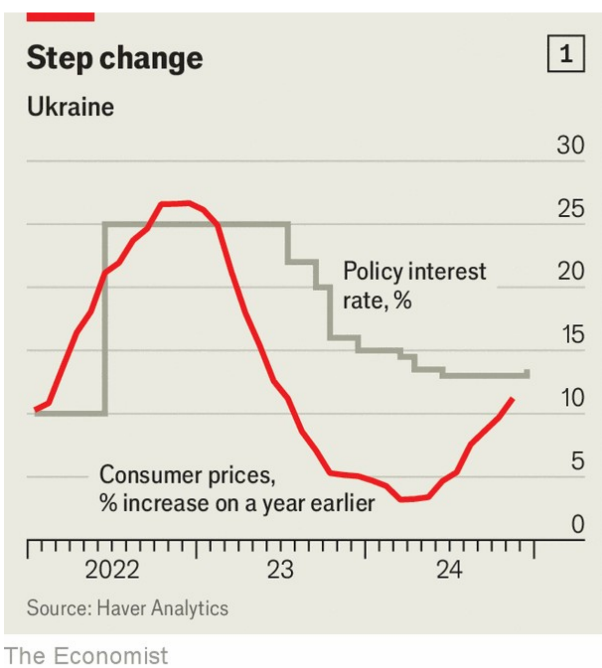
December 18th 2024

EVERY BUSINESS in Ukraine has a reference point. For Mykhailo Travetsky, a farmer in Pryluky, it was the first six weeks of the all-out invasion. As a Russian column stalled on a nearby highway, his farm became no-man's land. Locals fought gun battles to keep the Russians off it. Shells whizzed overhead. And Mr Travetsky milked his cows twice a day in body armour, automatic rifle cocked at his side.

Since then the farm has constantly adapted to new difficulties. When Russia first bombed Ukraine's energy system, rendering fridges and milking machines unusable, Mr Travetsky pivoted to making soured-milk products and cheeses with longer shelf lives, like feta. When wealthy families disappeared, he cut his prices and started supplying the pensioners who remained, who needed their milk delivered.

Ukraine's economy at large has reinvented itself to navigate wartime realities. It remains one-quarter smaller than in 2021. Yet for the first time since 2022, the start of the all-out invasion, it is healthier than its enemy's in some key respects. Ukraine's central bank forecasts GDP to grow by 4% in 2024 and 4.3% in 2025. The currency is stable and interest rates, at 13.5%, remain near their lowest in 30 months. Contrast that with Russia, where rates should soon hit 23% to arrest the rouble's fall, banks look fragile and GDP is set to grow by just 0.5-1.5% in 2025. But Ukraine faces strong headwinds: the uptick of war, the downtick of domestic resources, and Donald Trump. How long can its economy hold out?

Ukraine's economic history since 2022 has had three phases. In the first, amid heavy fighting, the country scrambled to put out fires. Martial law was introduced and 14m people fled their homes. Russia blockaded Black Sea ports, choking off Ukraine's exports. The central bank's actions were subordinated to military objectives. In the first half of 2022 it financed half of the public deficit. It imposed strict capital controls and flooded banks with liquidity. Inflation soared and GDP shrank by a third (see chart 1).



The second phase began after Ukraine repelled Russia's advances in the country's south, in mid-2022. As confidence improved, GDP stabilised. A UN-brokered deal allowed Ukraine to ship grain again. The central bank went back to fighting inflation. In early 2023 Ukraine signed a package with the IMF; the central bank stopped monetising the budget deficit. As aid flowed in, foreign-exchange reserves recovered. Capital controls were eased.

The return of macroeconomic stability allowed the government and firms to war-proof their operations. One priority was to protect productive assets against Russian missiles. Industrial parks were built in safer western regions. Businesses invested abroad to war-proof their income. Expatriates have generated income from abroad, too: last year one in ten new firms in Poland was set up by a Ukrainian.

Another task was to reallocate resources towards the needs of a protracted conflict. Public spending has more than doubled, and now accounts for two-thirds of GDP, up from 41% in 2021; defence and security alone account for nearly 30% of GDP. Some state firms have overhauled themselves. Naftogaz, the country's hydrocarbon champion, named a supervisory board in 2023, staffed with independent directors from European blue-chips. It posted 79bn hryvnia ($2.4bn) in losses in 2022 but pocketed 24bn hryvnia in profit in the first half of 2024, thanks to increases in gas output and green-energy investments.

Private firms have pivoted, too. After Mariupol, a key port on the Sea of Azov, was obliterated in the spring of 2022, Vitalii Lopushanskyi, an entrepreneur, created UADamage, an AI outfit that parses satellite images to build interactive maps featuring every building, road or bridge that has been destroyed. He has since mapped more than 200 cities. He also teaches drones to spot mines and guide robots on the ground to disable the devices.

The last piece was to keep hard currency flowing in. In July 2023 Russia refused to renew the grain deal. Ukraine responded by opening its own maritime corridor, securing it through a remarkable campaign of sea deterrence by drones and missiles. That allowed it to resume shipments of not just grain but also metals and minerals, its second-biggest export.

These measures, together with Western aid, have prevented Russia from robbing Ukraine of the resources and morale it needs to keep fighting. Now a third phase is beginning, during which the country's economy faces its biggest threats yet: acute shortages of power, men and money.

Take power first. In 2022 and again this spring and summer, Russia relentlessly attacked Ukraine's grid. Despite continuous repairs, the country can count on less than half of the 36 gigawatts (GW) in generation capacity it could tap before the war. And lately Russia's campaign has resumed. On December 13th it sent 93 missiles and nearly 200 drones to transmission assets and thermal power plants. Twelve missiles got through, forcing blackouts. On November 27-28th, in a reckless escalation, Russia had already struck transmission facilities alongside nuclear power stations. That cast a darker shadow over Ukraine's wintertime energy capacity, around 70% of which comes from nuclear power.

On a more positive note, the country has become better equipped to absorb such shocks. In December it expanded its electricity-import capacity from the EU by almost a quarter, to 2.1GW. Many food producers ferment residues from their operations into biogas that they use on-site. A lot of farmers also have diesel generators. Mid-sized firms often have natural-gas plants, which they sometimes pair with wind and solar power. Industrial firms use all these, together with imports, to avoid catastrophic outages.

The Economist

Coping strategies and ongoing repairs will contain the country's average power deficit to 6% of total demand in 2025 and 3% in 2026, says Andriy Pyshnyi, the governor of Ukraine's central bank. Heavy users complain of multifold increases in power prices since the start of the war, even when there are no shortages. Timofiy Milovanov of the Kyiv School of Economics reckons electricity problems could shave up to one percentage point off GDP growth next year.

The second problem—and the thorniest—is the lack of labour. Since 2022 mobilisation, migration and war have caused the workforce to shrink by over a fifth, to 13m people. Demand is strong: the number of job openings has reached 65,000 a week, up from 7,000 during the first weeks of the war—but the average opening attracts only 1.3 applications, compared with two in 2021. Wages are rising. The economy and defence ministries are locked in a tug of war over mobilisation: where to strike the right balance for the country's future. Ukraine's civilian leadership has so far declined the maximalist demands of military leaders, to the detriment of the front line.

There are no easy fixes. Now even industries deemed critical can protect only half of their workers from the front line. Hiring many more women is tricky: there are nearly as many of them who have migrated abroad as men who are at the front or have come back from it unable to work, says Hlib Vyshlinsky of the Centre for Economic Strategy, a think-tank in Kyiv.

It does not help that money is scarce—the third problem. Small farms and firms struggle to borrow enough to finance their operations. Financing long-term capital spending is virtually impossible. The soaring costs of doing business have hit profits. Companies with domestic customers are passing through some of the increases, pushing up inflation. Exporters, which compete in global markets, do not have that option. Mauro Longobardo, who runs ArcelorMittal's local branch, says he has burnt $1bn in cash since the war started—just to keep his facilities maintained. Half his steelworks are down.

The government, too, is spending much more money than it pockets. In 2025 its budget deficit is projected to near 20% of GDP. In principle nearly all of it—$38bn—will be financed from external sources. In June the G7 agreed to a $50bn debt package for Ukraine, to be repaid from interest generated by Russia's €260bn-worth ($273bn) of sovereign assets frozen in the West. In early December America transferred its $20bn share to a World Bank fund that Ukraine can use for non-military purposes, though Mr Trump could try to make it harder for Ukraine to access the money.

Ukraine can probably survive without American funds in 2025 anyway. Together with an €18bn tranche the EU agreed to provide under a previous programme, contributions from other G7 members would plug the gap left by Uncle Sam, says Dimitar Bogov of the European Bank for Reconstruction and Development. Ukraine also has healthy foreign-exchange reserves. These are projected to grow to $43bn—five months' worth of imports—by the end of 2024. Were America to pull out, however, Ukraine could run out of road in 2026. Cash-strapped and politically weak, EU governments may struggle to foot another big bill. And Ukraine's ability to collect more at home is limited: a proposal to raise taxes by 4-5% of GDP was withdrawn this summer after strident opposition.

Military developments could cause a crunch before 2026. Yet businesses are cautiously optimistic. Mr Travetsky says he turned a small profit this year, the first since taking on the farm. He is thinking about starting a new line in parmesan cheese. "I've done the training, and I know the recipe," he says.

But the obstacles remain daunting: “Try making it when you don’t have electricity 12 hours a day.” ■

For more expert analysis of the biggest stories in economics, finance and markets, sign up to Money Talks, our weekly subscriber-only newsletter.

Finance & economics | The other war's winners and losers

Conflict is remaking the Middle East's economic order

Iran is boxed in as Saudi Arabia, the UAE and Turkey look to capitalise

December 19th 2024

THE LIQUIDITY crunch could not have come at a worse time. Usually, most of Hizbullah's budget arrives on a plane in Damascus, the Syrian capital, with the country's Iranian ambassador. The cash is then transported across the Lebanese border to the Shia militia. But on December 8th, just weeks after Hizbullah stopped fighting with Israel in Lebanon, Bashar al-Assad, Syria's president and Iran's ally, was overthrown. Iran evacuated officials and soldiers in Syria. Already financially emaciated, Hizbullah faces rebuilding deprived of its surest cash flow.

Iran has long vied with Gulf states for influence over the Middle East, despite being under American sanctions. Its financiers and traders have outfoxed Western officials with a labyrinthine economic system, built primarily across friendly countries, which funded proxies, traded arms with Russia and took oil payments from India and China. That was, at least, until October 7th 2023, when Hamas's attack on Israel plunged the region into chaos and started to blow holes in Iran's networks. A year on, the Islamic Republic looks like the war's big economic loser. Saudi Arabia, the United Arab Emirates (UAE) and Turkey, all jostling to pick up lost trade and influence, are its likely winners.

To dodge sanctions, many of the supply chains Iran relies on to move capital and goods abroad criss-cross through allies (legitimately) as well as less friendly countries (often disguised). A weapons shipment destined for northern Russia, for instance, may pass through Syria and then be smuggled into Turkey before travelling by sea around Europe. Other big Middle Eastern economies, such as those in the Gulf and Turkey, which trade more in the open, can take simpler routes and have more options when war makes transport tricky. But Iran's trade, banking and aid, the backbone of its regional outreach, are more furtive by necessity, and therefore more vulnerable.

Take trade first. Homs, in central Syria, was a trading outpost for Iranian goods under American restrictions. Iranian firms directed enough goods through Syria, according to an American official, to make Iran one of the world's biggest arms manufacturers. Chemicals and mechanical parts were also shipped through Syria. The big buyers were Belarus and Russia, as well as Mr Assad himself. Iran now needs at least one new customer, and a way to reach it.

The loss of financiers in Damascus and Beirut, Lebanon's capital, is also a headache. As much as half of Iran's revenues come from oil exports in a typical year, despite the American sanctions. Payments flow through a series of correspondent banks and small exchanges, registered to international aliases and allies. One of many such arrangements made use of Hizbullah's supporters in Lebanon's diaspora, who, through companies affiliated with the militia, took payments for Iranian oil from countries ranging from Turkey to Senegal, and kept some profit for themselves. But Muhammed Qasir, the man who ran the network, died in October in an Israeli air strike.

According to Israeli officials, Iran has had a hard time getting things going again in his absence.

Such losses could be disastrous for Iran’s remaining supporters in the Middle East. With Hamas and Hizbullah greatly weakened, and Mr Assad in exile, only the Houthis, the proxy over which Iran has the least influence, fighting for control over Yemen, are not in disarray.

Iran is now struggling to get weapons or cash to Beirut and the Palestinian territories to replenish forces, as much materiel arrived through Syria. The alternative is moving supplies covertly, but that limits the size of shipments to what can be hidden and takes longer. Extra cash is desperately needed. Al-Qard Al-Hassan, the financial institution at the centre of Hizbullah’s banking network, was targeted during Israeli air strikes in October. Though Hamas’s finances, run out of Istanbul, are stable, it is difficult to get any cash into Gaza, according to one official in Turkey.

It does not help that Iran’s finances have also been hit by debts that must now be written off. Its government has lost billions of dollars in loans to Mr Assad, which propped him up while Syria was shut out of global markets. Officials suggest a combination of personal loans to Mr Assad and credit lines for oil came to $5bn a year.

Meanwhile, the Gulf and Turkey are hoping to scoop up lost influence. As America has grown less willing to spend in the Middle East, Gulf states have become the biggest external financiers to its poorer countries. Qatar, Saudi Arabia and the UAE lent $34bn across the Middle East and North Africa in 2021-22, compared to $17bn in 2019-20. Their loans are also lubricating economies that Iran previously helped finance, including Kuwait. Long friendly with Iran, even as it enjoyed good relations with the West, Kuwait has recently become less willing to trade with the Islamic Republic, Iranian officials complain.

Gulf of expectation

The UAE and Saudi Arabia are negotiating with America to pick up some of the reconstruction bill in Gaza in return for a Palestinian state. In Syria, Turkey hopes to profit from its support for Hayat Tahrir al-Sham, the biggest presence in the new government. Some Western officials worry that Syria under the thumb of Recep Tayyip Erdogan, Turkey's president, would be little better than it was under a leader loyal to Iran and Russia. But on December 18th the Iranian rial plunged to its lowest ever level against the dollar. The Syrian pound, meanwhile, has soared by 25% in two weeks. The market, at least, disagrees. ■

For more expert analysis of the biggest stories in economics, finance and markets, sign up to Money Talks, our weekly subscriber-only newsletter.

Finance & economics | GiveSmart

The search for the world's most efficient charities

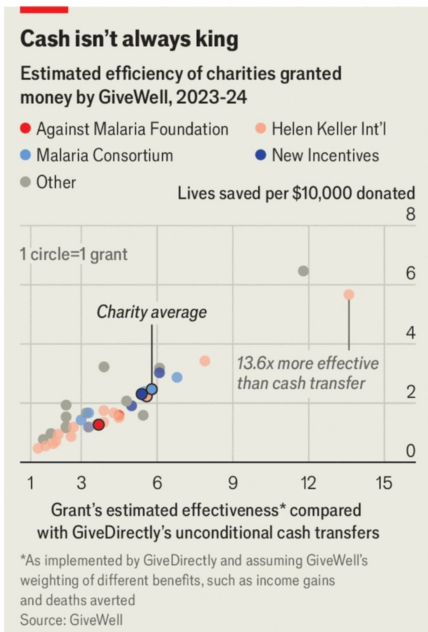
What the data say about doing good well

December 19th 2024

GIVING IS BIG business. In 2023 Americans alone handed $557bn to charities, according to the Giving USA annual report. So identifying which charities are the most efficient in terms of good done per dollar given is important. GiveWell, a charity evaluator, tries to do just this, and currently recommends giving to four worthy organisations. How is this recommendation put together, and how good is it?

Determining which charities get more bang for their buck comes with challenges. One is data. Any rigorous assessment of efficiency requires someone to catalogue both money spent and outputs achieved. It also requires data on how outputs (such as teacher training) translate into outcomes (such as learning).

Any effort to assess how different charities fare relative to each other must also grapple with the fact that they seek to do different good things: some to cure blindness, others to preserve natural parks. To compare them means these goods must be compared, too—a moral judgment with no correct answer.



The Economist

Despite these difficulties, outfits like GiveWell argue that with sufficiently good data, and reasonable assumptions about moral considerations, it is possible to try to identify the most efficient ways to give. GiveWell uses a mix of academic scholarship, impact evaluations, site visits, reviews of financial documents, interviews with experts and other data to identify its top charities. To compare charities doing different things, it uses a system of moral weights. For instance, doubling the consumption of 100 people is valued roughly the same as averting the death of one person in their 30s. Averting the deaths of young children is valued most highly.

No surprise, then, that GiveWell's four top charities all focus entirely or largely on saving children's lives. Two focus on preventing malaria, which kills 600,000 people, mostly children under five, every year: the Malaria Consortium delivers preventative medicine, at a cost of $7 per prevented infection; the Against Malaria Foundation delivers bednets, at about $5 per net. The other two give vitamins and vaccines: Helen Keller Intl delivers vitamin A supplements (about $2 per child per year); New Incentives gives cash handouts for child vaccinations ($155 for a full course).

How efficient are they? According to GiveWell's calculations, the number of children's lives saved by its four favoured charities ranges from 1.6 to 3.1 per $10,000 donated—a solid return on investment.

But how does this stack up against other approaches to giving? A natural comparison would be with the practice of simply handing over money to the very poor. This is also the comparison favoured by GiveWell. GiveDirectly, a charity that despite the name is not related to GiveWell, does just that: for every dollar donated to it, 80 cents ends up in a poor person's pocket. Recipients then use it as they see fit, with studies showing rising incomes, better health and lives saved as a result.

GiveWell argues that its top picks win out. According to its own calculations, and using its moral weights, its four favoured charities provide between 3.7 and 5.8 times the benefit of GiveDirectly's unconditional cash transfers, per dollar given. Several past external reviews have found such GiveWell estimates to be reasonable.

GiveWell's analysis might make sense, but those who contest its rankings prefer to focus on its priorities. GiveWell's moral weights heavily prioritise saving lives over other outcomes. In addition to averting deaths, the top charities do also help many more people avoid terrible, non-lethal disease. But if you care about literacy or political rights as a good in itself, then you would apply a different set of moral weights to charities.

GiveWell also does not give any weight to the preferences of those in need; some might rather have more cash in their pockets than better health. Those preferences may be better assessed by smaller local organisations, and better met by simply handing over cash. The debate about which approach is best will go on. Data alone, as GiveWell admits, cannot provide the answer. But it is a good start. ■

For more expert analysis of the biggest stories in economics, finance and markets, sign up to Money Talks, our weekly subscriber-only newsletter.

Finance & economics | Nuts in Brazil

Why Brazil's currency is plunging

Fiscal and monetary policy are now pitted against one another

December 19th 2024

Reuters

THE BRAZILIAN real holds an ignominious title this year: it is the worst-performing major currency, down by more than 20% to a record low of almost 6.3 to the dollar. The situation has grown even uglier over the past week, with the sell-off accelerating despite several interventions by the central bank.

The slump is fuelled by panic about fiscal plans. In November the government of Luiz Inácio Lula da Silva, the left-wing president, announced a long-awaited programme to curb spending, including earnings caps for public-sector workers. At the same time, though, the finance minister, Fernando Haddad, promised extensive tax cuts for low- and middle-income workers. Investors took the announcement as proof of insufficient commitment to fiscal discipline. Given Brazil's budget deficit of almost 10% of GDP and gross debt of nearly 90% of GDP, jitters are understandable.

The Economist

On December 17th the central bank sold over $3bn in currency reserves in a failed attempt to prop up the real. It has already raised interest rates three times since September, including a surprise increase of a full percentage point on December 11th. Even as many emerging-market central banks have begun to cut rates, taking their cue from the Federal Reserve, investors expect more monetary tightening in Brazil over the coming year. The country's two-year government bonds now yield more than 15%, up from just under 10% at the end of 2023.

But monetary hawkishness is not cutting the mustard. Financial markets are clamouring for a fiscal U-turn, which the government is reluctant to offer. "We know exactly how we got here, so we know how to get out of here. We need to walk backwards," says Alberto Ramos, head of economic research for Latin America at Goldman Sachs, a bank. "The more you wait, the higher the risk that things will be done the hard way, and the market will force the correction. The symptoms of a crisis are there."■

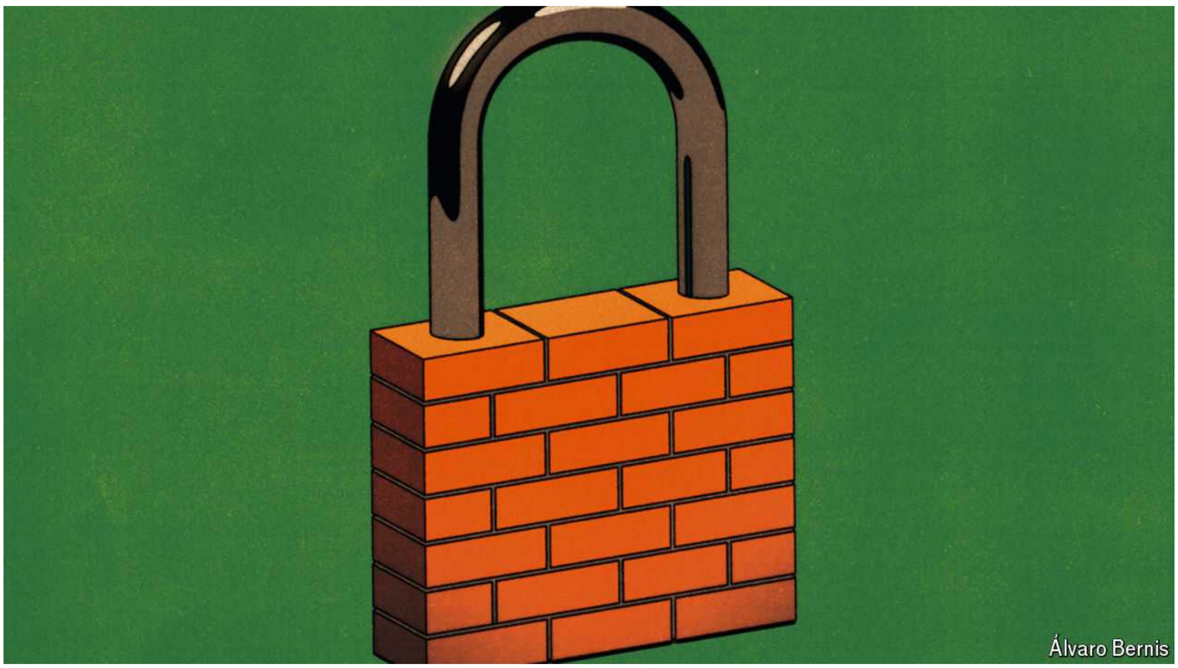
For more expert analysis of the biggest stories in economics, finance and markets, sign up to [Money Talks](), our weekly subscriber-only newsletter.

Finance & economics | Free exchange

Don’t count on monetary policy to make housing affordable

Unless housebuilding picks up, neither cheap nor dear money will bring relief

December 19th 2024



WHY IS HOUSING so expensive? Explanations have tended to fall into two camps. One emphasises a gummed-up supply side: a range of restrictions on land use and NIMBY campaigners have stymied housebuilding across the rich world. The other camp focuses on demand: a long-term fall in real interest rates has bid up the prices of all assets. Cheaper credit means more expensive housing. Yet even as interest rates rose across the rich world in the early 2020s, prices barely budged. Why? A range of recent papers suggests that the interaction between fixed supply and changes in demand explains the puzzle.

For most people, a house is a home. To economists it is an income-generating investment. Both are right. On the one hand, for landlords that income is rent. On the other, owner-occupiers receive their income in kind: the consumption of the "housing services" a home provides. Either way the price is largely the same; in essence, both receive rent. For the purpose of inflation statistics this is known as "owner equivalent rent" (OER), and is the main way in which housing shows up in consumer-price indices. OER accounts for about a quarter of the American inflation measure.

All else being equal, lower interest rates ought to lead to higher house prices. The ratio of rent to a house's price is similar to the yield on a bond. Both can, in turn, be compared to the interest rate the central bank sets on money. Across financial markets the rates of return on different assets, adjusting for different levels of risk, should converge—otherwise a landlord could sell their portfolio of houses and lock in a higher return in the stockmarket or vice versa. A cut in the central-bank rate raises the market price of bonds, shares and houses in the same way to keep the rates of return in sync. Some economists used this principle to identify a housing bubble before the crash of 2007 as the ratio of house prices to rents rose above what could be justified by interest costs.

In its latest quarterly review, the Bank for International Settlements (BIS) examines what a gummed-up housing market means for monetary policy. Ideally, developers should respond to the higher prices brought on by lower interest rates by building more houses and hiring more workers, generating inflationary pressure; higher rates should have the opposite effect. That response has been diminishing over time. During the 1970s, the authors calculate, a 1% increase in home prices produced a 6% increase in new construction; by the 2000s this had dropped to 4%. The authors put this down to a combination of stricter land-use regulation and falling productivity in construction. Rather than stimulating investment, monetary policy works through other channels: fewer new homes are built, and existing ones become more expensive.

Whereas many asset prices adjust almost immediately to changes in monetary policy, the housing market takes longer. It can take months or even years to buy or sell a property. The BIS researchers find that in areas where the supply of homes responds to higher prices there is a one-off shift in house prices: over about a year they rise by about 1.5% following a one-percentage-point cut in interest rates; the rents-to-prices ratio falls and then stabilises. When construction is slow to respond, however, house prices just keep on rising. The authors think this might be because would-be homeowners extrapolate that house prices will continue to rise in the future, which could compensate for a lower yield. Rather than boosting construction, homeowners get a windfall and spend more, generating inflationary pressure through a different channel. They could, for instance, splurge on restaurants and holidays, pushing up wages in those industries.

That does not mean frustrated young renters should hope for an increase in interest rates to bring prices down and homeownership within reach. Monetary policy changes the appeal of owning a home. A paper by Daniel Greenwald of New York University and Adam Guren of Boston University looks at how the rental and house-buying markets interact with each other. In theory, as house prices rise, landlords should be willing to sell to wannabe homeowners. Bringing more sellers into the market relieves some of the upward pressure on house prices after a fall in the cost of credit. It also means the rate of homeownership can increase even if not many new homes are built. Yet in reality this effect is not borne out. The rental market and the homeownership market are almost entirely segmented.

Heads homeowners win, tails renters lose

When rates rise, and mortgages become more expensive, renting becomes more attractive. That increases demand for the relatively fixed number of rental properties. At the same time, landlords are offered higher risk-adjusted yields on other assets and need to be compensated for missing out on them. A paper focusing on Ireland by Juan Castellanos of the European University Institute and Andrew Hannon and Gonzalo Paz-Pardo of the European Central Bank finds that higher rates actually tend to push rents up. In the same vein, a paper by Daniel Dias of the Federal Reserve and João Duarte of the Nova Business School, focusing on America, finds that tight money can increase "shelter" inflation.

That helps explain some of the recent puzzles of the housing market. Higher rents mean that house prices do not have to fall so far to maintain the yield differential between housing and other assets after monetary policy is tightened. Shelter inflation, meanwhile, has been one of the most stubborn components in the last mile of disinflation for the Federal Reserve. Deniz Igan of the BIS calculates that for potential buyers, who care about home prices, their income and mortgage costs, housing is more unaffordable than at any time since the meltdown of 2007. As long as housebuilding remains weak, neither cheap nor expensive money will bring relief. ■

Subscribers to The Economist can sign up to our new Opinion newsletter, which brings together the best of our leaders, columns, guest essays and reader correspondence.

Science & technology

- Earth is warming faster. Scientists are closing in on why
- Academic writing is getting harder to read—the humanities most of all
- Giving children the wrong (or not enough) toys may doom a society

Science & technology | 2023, WTF?

Earth is warming faster. Scientists are closing in on why

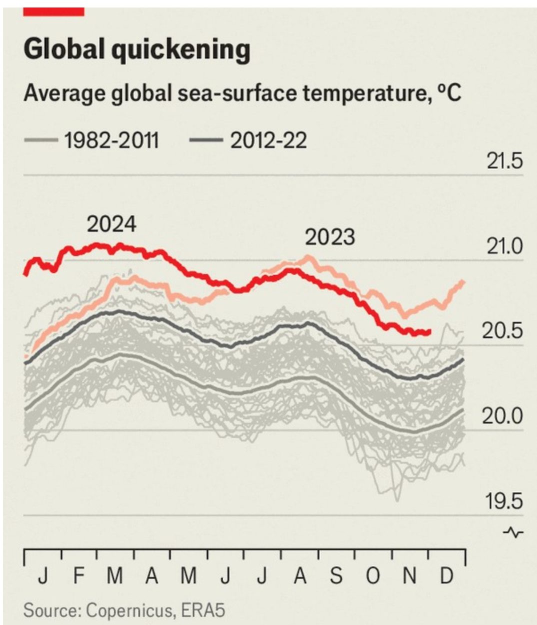
Paradoxically, cleaner emissions from ships and power plants are playing a role

December 16th 2024

Gavin Schmidt, a leading climate modeller and the boss of NASA's Goddard Institute for Space Science (GISS) in New York City, is not noted for his humility. Nevertheless, writing in *Nature*, a journal, in March 2024, he confessed to being humbled by his inability, and that of his colleagues, to understand the extraordinary year through which they had just lived—2023 had been around 0.2°C (0.4°F) hotter than had been expected.

Not just humbled: worried, too. If climate modellers' accumulated knowledge and spiffy models could not explain what had just happened, it might mean that climate change had pushed the workings of Earth into "uncharted territory…fundamentally altering how the climate system operates". Both the speed of climate change and the workings of the climate might be changing. The future might look even worse than it used to.

Nine months later, in Washington DC, Dr Schmidt and his colleagues returned to the subject at a recent meeting of the American Geophysical Union (AGU), the world's largest annual gathering of Earth scientists. The sessions that took place on the topic felt at times like a murder inquiry, with the evidence for one suspect or another gone through meticulously. The probable verdict is now clearer than it was in March; some suspects have been ruled out and new clues have emerged which point to some others. The conclusion looks likely to be that the world can expect somewhat higher rates of warming. But the case is still not closed.



The Economist

It was always going to be hot in 2023. Climate change forced by greenhouse gases means that all years can now be expected to be warm by past standards; in 2021 the Intergovernmental Panel on Climate Change put the rate of warming at 0.2°C a decade. What is more, the second half of 2023 saw an El Niño get under way.

El Niños are the warm phase of a seesaw of winds and ocean currents in the tropical Pacific called ENSO (El Niño-Southern Oscillation). The extra heat that such events can add to the overall warming trend means that El Niño years often set records for global temperatures. Because the El Niño that began in 2023 carried on into the following year, 2024 has therefore ended up being even hotter than the last year (see chart).

Whodunnit?

But if not the hottest year on record, 2023 still ranks as the strangest. For one thing, records were tumbling well before the El Niño kicked in in the second half of the year. For another, the scale of the warming compared with the year before was beyond what anyone would normally expect from an El Niño. For a third, the pattern of warming across various ocean basins was very peculiar.

At the time, several additional "forcings" were discussed. The underwater eruption of the Hunga Tonga-Hunga Ha'apai volcano in the South Pacific in January 2022 had put a huge amount of water vapour into the normally desiccated stratosphere; water vapour is a greenhouse gas, and in the stratosphere it sticks around for a long time. The Sun was reaching the peak of its 11-year sun-spot cycle; during such "solar maxima", it provides around 0.05% more light than it does on average and its spectrum skews into the ultraviolet. And in 2020 new rules imposed by the International Maritime Organisation (IMO) had slashed the amount of sulphur allowed in the fuel of ships on the high seas.

Sulphur in ships' fuel turns into sulphate particles rising from ships' funnels. Some of those particles end up blowing ashore; producing fewer of them cleans the landlubbers' air and saves lives. But the particles also encourage the formation of clouds, brighten clouds already there and reflect away sunlight even if the air is too dry for any clouds at all: all these effects cool the sea's surface.

As soon as the IMO rules went into effect there were climate scientists keen to see what they did to temperatures. 2023's spike added to the excitement. At the AGU Andrew Gettelman of the Pacific Northwest National Laboratory in Richland, Washington, presented an overview of studies of the phenomenon. Observations show that the distinctive lines of cloud—known as "ship tracks"—that can stretch out behind vessels burning sulphur-rich fuel are indeed much rarer now. Modelling suggests that, overall, this means something like 1.2 more watts per square metre of sunshine are warming the ocean.

That is enough to have a significant effect, but not enough to provide all the necessary warming for 2023. Nor can the concerted action of all the initial suspects suffice. The solar effect is smaller than the fuel effect. The volcano's effect seems to point the other way. Volcanoes, too, throw sulphur up into the atmosphere. According to Mark Schoerberl, of the Science and Technology Corporation, the long-lived sulphate particles created in the stratosphere after the eruption of Hunga Tonga-Hunga Ha'apai more than counterbalanced the warming provided by the water vapour, providing a small net cooling.

Evidence against different culprits comes from work published recently in *Science*. Helge Goessling and his colleagues at the Alfred Wegener Institute in Bremerhaven used satellite data and weather records to show that over the course of this century Earth has gradually been reflecting less sunlight back into space than it used to. 2023 was the dimmest year to date. This was apparently due to paucity of cloud cover, particularly in the northern mid latitudes.

Part of this could be down to the new IMO rules, but the dimming is too strong to be explained by that alone. Bjorn Samset of CICERO, a Norwegian climate research institute, points to another possibility: the lack of sulphate emissions is not a result of cleaner ships, but of cleaner Chinese coal-fired power plants. Since 2014 China has been making progress in reducing sulphur emissions by closing particularly noxious power plants and scrubbing sulphur out of the flue gases at others. New data leads Dr Samset and colleagues to think the cleanup is having a marked effect across the North Pacific, where cleaner air and fewer clouds will mean more warming.

A lung-sparing dearth of sulphates may not be the only thing making Earth less reflective. As the climate warms, its workings change in all manner of ways. One is that the tropics expand, and the tracks of storms in temperate zones narrow. Narrower storm tracks mean less cloud. This sort of shift could be another reason why Earth is growing less reflective, and thus warming more.

Both the sulphur stories and the changing cloud patterns suggest that increased warming may be here for some time to come. Models expect warming to speed up as annual emissions get larger, which they continue to do, and as sulphate emissions fall, which they continue to do. Dr Schmidt's predecessor as the boss of GISS, James Hansen, goes beyond what many of his colleagues are comfortable with when he argues that this effect is already apparent and large. That said, warming over the decade to 2023 was 0.26°C; not as high as the 0.32°C a decade rate that Dr Hansen thinks is the new normal, but well above what it used to be.

At the end of the AGU sessions Dr Schmidt felt that there had been real progress on the various possible culprits. In the next few weeks he expects modellers at GISS and elsewhere to start trying to pull them all together into a coherent narrative in new climate-model runs that use the most up-to-date data on both sulphur emissions and the reduction in reflected light. Picking over the results may allow scientists to say with some certainty what actually happened. ■

Curious about the world? To enjoy our mind-expanding science coverage, sign up to Simply Science, our weekly subscriber-only newsletter.

Science & technology | Hot air

Academic writing is getting harder to read—the humanities most of all

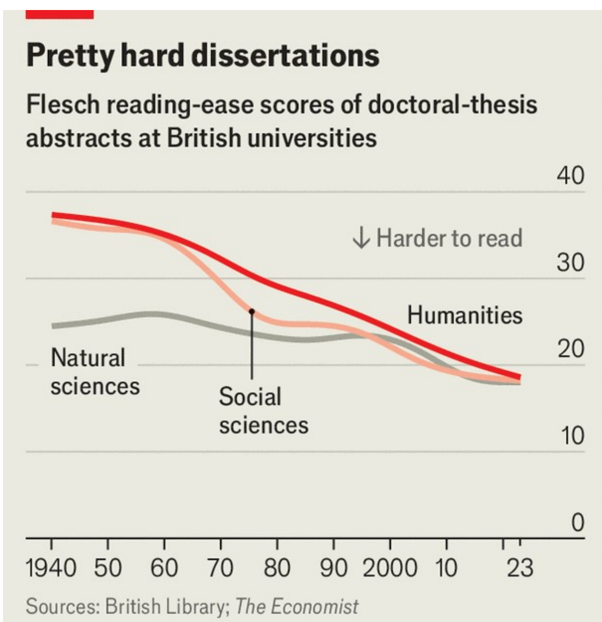
We analyse two centuries of scholarly work

December 18th 2024

Academics have long been accused of jargon-filled writing that is impossible to understand. A recent cautionary tale was that of Ally Louks, a researcher who set off a social media storm with an innocuous post on X celebrating the completion of her PhD. If it was Ms Louks's research topic ("olfactory ethics"—the politics of smell) that caught the attention of online critics, it was her verbose thesis abstract that further provoked their ire. In two weeks, the post received more than 21,000 retweets and 100m views.

Although the abuse directed at Ms Louks reeked of misogyny and anti-intellectualism—which she admirably shook off—the reaction was also a backlash against an academic use of language that is removed from normal life. Inaccessible writing is part of the problem. Research has become harder to read, especially in the humanities and social sciences. Though authors may argue that their work is written for expert audiences, much of the general public suspects that some academics use gobbledygook to disguise the fact that they have nothing useful to say. The trend towards more opaque prose hardly allays this suspicion.

To track academic writing over time, *The Economist* analysed 347,000 PhD abstracts published between 1812 and 2023. The dataset was produced by the British Library and represents a majority of English-language doctoral theses awarded by British universities. We reviewed each abstract using the Flesch reading-ease test, which measures sentence and word length to gauge readability. A score of 100 roughly indicates passages can be understood by someone who has completed fourth grade in America (usually aged 9 or 10), while a score lower than 30 is considered very difficult to read. An average *New York Times* article scores around 50 and a CNN article around 70. This article scores 41.



The Economist

From "asymmetric allylation of aldehydes" to "pneumatological and apocalyptically eschatological foundations", PhD abstracts had an unmistakably scholarly aroma. We found that, in every discipline, the abstracts have become harder to read over the past 80 years. The shift is most stark in the humanities and social sciences (see chart), with average Flesch scores falling from around 37 in the 1940s to 18 in the 2020s. From the 1990s onwards, those fields went from being substantially more readable than the natural sciences—as you might expect—to as complicated. Ms Louks's abstract had a reading-ease rating of 15, still more readable than a third of those analysed in total.

Other studies of academic writing have similar findings: scientific jargon and acronyms are on the rise. The blame does not fall solely on authors. Specialisation and advances in technology require more precise terminology and a doctoral thesis often covers some of the most obscure research topics. With millions of views, Ms Louks might lay claim to one of the most-read PhD abstracts of all time. She has since posted, "I love that I have somehow equipped everyone with new terminology and frameworks!" But surging interest in olfactory ethics aside, the trend towards illegible academic writing stinks. Clear prose would be a breath of fresh air. ■

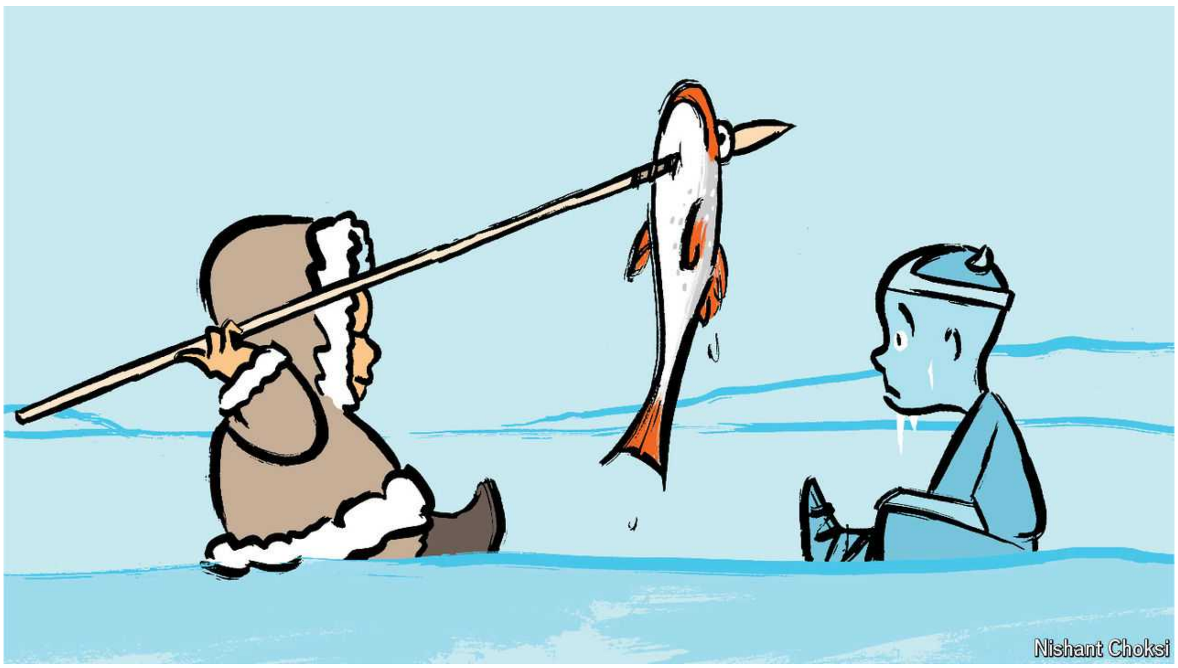
Curious about the world? To enjoy our mind-expanding science coverage, sign up to [Simply Science](), our weekly subscriber-only newsletter.

Science & technology | Clear and present danger

Giving children the wrong (or not enough) toys may doom a society

Survival is a case of child's play

December 18th 2024



GIVERS OF EDUCATIONAL gifts, rejoice: despite the eye-rolls you may receive on Christmas morning, you are part of a long and valuable tradition. In cultures around the world, toys have been used to teach children what they need to know about the society they live in. When the toys teach the right skills, the children are prepared for adulthood and thrive. When they do not, calamity beckons.

And how. New work led by Mathilde Meyer, a PhD student at Aarhus University in Denmark, and Felix Riede, her supervisor, reveals that giving the wrong toys probably played an important part in dooming the Norse settlers who came to Greenland from Iceland in 985.

Greenland was mostly covered in ice when the Norse made the journey, save for a thin strip of fertile land along the coastline where they could farm. The settlers flourished for a few hundred years but, as the world entered a cold period (known as the Little Ice Age) in 1300, records show that they started to struggle. Summers became drier, temperatures dropped and storms strengthened. By 1400 the Norse were forced to abandon the settlements. Even so, the island remained inhabited: the Inuit people of northern Alaska arrived on Greenland in 1000 and endured long after the Norse gave up.

Why the Inuit survived while the Norse did not has baffled archaeologists for decades. One idea was that the Norse did not eat more seafood (as the Inuit did) when farming conditions deteriorated. But this is not backed by evidence. Isotope studies of Norse teeth show that they were turning to the ocean for food. Archaeologists agree that the Inuits adapted successfully while the Norse did not, but nobody knows why.

To try to answer that question, Ms Meyer and Dr Riede looked at as many toys as they could find that had once been played with by the children of either culture. The Norse settlements yielded 72. The Inuit settlements, located in similar environmental conditions, yielded 2,397. For the researchers, this staggering difference implies that the Inuit gave their children more toys than the Norse did.

Ms Meyer and Dr Riede then assigned each toy to one of five categories. These included toys of weapons (including harpoons, arrows and swords), tools (cooking pots, lamps and saws), forms of transport (boats and sledges), for social play (dolls and figurines) and for skill play (tops and balls). They also determined approximate times for when the toys were made, either between 1000 and 1200 or 1200 and 1400.

The categorisation process revealed that the Inuit children not only had more toys available to them, but that these toys were more diverse. For example, though the Norse children had access to only toy arrows, axes and swords, the Inuit children also had toy bows, crossbows, darts, harpoons, harpoon mountings, lances and much more. Most important, Ms Meyer and Dr Riede found that the differences in the number and diversity of toys grew dramatically over time.

Not just fun and games

They report in the *European Journal of Archaeology* that, although eight social-play toys were found among the Norse settlements and 23 social-play toys were found among the Inuit settlements between 1000 and 1200, over the next 200 years the gap grew to 11 social-play toys for the Norse and 158 social-play toys for the Inuit.

A similar trend held for all the other categories of toy. As the years went by, toys associated with hunting at sea (a category including harpoons as well as figurines of seals and fish) became more common among the Inuit, but the Norse continued to give their children figurines of horses and birds. In essence, say the researchers, the Norse were adapting their lives to their new environment but continuing to gift old-fashioned toys.

Though the lack of toys may indicate that Norse society was less creative from the start, the researchers argue that their tendency to give irrelevant toys compounded any initial lack of creativity and ultimately sabotaged their survival. In contrast, the Inuits' preference for diverse and relevant toys paved the way for their children to be more innovative and adaptive. A parable for parents if ever there was one. ■

Curious about the world? To enjoy our mind-expanding science coverage, sign up to Simply Science, our weekly subscriber-only newsletter.

Culture

- There is more to Hanukkah gifts than meets the eye
- Christmas films are cheesy, mindless and widely loved. Why?
- “Babygirl” and the trouble with equality

There is more to Hanukkah gifts than meets the eye

How American Jews reshaped an ancient, minor holiday

December 19th 2024

THIS YEAR, for the first time since 2005, the start of Hanukkah falls on December 25th. (The next time will be in 2035.) The two celebrations will both involve lights—strung around trees and homes for Christians, kindled in a nine-branched menorah for Jews—and festive foods (usually a roast meat for Christmas, and oil-fried bites, including potato pancakes and jam-filled doughnuts, for Hanukkah).

Both holidays also entail the exchange of gifts, but this is more recent and controversial for Hanukkah than Christmas. That may seem surprising, considering how Hanukkah presents abound. A search on Amazon, the e-commerce Goliath, for example, turns up tens of thousands of results, including books, candles, gift wrap, latke-servers, pyjamas, socks and even a yarmulke that resembles Santa's red and white hat. The story of how a commercial marketplace for Hanukkah gifts came to be—and how exchanging presents for Hanukkah became widely accepted—is a classic immigrants' tale of a battle between assimilation and distinctness, adaptation and tradition.

Liturgically, Hanukkah is a relatively minor holiday. Work is not forbidden, as it is on the Sabbath and for the high holidays of Rosh Hashanah and Yom Kippur. It commemorates events that took place in the second century BC, after the death of Alexander the Great.

Hanukkah means "dedication" in Hebrew, and it refers to the victory of Jewish fighters, who succeeded in expelling occupying Greek forces from the Temple, then the heart of Jewish religious practice in Jerusalem. A tiny flask of oil, enough to last just a single day in the Temple's menorah, miraculously burned for eight days, the story goes: hence the length of the holiday.

However, aside from coins (*gelt* in Yiddish) given to children with the expectation that they would slip them to their teachers—a practice that first emerged in Poland in the 17th century—gift-giving played no role in the holiday for most of its history. That started to change after Jews began emigrating en masse to the United States in the late 19th century.

Between 1880 and 1924, the Jewish population in America grew from around 250,000, mainly from Germany and central Europe, to 2m, mostly from eastern Europe. The earlier German-Jewish immigrants had assimilated quickly and generally embraced Christmas as an American holiday, gifts and all.

Newly arriving Jews, however, tended to be more religious and spoke Yiddish rather than German or English. But they were not restricted from practising their faith, nor forced into ghettos to keep them away from Christians, as they had been in Europe. That meant they could see, with more intimacy than ever before, how their non-Jewish countrymen lived.

This was happening at a time when Christmas celebrations were changing and becoming more commercial. Christmas festivities and decorations are now an integral part of December in America and much of the world, but that is relatively recent. For years the Puritans banned Christmas when Massachusetts was still a British colony. ("They for whom all days are holy can have no holiday" was their pious belief; the Puritans are not renowned for their sense of fun.)

Congress, now notorious for its long recesses, was in session on Christmas Day in the early 19th century; Christmas did not become a federal holiday until 1870. That was just a decade before waves of Jewish emigration began, and right as American industrial might expanded, which made producing and buying gifts more affordable and prevalent.

Ads for Hanukkah gifts—both Jewish-themed, such as menorahs, and other religious and household items to use throughout the year—began appearing in the Yiddish press in the 1890s and became staples by the 1920s. Crisco, a vegetable shortening first sold in 1911, proved especially popular. Religious dietary laws forbade serving milk and meat at the same time, which meant Jews tended to use schmaltz (chicken fat) when cooking meat, requiring a messy process. Scooping cooking fat from a can, therefore, was appealing.

Gradually, Hanukkah became as much a marketing opportunity as Christmas. Hallmark began selling Hanukkah cards in the 1940s; soon afterwards, Barton's Candy began producing chocolate gelt, now a mainstay of Hanukkah celebrations.

The market took off after the second world war, but focused mainly on Judaica: menorahs, Seder plates and other religious goods. Gradually, pop culture began making inroads: Mickey Mouse and Donald Duck, rather than biblical scenes, started appearing on menorahs, and dreidels—the spinning tops used for Hanukkah games—got bigger and could be filled with sweets.

Yael Buechler, a rabbi who follows the Hanukkah marketplace and founded a company that makes Hanukkah-themed stickers for fingernails, says that thanks to fast fashion, "Things exist today that didn't exist even five or ten years ago." Big retailers can make lines of Hanukkah items quickly, while individual artists and small businesses have more outlets to sell and market their goods.

No time like the presents

All this has made Hanukkah, despite its humble beginnings, probably the best-known Jewish holiday to non-Jews. Chabad, a Jewish revivalist and social-service organisation, holds public menorah lightings around the world. Yitz Landes, a professor at the Jewish Theological Seminary of America, says that Hanukkah "feels like a national holiday" and has become "a symbol of how Jews can be Americans [that is] also legible to non-Jews: it works with other winter holidays".

But Hanukkah presents are given less often outside America. Israel's Jewish population numbers around 7.5m, about the same size as America's. But since 2004, online searches for Hanukkah gifts in Israel have been around 100 times less than in America, according to Google Trends. Some traditionalists still oppose gift-giving; Mr Landes recalls that in the Orthodox community in which he grew up, he never received presents on Hanukkah.

But Ms Buechler, the rabbi, notes that Jews are commanded to publicise the miracle of the oil, which is why lit menorahs are usually placed in windows: so passers-by can see them. "The more ways we can find to publicise" Hannukah, "the better." She starts decorating her family's home for Hanukkah in early November.

Mr Landes says that when his children see a cartoon featuring characters making latkes and lighting a menorah, "and someone mentions Hanukkah, they feel seen". Feeling welcomed and accepted, after so many centuries of being neither, may be the best gift of all. ■

For more on the latest books, films, TV shows, albums and controversies, sign up to Plot Twist, our weekly subscriber-only newsletter

Culture | The snowball effect

Christmas films are cheesy, mindless and widely loved. Why?

The obviousness is part of the appeal

December 13th 2024

THE STORY is set in a town called Hope Springs—your first clue to the film's schmaltz—which hosts an annual snow-sculpture contest. A local Michelangelo has sculpted a snowman with a chiselled face and rippling muscles. On a whim, a young widow drapes a red scarf over the frozen figure; naturally, magic brings the ice-cold hottie, shivering, to life.

Recently released on Netflix, "Hot Frosty" is a truly absurd Christmas film. No one in Hope Springs seems perturbed by a snow sculpture becoming a fully sentient being; one person simply shrugs: "It's Christmas." Nor do viewers seem to mind the movie's outlandish premise. Subscribers spent nearly 52m hours watching the film in the three weeks after its release; it has been one of the most popular movies on Netflix, enjoying nearly 35 times the demand of an average film in America, according to Parrot Analytics, a data firm.

"Hot Frosty" points to a hot area of entertainment: lighthearted, generally predictable, sometimes terrible Christmas films that people nonetheless love. In 2023 144 of them were released worldwide—seven times more than in 2000.

That was the year when Hallmark's cable-television network started making festive fare in earnest; in 2024 it is releasing 32 films as part of its annual "Countdown to Christmas" event, in which at least three new films are broadcast every weekend, starting in October. The most-watched film made for cable TV this year was Hallmark's "Holiday Touchdown: A Chiefs Love Story", loosely inspired by the relationship of Taylor Swift, a pop star, and Travis Kelce, an American-football player.

A large majority of Hallmark films—over 90%—are romances with punny titles such as "To Have and to Holiday". Brandon Gray and Daniel Pandolph, two of the hosts of "Deck the Hallmark", a podcast, have analysed around 1,000 Christmas films and observe that they "typically have some sort of baking scene" and "a big decision that has to be made by Christmas". Around 80% of them feature a decorating scene involving homes, gingerbread houses and more. Most feature a montage, a hammy film-making technique that is otherwise out of style year-round.

For a long time, Hallmark had the holiday season wrapped up. But Netflix and other streamers are getting in on the festive action, tempted by the low budgets—the films generally cost less than $5m—and high returns. In 2023 Hallmark released 40 original Christmas titles, according to Ampere Analysis, a research firm; meanwhile viewers could stream more than 70 on Netflix (a mix of new offerings and back-catalogue fare). The platform is focusing on romance titles at the expense of productions aimed at children or families. Another of the new releases in 2024, "Our Little Secret", has accumulated nearly 95m hours of viewing. Starring Lindsay Lohan, it follows a couple who split up years ago but meet again, unexpectedly, via their new partners.

Who likes such sparkly fluff, and why? Adult Christmas films are mostly watched by women, from millennials upwards. Many are busy preparing presents and food; few have time to sit down and give a film their full attention. The predictable plots, then, are an advantage. "You know what's going to happen," Mr Gray says, "and so you can still do the things that you need to do, while also getting into the Christmas spirit." Mr Pandolph adds that after a couple of glasses of mulled wine, it does not matter that the story is naff: in fact, "Your enjoyment of these movies goes up exponentially if you've been drinking."

Russell Hainline, the writer of "Hot Frosty" and other holiday flicks, says that films such as his offer wish-fulfilment. "'Harry Potter' has wands and 'The Lord of the Rings' has hobbits. Christmas movies have good people having good things happen to them all the time." The world would be a nicer place, he suggests, if it "was even a little bit more like a Christmas movie". It is a cheerful idea. In fact, it sounds like a perfect line in a holiday film. ■

For more on the latest books, films, TV shows, albums and controversies, sign up to Plot Twist, our weekly subscriber-only newsletter

Culture | Back Story

“Babygirl” and the trouble with equality

In Nicole Kidman’s new film, a female CEO has an affair with an intern. Boo or bravo?

December 19th 2024

Played ELECTRIcALLY by Nicole Kidman, the protagonist of “Babygirl” is a glamorous high-flyer with a secret woe: sexual frustration. But “at the end of the movie, that problem is fixed,” observed Antonio Banderas, who plays her husband, at the Venice Film Festival, where the erotic thriller had its premiere. “Maybe,” Ms Kidman shot back.

Which goes to show that responses to “Babygirl”, out on Christmas Day in America and elsewhere in January, may vary between the sexes, and, probably, between generations. Back Story is a middle-aged man with Gen-X ideas about feminism and fairness. For him, a provocative film that aspires to be radical winds up seeming oddly reactionary.

Ms Kidman is Romy Mathis, the boss of a logistics firm with a glitzy headquarters in Manhattan. The company does something with warehouses, though exactly what is unclear: those are not the sort of logistics this movie is most interested in. Romy is glimpsed in a lift, surrounded by men, like Margaret Thatcher with her cabinet. She has a palatial apartment and a swish country house, which she shares with her two teenage daughters and Jacob, her handsome nice-guy spouse.

Alas, there is a wrinkle in superwoman paradise (even if there are none on Romy's Botoxed face). In bed with Jacob, she fakes every climax, then puts on one of her deluxe camisoles, scoots down a marbled corridor, cranks up her laptop and gets her kicks from brutal porn. Ms Kidman has starred as monied matriarchs in a run of recent TV shows, from "The Undoing" to "The Perfect Couple". Romy is their kinkier sister.

Enter Samuel (Harris Dickinson), a swaggering and impertinent intern. As well as being Romy's underling, Samuel is a bit of rough. You can tell by the chain he wears and, when he gets his kit off, his tattoos. On brief acquaintance he spots a proclivity that, despite their decades-long relationship, Romy's doting husband has missed. "I think you like to be told what to do," Samuel says. Chalk it up to his male intuition. Or maybe it's a lucky guess.

Fleetingly Romy clings to the human-resources argot of "inappropriate" and "unacceptable" behaviour. But soon the pair are rendezvousing in seedy hotel rooms and toilet cubicles. She crawls around on the floor, eats from Samuel's hand like a dog and laps milk from a saucer on all fours. "You know things," she purrs. "You sense things." "Sometimes I scare myself," Samuel replies modestly.

"We all have a beast living inside of ourselves," Halina Reijn, the writer and director, said in Venice. If, like Jacob, you are inclined to think that "female masochism is nothing but a male fantasy", her film will try to persuade you that your ideas about sex and desire are outdated. Whereas, in "Fatal Attraction" and other adultery dramas of yore, women tended to suffer for their lust, Ms Reijn didn't "want any of [her] characters to be punished".

But perhaps Romy deserves some punishment (not just the kind she enjoys). For if the movie's cinematic context is Glenn Close's bunny-boiling and the grisly antics in "Basic Instinct", the real-life background is #MeToo. Given the imbalance between her and Samuel in age and status, Romy knows the liaison is risky or even wrong. "I genuinely believed that women with power would behave differently," laments a colleague who rumbles the affair.

Ultimately, though, "Babygirl" glosses over these qualms. In a choice between exploring workplace ethics on one hand, and celebrating orgasms on the other, it plumps for the redemptive power of getting your rocks off. It takes sex seriously as an issue of self-expression but trivialises it as a political one. If the story has a feminist streak, it is mostly the personalised, sex-positive sort espoused by some younger people.

True, unlike the miscreants of #MeToo, Romy is a woman. She is only acting as countless entitled men have before her. You don't, however, have to be a monster of the manosphere to wonder how much of a difference that ought to make to moral judgments. After all, some forms of parity are less desirable than others. When it comes to, say, their propensity to commit violent crimes or binge-drink, it would be good for men to cut back, less so for women to catch up.

"Babygirl" grants Romy another licence which, in the past, was overwhelmingly a male preserve. A powerful woman has a fling with a striving subordinate—and the audience is invited to cheer her liberation. You might call that role-swap a kind of equality or rough justice. You wouldn't call it progress. ■

For more on the latest books, films, TV shows, albums and controversies, sign up to Plot Twist, our weekly subscriber-only newsletter

Economic & financial indicators

- Economic data, commodities and markets

Economic & financial indicators | Indicators

Economic data, commodities and markets

December 19th 2024

Economic data

1 of 2

	Gross domestic product, % change on year ago: latest		quarter*	2024†	Consumer prices, % change on year ago: latest		2024†	Unemployment rate, %	
United States	2.7	Q3	2.8	2.7	2.7	Nov	2.8	4.2	Nov
China	4.6	Q3	3.6	4.9	0.2	Nov	0.3	5.0	Nov‡§
Japan	0.5	Q3	1.2	-0.2	2.2	Oct	2.6	2.5	Oct
Britain	1.0	Q3	0.6	0.9	2.6	Nov	2.9	4.3	Sep††
Canada	1.5	Q3	1.0	1.3	1.9	Nov	2.4	6.8	Nov
Euro area	0.9	Q3	1.7	0.8	2.2	Nov	2.4	6.3	Oct
Austria	-0.6	Q3	-0.5‡	-0.9	1.9	Nov	2.9	5.6	Oct
Belgium	1.2	Q3	1.3	1.1	4.8	Nov	4.3	5.8	Oct
France	1.2	Q3	1.6	1.1	1.7	Nov	2.3	7.6	Oct
Germany	-0.3	Q3	0.4	-0.1	2.4	Nov	2.4	3.4	Oct
Greece	2.5	Q3	1.1	2.2	3.0	Nov	3.0	9.8	Oct
Italy	0.4	Q3	nil	0.5	1.5	Nov	1.1	5.8	Oct
Netherlands	1.7	Q3	3.3	0.9	3.8	Nov	3.4	3.7	Oct
Spain	3.4	Q3	3.4	3.0	2.4	Nov	2.9	11.2	Oct
Czech Republic	2.0	Q3	1.7	1.0	2.8	Nov	2.4	2.7	Oct‡
Denmark	3.6	Q3	5.1	1.8	1.6	Nov	1.3	2.9	Oct
Norway	3.5	Q3	-7.1	1.7	2.4	Nov	2.2	4.1	Sep‡‡
Poland	2.7	Q3	-0.4	2.3	4.7	Nov	3.8	5.0	Nov§
Russia	3.1	Q3	2.7	3.5	8.9	Nov	8.5	2.3	Oct§
Sweden	0.6	Q3	1.1	0.7	1.6	Nov	1.8	7.4	Nov§
Switzerland	2.0	Q3	1.7	1.2	0.7	Nov	1.2	2.6	Nov
Turkey	2.1	Q3	-0.8	2.9	47.1	Nov	57.7	8.5	Oct§
Australia	0.8	Q3	1.3	1.1	2.8	Q3	3.1	3.9	Nov
Hong Kong	1.8	Q3	-4.2	2.5	1.3	Oct	2.0	3.1	Nov‡‡
India	5.4	Q3	3.0	6.6	5.5	Nov	4.8	8.0	Nov
Indonesia	4.9	Q3	3.8	5.0	1.5	Nov	2.3	4.9	Aug§
Malaysia	5.3	Q3	6.3	5.1	1.9	Oct	1.9	3.2	Oct§
Pakistan	3.2	2024**	na	3.2	4.9	Nov	13.3	6.3	2021
Philippines	5.2	Q3	7.0	5.5	2.5	Nov	3.3	3.9	Q4§
Singapore	5.4	Q3	13.6	3.5	1.4	Oct	2.4	1.9	Q3
South Korea	1.6	Q3	0.4	2.3	1.5	Nov	2.4	2.2	Nov§
Taiwan	4.2	Q3	0.9	5.0	2.1	Nov	2.1	3.4	Oct
Thailand	3.0	Q3	4.9	2.6	0.9	Nov	0.4	1.0	Oct§
Argentina	-2.1	Q3	16.4	-2.6	166	Nov	220	6.9	Q3§
Brazil	4.0	Q3	3.7	3.4	4.9	Nov	4.4	6.2	Oct§‡‡
Chile	2.3	Q3	2.7	2.2	4.2	Nov	4.0	8.6	Oct§‡‡
Colombia	2.0	Q3	0.8	1.6	5.2	Nov	6.6	9.1	Oct§
Mexico	1.6	Q3	4.4	1.4	4.5	Nov	4.8	2.5	Oct
Peru	3.8	Q3	2.8	3.0	2.3	Nov	2.4	6.2	Nov§
Egypt	2.4	Q2	12.6	2.4	25.5	Nov	28.7	6.7	Q3§
Israel	-1.0	Q3	3.8	0.1	3.4	Nov	3.2	2.7	Nov
Saudi Arabia	-0.8	2023	na	1.3	2.0	Nov	1.7	3.3	Q2
South Africa	0.3	Q3	-1.4	0.8	2.8	Nov	4.4	32.1	Q3§

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. Note: Euro area consumer prices are harmonised.

The Economist

Economic data

2 of 2

	Current-account balance, % of GDP, 2024†	Budget balance, % of GDP, 2024†	Interest rates, 10-yr gov't bonds latest, %	change on year ago, bp	Currency units, per $ Dec 18th	% change on year ago
United States	-3.4	-7.1	4.5	55.0	-	
China	2.1	-4.4	1.4 §§	-104	7.29	-2.1
Japan	4.2	-4.7	1.1	37.0	154	-7.1
Britain	-2.9	-4.0	4.5	72.0	0.79	nil
Canada	-1.0	-1.2	3.1	2.0	1.43	-6.3
Euro area	3.3	-3.1	2.3	19.0	0.95	-4.2
Austria	2.2	-2.3	2.7	4.0	0.95	-4.2
Belgium	-0.5	-4.6	2.9	22.0	0.95	-4.2
France	-0.4	-6.2	3.3	44.0	0.95	-4.2
Germany	6.3	-1.6	2.3	19.0	0.95	-4.2
Greece	-6.5	-0.7	3.1	-6.0	0.95	-4.2
Italy	1.5	-4.3	3.4	-38.0	0.95	-4.2
Netherlands	9.9	-2.0	2.5	9.0	0.95	-4.2
Spain	3.4	-3.2	2.9	-11.0	0.95	-4.2
Czech Republic	1.1	-2.4	4.1	25.0	24.0	-6.3
Denmark	10.8	2.1	2.0	-29.0	7.12	-4.1
Norway	17.3	12.5	3.7	51.0	11.2	-7.5
Poland	0.4	-5.7	5.8	64.0	4.07	-2.5
Russia	3.3	-1.7	16.2	424	104	-13.5
Sweden	6.5	-0.9	2.1	3.0	11.0	-6.9
Switzerland	7.4	-0.9	0.3	-29.0	0.89	-3.4
Turkey	-1.7	-4.1	28.1	568	35.0	-17.0
Australia	-0.6	-1.0	4.2	-16.0	1.59	-5.7
Hong Kong	11.9	-3.2	3.5	10.0	7.77	0.3
India	-0.5	-4.9	6.8	-40.0	85.0	-2.2
Indonesia	-0.2	-2.5	7.1	54.0	16,090	-3.6
Malaysia	1.4	-4.5	3.8	6.0	4.47	4.9
Pakistan	-0.2	-6.9	12.1 †††	-306	278	1.7
Philippines	na	-6.1	5.9	-17.0	59.0	-5.3
Singapore	19.3	0.2	2.8	6.0	1.35	-1.5
South Korea	3.8	-1.8	2.8	-55.0	1,436	-9.7
Taiwan	13.5	0.5	1.6	42.0	32.5	-3.6
Thailand	2.1	-3.7	2.3	-51.0	34.3	2.2
Argentina	0.4	0.3	na	na	1,022	-21.4
Brazil	-2.1	-7.5	14.3	372	6.18	-20.2
Chile	-2.4	-2.2	5.8	34.0	990	-11.8
Colombia	-2.8	-5.7	11.1	88.0	4,364	-9.9
Mexico	0.3	-5.0	10.2	112	20.1	-14.4
Peru	1.0	-4.0	6.6	-51.0	3.74	0.5
Egypt	-5.2	-3.7	na	na	50.9	-39.2
Israel	4.6	-7.2	4.4	54.0	3.59	2.2
Saudi Arabia	0.4	-2.4	na	na	3.76	-0.3
South Africa	-1.9	-5.2	9.0	-63.0	18.1	3.1

Source: Haver Analytics. §§5-year yield. †††Dollar-denominated bonds.

The Economist

Markets

In local currency	Index Dec 18th	% change on: one week	Dec 29th 2023
United States S&P 500	5,872.2	-3.5	23.1
United States NAS Comp	19,392.7	-3.2	29.2
China Shanghai Comp	3,382.2	-1.5	13.7
China Shenzhen Comp	2,025.5	-3.1	10.2
Japan Nikkei 225	39,081.7	-0.7	16.8
Japan Topix	2,719.9	-1.1	14.9
Britain FTSE 100	8,199.1	-1.2	6.0
Canada S&P TSX	24,557.0	-4.3	17.2
Euro area EURO STOXX 50	4,957.3	nil	9.6
France CAC 40	7,384.6	-0.5	-2.1
Germany DAX*	20,242.6	-0.8	20.8
Italy FTSE/MIB	34,401.0	-1.0	13.3
Netherlands AEX	892.7	-0.4	13.5
Spain IBEX 35	11,617.9	-1.5	15.0
Poland WIG	80,225.6	-2.6	2.3
Russia RTS, $ terms	738.5	-3.6	-31.8
Switzerland SMI	11,638.9	-0.4	4.5
Turkey BIST	9,915.8	-1.4	32.7
Australia All Ord.	8,558.6	-0.6	9.3
Hong Kong Hang Seng	19,864.6	-1.4	16.5
India BSE	80,182.2	-1.6	11.0
Indonesia IDX	7,107.9	-4.8	-2.3
Malaysia KLSE	1,599.6	-0.2	10.0
Pakistan KSE	111,070.3	0.2	77.9
Singapore STI	3,779.6	-0.3	16.6
South Korea KOSPI	2,484.4	1.7	-6.4
Taiwan TWI	23,168.7	1.2	29.2
Thailand SET	1,399.0	-3.1	-1.2
Argentina MERV	2,521,016.0	10.0	171.2
Brazil BVSP*	120,771.9	-6.8	-10.0
Mexico IPC	49,968.4	-2.6	-12.9
Egypt EGX 30	30,503.1	-0.8	22.5
Israel TA-125	2,423.3	1.5	28.4
Saudi Arabia Tadawul	11,961.1	-1.5	-0.1
South Africa JSE AS	85,599.8	-1.7	11.3
World, dev'd MSCI	3,812.1	-0.8	20.3
Emerging markets MSCI	1,093.2	-1.4	6.8

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 29th 2023
Investment grade	94	154
High-yield	315	502

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

The Economist

Commodities

The Economist **commodity-price index**

2020=100	Dec 10th	Dec 17th*	% change on month	% change on year
Dollar Index				
All items	136.2	136.9	4.4	5.7
Food	150.7	154.4	7.9	15.3
Industrials				
All	124.3	122.4	0.9	-2.8
Non-food agriculturals	134.2	133.6	-0.8	6.6
Metals	121.7	119.5	1.4	-5.2
Sterling Index				
All items	137.4	138.4	4.0	5.9
Euro Index				
All items	148.2	149.0	5.2	10.6
Gold				
$ per oz	2,689.4	2,638.4	0.5	29.1
Brent				
$ per barrel	72.6	72.7	-0.2	-8.4

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

The Economist

Obituary

Obituary | The work of prayer

Brother Harold Palmer lived alone in the wilds by choice

The Northumbrian hermit died on October 4th, aged 93

December 19th 2024

Sometime in 1970 Brother Harold Palmer, then living in a house of the Society of St Francis, received a strange parcel in the post. He never knew who had sent it. It contained a mason's trowel, a set square, a plumb-line and a surveyor's measuring tape. Plainly, he had building to do.

Up until then he had been undecided. He had seen a possible site, called Shepherds Law, on top of a gorse-thick hill in Northumberland with views as far as Scotland. But it was still not ideal. In fact, it was ruins: bits of an 18th-century cottage, two triple-arched arcades and an almost-gone pavilion. Not worth a visit, his guide had said. The arcades had probably been part of a folly long ago. There was no point in starting a new one.

Probably not. But Brother Harold had been looking for a long time, and all over the place, for somewhere he could found a *skete*: a tiny monastic community where he would live alone and a few chosen brothers would live close, in separate cells. They would tend a communal garden, eat and do chores together, and most vitally build a little chapel where they would sing the Divine Office seven times a day. That too was work: *Opus Dei*, the work of God. And after a while it would become an exercise in joy.

An Anglican priest, Father William Sirr, had tried to set up a *skete* at Glasshampton in 1918; sadly, no one had joined him. Perhaps Brother Harold's counter-cultural dream could catch on in the modern age. People often said how much they longed for silence and stillness, and a life of prayer, solitary or almost so, was all about that. This was what had struck him most strongly when he visited Mount Athos and wandered among the *sketes* there: a stillness that if suddenly broken by a swallow, or a boat engine, immediately redescended like a presence. It had been a feature, too, of the lives of the earliest saints of Northumbria. St Cuthbert was said to have stood so still in the sea, praying by night, that his feet froze, and two otters came to him to lick them warm. In those days the Christian church had been undivided. He longed fiercely for it to be one body again.

Since 1960, when he became a member of the SSF (the Anglican version of the Franciscans), he had lived in several SSF houses. But he couldn't settle. He did not enjoy community on that scale, disliked being regimented, and hated the principle of enclosure. All in all, a difficult brother. He was happiest at the Alnmouth house on the Northumbrian coast, where the friars had to go down to the beach to gather sea-coal for the freezing rooms, and where railway trains, his passion, steamed past on the east-coast main line. In order not to miss them he would hitch his robe into his girdle, seize his situp-and-beg bike and race madly towards the smoke. He loved to be out and doing. He also loved to constantly acknowledge God around and within him, in song or silence, and alone.

St Francis had faced that dilemma. He ordered his followers to preach in towns, and did so himself. But he also made a habit of retiring to pray in remote and rocky places. Each Franciscan had to ask, as Francis did, whether he belonged in the world or not. The Northumbrian saints had a similar mission to the laity but also treasured solitude, as Cuthbert did when he fled to the Farne Islands. Brother Harold definitely needed both, and when he first went to live at Shepherd's Law, in 1971 in a cold caravan wrapped in straw-bales containing rats, he often wondered what on earth he was doing. He made sure to get a mobile phone.

He had decided to raise money for his hermitage-house by working in a geriatric ward, tending frail old men who steadily died around him. But at Shepherds Law fellow-friars and local people, from the village of Eglingham and round about, soon lent a hand. Traditionally, hermits and anchorites always drew visitors. Clearly most locals liked having this curious solitary nearby. As he built his hermitage—thick walls of local stone and concrete, clay pantiles on the roof—donations of material kept coming. Since sanitation for years was a slop-bucket and an Elsan, he exchanged dog-walking for baths. His letterbox was at the bottom of the hill, to save the postman trouble. Villagers would leave cakes and other offerings there. The Friends of Shepherds Law were set up to raise funds for him. Over his 50 years of hermithood he became a village character: smiling, scruffy, missing a front tooth, and devoted to his Thomas the Tank Engine woolly hat with earflaps.

His purpose there, though, was prayer. Prayer both Anglican, from the Book of Common Prayer, and Catholic, since in 2004 he had turned to Rome. He loved, and used, both liturgies together. At first there was nowhere to pray but in the biting wind; then in a lean-to against the ruined wall, roofed with corrugated iron. Money from his mother, after she died, paid for a beautiful Romanesque chapel in local stone, dedicated to St Mary and St Cuthbert, with icons and stained glass and a relic of Cuthbert under the altar. The walls contained fragments of brick gathered from the beach at Lindisfarne, his Holy Island. Seven times a day, for the canonical hours of matins, prime, terce, sext, none, vespers and compline, Brother Harold would ring a medieval bell and enter to sing the Psalter. He had spent hours unearthing and translating Latin liturgies from archives in Durham and elsewhere, fitting them to Gregorian chant he had composed himself on the backs of envelopes. Chant, like his icons, pointed to the Mystery.

Usually he was alone. He had built four well-equipped cells for visitors, each with its upstairs oratory; quite a few stayed, but no one stayed for good. Perhaps they disliked the smell of paraffin lamps, or objected to the meals of cold baked beans. It didn’t matter too much. As long as he himself remembered God continually, as he did, and addressed Him on behalf of the world and its troubles, and allowed God to enter his heart and dwell there, all was well. Between the verses of the Psalms, sheep bleated outside. He was perfectly still. ■


The Economist
HOLIDAY
DOUBLE ISSUE
DECEMBER 21ST 2024–JANUARY 3RD 2025
FEATURING: *Tokyo's mega fish market · The mysteries of sex*
Retired planes' second act · The fabulous Triassic · A tale of
Odessa · The rise of the axolotl · Does money buy happiness?
The Ivy League rat race · Chinese calligraphy · and much more...
鮮魚
HARVARD

Table of Contents